



DEPARTMENT OF B.SC. COMPUTER SCIENCE WITH DATA ANALYTICS (Unaided)

LESSON PLAN-THEORY

ACADEMIC YEAR:2023-2024

Faculty Name : PRAVEENA B BALASUBRAMANIAN,
Year/Semester/Section : I/I/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 23UDA101 & CORE PAPER 1 - PROGRAMMING FOR PROBLEM SOLVING USING C

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	20/06/2023	1	Fundamentals of Computers	CHALK AND TALK	https://drive.google.com/drive/folders/0BywNwO6KwzUPNU9YTEFVZURGS1E?resourcekey=0-2zFLzES-iEJceCr3xVU_sA	1. E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw-Hill Education Pvt. Ltd.
2	21/06/2023	1	Introduction	CHALK AND TALK	https://drive.google.com/drive/folders/0BywNwO6KwzUPNU9YTEFVZURGS1E?resourcekey=0-2zFLzES-iEJceCr3xVU_sA	1. E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw-Hill Education Pvt. Ltd.
3	22/06/2023	1	Generations of Computers	CHALK AND TALK	https://drive.google.com/drive/folders/0BywNwO6KwzUPNU9YTEFVZURGS1E?resourcekey=0-2zFLzES-iEJceCr3xVU_sA	1. E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw-Hill Education Pvt. Ltd.
4	23/06/2023	3	Classification of Computers	CHALK AND TALK	https://www.geeksforgeeks.org/classification-of-computers/	1. E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw-Hill Education Pvt. Ltd.



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S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
5	26/06/2023	2	Basic Anatomy of a Computer System	CHALK AND TALK	https://www.studocu.com/in/document/galgotias-university/agriculture/lecture-1-introduction-anatomy-of-computers/21217869	1. E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
6	28/06/2023	1	Input devices	CHALK AND TALK	https://www.tutorialspoint.com/computer_fundamentals/computer_input_devices.htm	1. E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
7	30/06/2023	1	Processor, Output devices	CHALK AND TALK	https://artoftesting.com/computer-output-devices-example	1. E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
8	03/07/2023	1	Memory Management	CHALK AND TALK	https://www.tutorialspoint.com/operating_system/os_overview.htm	1. E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
9	04/07/2023	3	Types of software	CHALK AND TALK	https://www.techtarget.com/searchapparchitecture/definition/software	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
10	05/07/2023	2	Overview of Operating system	CHALK AND TALK	https://www.tutorialspoint.com/operating_system/os_overview.htm	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
11	07/07/2023	1	Programming Languages	CHALK AND TALK	https://www.javatpoint.com/programming-language	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
12	10/07/2023	1	Programming Languages	CHALK AND TALK	https://www.javatpoint.com/programming-language	1. E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
13	11/07/2023	1	Translator Programs	CHALK AND TALK	https://en.wikipedia.org/wiki/Translator_(computing)	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.



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14	12/07/2023	3	Problem solving techniques	CHALK AND TALK	https://learnprogramo.com/problem-solving-through-programming-in-c-1/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd
15	13/07/2023	2	Problem solving Techniques	CHALK AND TALK	https://hamrocsit.com/notes/c-program/problem-solving-computer/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd
Unit 2						
16	17/07/2023	1	Overview of C	CHALK AND TALK	https://www.geeksforgeeks.org/c-programming-language/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
17	18/07/2023	1	Importance of C	CHALK AND TALK	https://www.tutorialspoint.com/state-the-importance-of-c-language-and-its-general-structure	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
18	19/07/2023	1	Character set, C tokens	CHALK AND TALK	https://prepinsta.com/all-about-c-language/the-c-character-set/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
19	20/07/2023	3	Keyword and Identifiers	CHALK AND TALK	https://www.geeksforgeeks.org/difference-between-keyword-and-identifier/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
20	21/07/2023	2	Constants, Variables and data types	CHALK AND TALK	http://newhorizon-nhcollegekasturinagar.s3.amazonaws.com/nhcollegekasturinagar/wp-content/uploads/2020/06/12115728/CONSTANT_VARIABLES_CHAPTER-4.pdf	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.
21	25/07/2023	1	Declaration of variables , Assigning values to variables	CHALK AND TALK	https://www.w3schools.com/c/c_variables.php#:~:text=Declaring%20(Creating)%20Variables&text=type%20variableName%20%3D%20value%3B,a%20value%20to%20the%20variable.	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw-Hill Education Pvt. Ltd.



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S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
22	26/07/2023	1	Defining Symbolic Constants	CHALK AND TALK	https://meramind.com/c-programming/symbolic-constants-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
23	27/07/2023	1	Arithmetic, Relational, Logical, Assignment operators	CHALK AND TALK	https://www.tutorialspoint.com/cprogramming/c_operators.htm	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
24	28/07/2023	3	Conditional, Bitwise, Special, Increment and Decrement operators	CHALK AND TALK	https://www.tutorialspoint.com/cprogramming/c_operators.htm	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
25	31/07/2023	2	Arithmetic Expressions, Evaluation of expression	CHALK AND TALK	https://www.scaler.com/topics/c/evaluation-of-arithmetic-expression/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
26	02/08/2023	1	precedence of arithmetic operators, Type conversion in expression	CHALK AND TALK	https://www.tutorialspoint.com/cprogramming/c_operators_precedence.htm	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
27	04/08/2023	1	operator precedence & associativity	CHALK AND TALK	https://www.geeksforgeeks.org/operator-precedence-and-associativity-in-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
28	07/08/2023	1	Mathematical functions	CHALK AND TALK	https://www.w3schools.com/c/c_math.php	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
29	08/08/2023	3	Reading and Writing a character	CHALK AND TALK	https://www.tutorialspoint.com/what-are-reading-and-writing-characters-in-c-language	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
30	09/08/2023	2	Formatted input and output.	CHALK AND TALK	https://www.geeksforgeeks.org/formatted-and-unformatted-input-output-functions-in-c-with-examples/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
Unit 3						



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S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
31	11/08/2023	1	Decision Making and Branching	PPT, CHALK AND TALK	https://mytechnicalarticle.files.wordpress.com/2017/09/unit-3-decision-making-and-branching.pdf	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
32	14/08/2023	1	Introduction	CHALK AND TALK	https://mytechnicalarticle.files.wordpress.com/2017/09/unit-3-decision-making-and-branching.pdf	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
33	16/08/2023	1	nesting of if	CHALK AND TALK	https://mytechnicalarticle.files.wordpress.com/2017/09/unit-3-decision-making-and-branching.pdf	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
34	17/08/2023	3	else if ladder	CHALK AND TALK	https://mytechnicalarticle.files.wordpress.com/2017/09/unit-3-decision-making-and-branching.pdf	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
35	18/08/2023	2	The switch statement	CHALK AND TALK	https://www.geeksforgeeks.org/c-switch-statement/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
36	21/08/2023	1	The?: Operator	CHALK AND TALK	https://www.tutorialspoint.com/cprogramming/c_operators.htm	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
37	22/08/2023	1	The goto Statement	CHALK AND TALK	https://www.geeksforgeeks.org/goto-statement-in-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
38	23/08/2023	1	Decision Making and Looping: Introduction	CHALK AND TALK	http://www.vpscience.org/materials/C%20lang%20Unit%203.pdf	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
39	24/08/2023	3	The while statement	CHALK AND TALK	http://www.vpscience.org/materials/C%20lang%20Unit%203.pdf	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.



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40	25/08/2023	2	the do statement	CHALK AND TALK	http://www.vpscience.org/materials/C%20lang%20Unit%203.pdf	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
41	30/08/2023	1	The for statement	CHALK AND TALK	http://www.vpscience.org/materials/C%20lang%20Unit%203.pdf	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
42	31/08/2023	1	Jumps in loops.	CHALK AND TALK	https://www.javatpoint.com/jump-statement-in-c	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
43	01/09/2023	1	Arrays	CHALK AND TALK	https://www.geeksforgeeks.org/c-arrays/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
44	04/09/2023	3	arrays	CHALK AND TALK	https://www.geeksforgeeks.org/c-arrays/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
45	05/09/2023	2	Character Arrays and Strings.	CHALK AND TALK	https://www.studytonight.com/c/string-and-character-array.php	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
Unit 4						
46	08/09/2023	1	User-Defined Functions: Introduction	CHALK AND TALK	https://www.programiz.com/c-programming/c-user-defined-functions	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
47	11/09/2023	1	Need and Elements of User-Defined Functions-	CHALK AND TALK	https://www.simplilearn.com/tutorials/c-tutorial/learn-user-defined-function-in-c	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
48	12/09/2023	1	Definition	CHALK AND TALK	https://www.w3schools.com/c/c_functions_decl.php	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.



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49	13/09/2023	3	Return Values and their types	CHALK AND TALK	https://www.tutorialspoint.com/c-function-argument-and-return-values	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
50	14/09/2023	2	Function Calls	CHALK AND TALK	https://www.tutorialspoint.com/cprogramming/c_functions.htm	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
51	18/09/2023	1	Declarations	CHALK AND TALK	https://www.tutorialspoint.com/cprogramming/c_functions.htm	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
52	19/09/2023	1	Category of Functions	CHALK AND TALK	https://www.tutorialspoint.com/what-are-the-different-categories-of-functions-in-c-programming	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
53	20/09/2023	1	Category of Functions	CHALK AND TALK	https://www.tutorialspoint.com/what-are-the-different-categories-of-functions-in-c-programming	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
54	21/09/2023	3	Nesting of Functions	CHALK AND TALK	https://www.geeksforgeeks.org/nested-functions-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
55	22/09/2023	2	Recursion	CHALK AND TALK	https://www.w3schools.com/c/c_functions_recursion.php	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
56	26/09/2023	1	Passing Arrays and Strings to Functions	CHALK AND TALK	https://www.geeksforgeeks.org/how-arrays-are-passed-to-functions-in-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
57	27/09/2023	1	The Scope, Visibility and Lifetime of Variables	CHALK AND TALK	https://www.collegenote.net/curriculum/c-programming-csit/30/138/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.



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58	03/10/2023	1	Multi file Programs	CHALK AND TALK	https://www.geeksforgeeks.org/multiple-source-files-in-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
59	04/10/2023	3	Structures and Unions	CHALK AND TALK	https://www.geeksforgeeks.org/structure-vs-union-in-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
60	05/10/2023	2	Structures and Unions	CHALK AND TALK	https://www.geeksforgeeks.org/structure-vs-union-in-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
Unit 5						
61	07/10/2023	1	Pointers: Introduction	CHALK AND TALK	https://www.geeksforgeeks.org/c-pointers/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
62	09/10/2023	1	Understanding Pointers	CHALK AND TALK	https://www.geeksforgeeks.org/c-pointers/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
63	10/10/2023	1	Accessing the address of a variable	CHALK AND TALK	https://www.codingame.com/playgrounds/14589/how-to-play-with-pointers-in-c/address-of-a-variable	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
64	11/10/2023	3	Declaration and Initialization of pointer Variable	CHALK AND TALK	https://www.studytonight.com/c/declaring-and-initializing-pointer.php	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.
65	12/10/2023	2	Accessing a variable through its pointer	CHALK AND TALK	https://www.compromath.com/2017/01/Declaration-Initialization-Accessing-of-Pointer-Variable.html	E Balagurusamy (2008), "Computing Fundamentals & C Programming" – Tata McGraw- Hill Education Pvt. Ltd.



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66	16/10/2023	1	Chain of pointers	CHALK AND TALK	https://www.tutorialspoint.com/cprogramming/c_pointer_to_pointer.htm	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
67	17/10/2023	1	Pointer Expressions	CHALK AND TALK	https://www.geeksforgeeks.org/pointer-expression-in-c-with-examples/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
68	18/10/2023	1	Pointer Increments and Scale factor	CHALK AND TALK	https://www.computersprofessor.com/2016/06/pointer-increments-scale-factor.html	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
69	19/10/2023	3	Pointers and Arrays	CHALK AND TALK	https://www.w3schools.com/c/c_pointers_arrays.php	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
70	20/10/2023	2	Pointers and Strings , Array of pointers	CHALK AND TALK	https://www.w3schools.com/c/c_pointers_arrays.php	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
71	25/10/2023	1	Pointers as Function Arguments	CHALK AND TALK	https://www.javatpoint.com/function-pointer-as-argument-in-c	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
72	26/10/2023	1	Functions returning pointers	CHALK AND TALK	https://www.geeksforgeeks.org/how-to-return-a-pointer-from-a-function-in-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
73	27/10/2023	1	Pointers to Functions	CHALK AND TALK	https://www.geeksforgeeks.org/function-pointer-in-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.
74	30/10/2023	3	Pointers and Structures.	CHALK AND TALK	https://www.programiz.com/c-programming/c-structures-pointers	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.



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75	31/10/2023	2	File Management in C.	CHALK AND TALK	https://www.geeksforgeeks.org/basics-file-handling-c/	E Balagurusamy (2008), "Computing Fundamentals & C Programming" - Tata McGraw- Hill Education Pvt. Ltd.

Faculty Signature

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Coordinator

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Head of the Department

Report ID



DEPARTMENT OF B.SC. COMPUTER SCIENCE WITH DATA ANALYTICS (Unaided)

LESSON PLAN-THEORY

ACADEMIC YEAR:2023-2024

Faculty Name : PRAVEENA B BALASUBRAMANIAN,

Year/Semester/Section : I/I/All

Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS

Subject Code & Name : 23UDA1CL & CORE PRACTICAL 1 - PROGRAMMING FOR PROBLEM SOLVING USING C LABORATORY

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	20/06/2023	4	Variables	LAB	https://www.w3schools.com/c/c_variables.php	1. Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
2	22/06/2023	3	Example of basic program using variables	LAB	https://www.w3schools.com/c/c_variables.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
3	23/06/2023	2	Data Types	LAB	https://www.programiz.com/c-programming/c-data-types	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
4	26/06/2023	5	Example program using datatypes	LAB	https://www.programiz.com/c-programming/c-data-types	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
5	27/06/2023	2	To develop a C program to perform variables and datatypes.	LAB	https://www.programiz.com/c-programming/c-data-types	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
6	28/06/2023	4	Operators	LAB	https://www.programiz.com/c-programming/c-operators	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.



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7	03/07/2023	3	Arithmetic operators	LAB	https://www.geeksforgeeks.org/arithmetic-operators-in-c/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
8	04/07/2023	2	To develop a C program to perform various operators.	LAB	https://www.geeksforgeeks.org/arithmetic-operators-in-c/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
9	05/07/2023	5	Mathematical Functions	LAB	https://www.w3schools.com/c/c_math.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
10	06/07/2023	2	Examples of Mathematical functions	LAB	https://www.w3schools.com/c/c_math.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
11	07/07/2023	4	Develop a C program to perform mathematical function	LAB	https://www.geeksforgeeks.org/ceil-floor-functions-cpp/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
12	11/07/2023	3	Examples of Mathematical functions	LAB	https://www.w3schools.com/c/c_math.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
Unit 2						
13	12/07/2023	2	Conditional statements	LAB	https://www.w3schools.com/c/c_conditions.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
14	13/07/2023	5	Examples using If, If else statements	LAB	https://www.w3schools.com/c/c_conditions.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
15	14/07/2023	2	Examples and syntax explanation of conditional statements	LAB	https://www.dotnettricks.com/learn/c/conditional-statements-if-else-switch-ladder	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
16	17/07/2023	4	To develop various C Programs using Conditional statements.	LAB	https://www.w3resource.com/c-programming-exercises/conditional-statement/index.php	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.



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S.N o	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
17	19/07/2023	3	Basics of control structure	LAB	https://www.freetimelearning.com/c-language/c-language-control-structure-s-statements.php	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
18	20/07/2023	2	Syntax explanation	LAB	https://www.geeksforgeeks.org/control-structures-in-programming-languages/	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
19	21/07/2023	5	To develop various C Programs using Control Structures.	LAB	https://codeahoy.com/learn/cprogramming/ch12/	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
20	24/07/2023	2	Switch case	LAB	https://www.programiz.com/c-programming/c-switch-case-statement	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson
Unit 3						
21	25/07/2023	4	Examples of switch case	LAB	https://www.programiz.com/c-programming/c-switch-case-statement	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson
22	27/07/2023	3	Syntax and uses of switch case	LAB	https://www.programiz.com/c-programming/c-switch-case-statement	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson
23	28/07/2023	2	To develop a c program using switch case	LAB	https://www.programiz.com/c-programming/c-switch-case-statement	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson
24	31/07/2023	5	User Defined Function	LAB	https://www.programiz.com/c-programming/c-user-defined-functions	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson
25	01/08/2023	2	Examples of user defined function	LAB	https://www.programiz.com/c-programming/c-user-defined-functions	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson



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S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
26	02/08/2023	4	Uses of user defined functions	LAB	https://www.programiz.com/c-programming/c-user-defined-functions	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson
27	07/08/2023	3	To Develop a C program to illustrate user defined function.	LAB	https://www.programiz.com/c-programming/c-user-defined-functions	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson
28	08/08/2023	2	String manipulation	LAB	https://www.programiz.com/c-programming/string-handling-functions	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
29	09/08/2023	5	String functions with examples	LAB	https://www.w3schools.com/c/c_strings_functions.php	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
30	10/08/2023	2	Example programs	LAB	https://www.w3schools.com/c/c_strings_functions.php	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
31	11/08/2023	4	To develop a C program to manipulate strings using String function.	LAB	https://dyclassroom.com/c-string-manipulation	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
32	16/08/2023	3	pointer	LAB	https://www.geeksforgeeks.org/c-pointers/	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
33	17/08/2023	2	How to declare a pointer and examples	LAB	https://www.geeksforgeeks.org/c-pointers/	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
34	18/08/2023	5	example program using pointers	LAB	https://www.geeksforgeeks.org/c-pointers/	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
35	19/08/2023	2	To Develop a C program to perform pointer.	LAB	https://www.geeksforgeeks.org/c-pointers/	Henry Mullish & Herbert L Cooper, (1996), "The Spirit of C", Jaico Publication House.
36	21/08/2023	4	Array explanation	LAB	https://www.w3schools.com/c/c_arrays.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
37	23/08/2023	3	example program using array of structures	LAB	https://www.javatpoint.com/array-of-structures-in-c	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.



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S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
38	24/08/2023	2	Array of structures	LAB	https://www.codesansar.com/c-programming/array-structure.htm	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
39	25/08/2023	5	To develop a C program using Array of Structures.	LAB	https://www.codesansar.com/c-programming/array-structure.htm	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
Unit 4						
40	29/08/2023	2	Files	LAB	https://www.geeksforgeeks.org/basics-file-handling-c/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
41	30/08/2023	4	basics of file handling	LAB	https://www.geeksforgeeks.org/basics-file-handling-c/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
42	01/09/2023	3	To develop a C program to calculate electricity bill using files.	LAB	https://www.sanfoundry.com/c-program-calculate-electricity-bill/#:~:text=The%20electricity%20bill%20is%20calculated,is%20190%C3%9710%20%3D%201900Rs.	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
43	04/09/2023	2	Example programs	LAB	https://www.programiz.com/c-programming/examples	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
44	05/09/2023	5	Example program using files	LAB	https://www.programiz.com/c-programming/examples	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
45	07/09/2023	2	Encryption and decryption using files	LAB	https://www.geeksforgeeks.org/basics-file-handling-c/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
Unit 5						



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S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
46	08/09/2023	4	Examples of files	LAB	https://www.geeksforgeeks.org/basics-file-handling-c/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
47	12/09/2023	3	To develop a C program to encrypt and decrypt a File.	LAB	https://codescracker.com/c/program/c-program-encrypt-file.htm	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
48	13/09/2023	2	Example programs using conditional statements	LAB	https://www.w3schools.com/c/c_conditions.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
49	14/09/2023	5	Example programs using conditional statements	LAB	https://www.w3schools.com/c/c_conditions.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
50	15/09/2023	2	Program on else if ladder	LAB	https://www.geeksforgeeks.org/c-if-else-if-ladder/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
51	18/09/2023	4	Example program using Switch statement	LAB	https://www.javatpoint.com/c-switch	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
52	20/09/2023	3	Example programs	LAB	https://www.programiz.com/c-programming/examples	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
53	21/09/2023	2	Program using variables and data types	LAB	https://www.geeksforgeeks.org/data-types-in-c/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
54	22/09/2023	5	program to perform various operators.	LAB	https://www.programiz.com/c-programming/c-operators	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
55	25/09/2023	2	Revision on operator programs	LAB	https://www.programiz.com/c-programming/c-operators	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
56	26/09/2023	4	Revision on structures	LAB	https://www.geeksforgeeks.org/structures-c/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
57	03/10/2023	3	Revision on pointers	LAB	https://www.geeksforgeeks.org/c-pointers/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.



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S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
58	04/10/2023	2	program to perform mathematical function.	LAB	https://www.javatpoint.com/c-math	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
59	05/10/2023	5	C Programs using Conditional statements	LAB	https://www.w3resource.com/c-programming-exercises/conditional-statement/index.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
60	06/10/2023	2	Programs using Control Structures	LAB	https://www.geeksforgeeks.org/control-structures-in-programming-languages/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
61	07/10/2023	4	program using switch case	LAB	https://www.javatpoint.com/c-switch	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
62	10/10/2023	3	user defined function	LAB	https://www.programiz.com/c-programming/c-user-defined-functions	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
63	11/10/2023	2	Various user defined function	LAB	https://www.programiz.com/c-programming/c-user-defined-functions	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
64	12/10/2023	5	Manipulate strings using String function	LAB	https://www.programiz.com/c-programming/string-handling-functions	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
65	13/10/2023	2	C program to calculate electricity bill using files	LAB	https://codeforwin.org/c-programming/c-program-to-calculate-electricity-bill	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
66	16/10/2023	4	Revision on all programs	LAB	https://www.programiz.com/c-programming/examples	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
67	18/10/2023	3	Revision on all programs	LAB	https://www.programiz.com/c-programming/examples	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.



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S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
68	19/10/2023	2	program to encrypt and decrypt a File	LAB	https://codescracker.com/c/program/c-program-encrypt-file.htm	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
69	20/10/2023	5	Revision	LAB	https://www.javatpoint.com/c-programs	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
70	24/10/2023	2	Structures in c programming	LAB	https://www.geeksforgeeks.org/structures-c/	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
71	25/10/2023	4	Pointers in c	LAB	https://www.w3schools.com/c/c_pointers.php	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
72	27/10/2023	3	Revision on all programs	LAB	https://www.programiz.com/c-programming/examples	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
73	30/10/2023	2	Revision on all programs	LAB	https://www.programiz.com/c-programming/examples	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.
74	31/10/2023	5	Revision on all programs	LAB	https://www.programiz.com/c-programming/examples	Ashok N Kamthane (2002), "Programming with ANSI and Turbo C", Pearson.


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Coordinator

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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : VANITHA R.
Year/Semester/Section : I/I/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 23EVS101 & ENVIRONMENTAL STUDIES

S.No	Date	Hours	Topics	Delivery Methods	Links	Book Referred
Unit 1						
1	21/6/2023	5	Definition: Scope and importance, need of public awareness	CHALK AND TALK, LINK	https://legaledhya.com/scope-and-importance-of-environmental-studies/	A Text Book of Environmental Studies I.P And
2	27/6/2023	1	Natural resources and Types of Natural resources	CHALK AND TALK, LINK	https://www.embibe.com/natural-resources/	A Text Book of Environmental Studies I.P And
3	29/6/2023	5	Forest Resources, Water Resources	CHALK AND TALK, LINK	https://en.wikipedia.org/wiki/Water_resources	A Text Book of Environmental Studies I.P And
4	06/07/2023	1	Mineral Resources and Food Resources	CHALK AND TALK, LINK	https://www.pharmaguideline.com/2012/01/different-natural-resources.html	A Text Book of Environmental Studies I.P And
5	10/07/2023	5	Energy resources	CHALK AND TALK, LINK	https://byjus.com/physics/natural-sources-of-energy/	A Text Book of Environmental Studies I.P And
6	14/07/2023	1	Land Resources	CHALK AND TALK, LINK	https://www.slideshare.net/SandipKumarSahoo/land-resource-environmental-science	A Text Book of Environmental Studies I.P And
Unit 2						
7	18/07/2023	5	Concepts of Eco Systems-Structure and functions of ecosystem	CHALK AND TALK, LINK	https://www.pharmaguideline.com/2007/01/concept-of-ecosystem-structure-and.html	A Text Book of Environmental Studies I.P And
8	24/07/2023	1	Procedures, Consumers and decomposers	CHALK AND TALK, LINK, FILES	https://study.com/academy/lesson/producers-consumers-decomposers-of-ecosystems.html	A Text Book of Environmental Studies I.P And
9	26/07/2023	5	Structure and Functional of following Ecosystems : Forest Ecosystems	CHALK AND TALK, LINK	https://www.environmentstudy.com/plants-and-trees-of-forest-ecosystem-components-types-examples/	A Text Book of Environmental Studies I.P And



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21	19/09/2023	5	Solid Waste Managements: Causes ,Effects, Control measures of urban and industrial waste, Role of individuals in prevention of pollution ,pollution Case Studies.Domestic waste water	CHALK AND TALK LINK	https://www.kongunaducollege.ac.in/EC/Files/uploads/2023/09/21/20230921_11PM.pdf?sequence=1&size=20M	A Text Book of Environmental Studies :TP And
22	20/09/2023	1	Effluent From paper mills and dyeing, Cement Pollution	CHALK AND TALK LINK	https://www.kongunaducollege.ac.in/EC/Files/uploads/2023/09/20/20230920_11PM.pdf?sequence=1&size=20M	A Text Book of Environmental Studies :TP And
23	27/09/2023	5	Disaster Management:Food Drought,Earth Quake	CHALK AND TALK LINK	https://www.kongunaducollege.ac.in/EC/Files/uploads/2023/09/27/20230927_11PM.pdf?sequence=1&size=20M	A Text Book of Environmental Studies :TP And
24	06/10/2023	1	Disaster Management:Cyclone and Landslides	CHALK AND TALK LINK	https://www.kongunaducollege.ac.in/EC/Files/uploads/2023/10/06/20231006_11PM.pdf?sequence=1&size=20M	A Text Book of Environmental Studies :TP And
Unit 5						
25	09/10/2023	5	Sustainable Development,smart City,Urban planning,town planning,urban problem related to energy,Water Conservation: Rain water harvesting and watershed Management.	CHALK AND TALK LINK	https://www.kongunaducollege.ac.in/EC/Files/uploads/2023/10/09/20231009_11PM.pdf?sequence=1&size=20M	A Text Book of Environmental Studies :TP And
26	15/10/2023	1	Resettlement and rehabilitation of people,Its problems and Concerns,Case Studies Narmatha valley project .Environmental ethics,issues,and possible solution.Climate Change,global warming,Ozone layer depletion,,Acid Rain, nuclear accidents and holocauste,Case study	CHALK AND TALK LINK	https://www.kongunaducollege.ac.in/EC/Files/uploads/2023/10/15/20231015_11PM.pdf?sequence=1&size=20M	A Text Book of Environmental Studies :TP And
27	17/10/2023	5	hiroshima and Nagasaki, Cheronobyl,Consumerism and waste products,environmental protection Acts,Air pollution Acts,eater pollution Acts,Wild life Protection Act,,Wild life protection Act,,forest Conservation Act,issues involved in enforcement of environmental legislation.	CHALK AND TALK LINK	https://www.kongunaducollege.ac.in/EC/Files/uploads/2023/10/17/20231017_11PM.pdf?sequence=1&size=20M	A Text Book of Environmental Studies :TP And



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28	24/08/2023	1	public Awareness,Human population and the environment,population growth and Distribution,population Explosion	CHALK AND TALK LINK	https://www.scribd.com/document/160218901/ENV-UNIT-4.pdf	A Text Book of Environmental Studies LP and
29	26/08/2023	5	Family welfare programme, environment and human health, human rights, value education, HIV/AIDS ,women and Child welfare, Role of Information Technology in Environment and Human health	CHALK AND TALK LINK	https://www.scribd.com/document/160218901/ENV-UNIT-4.pdf	A Text book of Environmental Studies LP And



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : NARMADHA S.
Year/Semester/Section : II/III/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UDA303 & CORE PAPER 3 - OBJECT ORIENTED PROGRAMMING IN JAVA

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	19/06/2023	1	Introduction to Object Oriented Paradigm	CHALK AND TALK	https://www.coursera.org/learn/software-architecture-design/object-oriented-paradigm/lecture/5-to-492/object-oriented-paradigm/520-00-adoption-of-object-oriented-programming-in-languages	The Complete Reference JAVA
2	20/06/2023	5	Basic Concepts of Object Oriented Programming Java	CHALK AND TALK	https://www.javapoint.com/java-oop-concepts	The Complete Reference Java
3	21/06/2023	1	Application of Object Oriented Programming	CHALK AND TALK	https://www.interviewbit.com/blog/applications-of-oop/	Programming with Java 10 in Edition, E Balagurusamy
4	23/06/2023	2	Characteristics of Java	CHALK AND TALK	https://www.javapoint.com/features-of-java	Programming with Java 10 in Edition, E Balagurusamy
5	27/06/2023	1	The Java Environment	CHALK AND TALK	https://www.slideshare.net/joemuchacho/java-environment	Programming with Java 10 in Edition, E Balagurusamy
6	28/06/2023	5	Java Syntax - Java Comments	PPT	https://www.javapoint.com/java-comments	Java: The Complete Reference
7	30/06/2023	1	Java Variables	PPT	https://www.w3schools.com/java/java_variables.asp	Programming with Java 10 in Edition, E Balagurusamy
8	04/07/2023	2	Java Data Types	CHALK AND TALK	https://www.programiz.com/java-programming/variables-primitive-data-types	Programming with Java 10 in Edition, E Balagurusamy
9	06/07/2023	1	Java Type Casting	CHALK AND TALK	https://www.w3schools.com/java/java_type_casting.asp	Programming with Java 10 in Edition, E Balagurusamy
10	07/07/2023	5	Java Operators	CHALK AND TALK	https://www.w3schools.com/java/java_operators.asp	Programming with Java 10 in Edition, E Balagurusamy
11	10/07/2023	1	Java Strings - Java String function	CHALK AND TALK	https://www.w3schools.com/java/java_string.asp	Programming with Java 10 in Edition, E Balagurusamy
12	12/07/2023	2	Java Math function - Java Booleans.	CHALK AND TALK	https://www.javapoint.com/java-math , https://www.w3schools.com/java/java_booleans.asp	Java: The complete reference
Unit 2						
13	14/07/2023	1	Java If...Else, Java Switch	CHALK AND TALK	https://www.geeksforgeeks.org/decision-making-if-else-switch-break-continue-jump/	Programming with Java 10 in Edition, E Balagurusamy
14	17/07/2023	5	Java While Loop Java For Loop	PPT	https://www.javapoint.com/java-while-loop	Programming with Java 10 in Edition, E Balagurusamy
15	18/07/2023	1	Java Break/Continue	CHALK AND TALK	https://www.geeksforgeeks.org/break-and-continue-statement-in-java/	Programming with Java 10 in Edition, E Balagurusamy
16	20/07/2023	2	Java Arrays	PPT	https://www.w3schools.com/java/java_arrays.asp	Programming with Java 10 in Edition, E Balagurusamy

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Coordinator

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17	24/07/2023	1	Java Methods -Java Method Parameters, Java Method Overloading	CHALK AND TALK	https://www.w3schools.com/java/java_methods.asp	Programming with Java (6 th Edition). E Balagurusamy
18	25/07/2023	5	Java Scope -Java Recursion, Java Classes/Objects -Java	CHALK AND TALK	https://www.w3schools.com/java/java_recursion.asp	Programming with Java (6 th Edition). E Balagurusamy
19	26/07/2023	1	Class Attributes, Java Class Methods	CHALK AND TALK	https://www.w3schools.com/java/java_class_attributes.asp	Programming with Java (6 th Edition). E Balagurusamy
20	28/07/2023	2	Java Constructors, Java Modifiers, Java Encapsulation	CHALK AND TALK	https://www.geeksforgeeks.org/encapsulation-in-java/	Programming with Java (6 th Edition). E Balagurusamy
21	01/08/2023	1	Java Packages / API	PPT	https://www.w3schools.com/java/java_packages.asp	Programming with Java (6 th Edition). E Balagurusamy
22	02/08/2023	5	Java Inheritance	PPT	https://www.geeksforgeeks.org/inheritance-in-java/	Java :The Complete Reference
23	08/08/2023	2	Java Polymorphism, Java Inner Classes	CHALK AND TALK	https://www.w3schools.com/java/java_polymorphism.asp https://www.w3schools.com/java/java_inner_classes.asp	Java : The complete Reference
24	10/08/2023	1	Java Abstraction -Java Interface, Java User Input.	CHALK AND TALK	https://www.w3schools.com/java/java_interface.asp	Programming with Java (6 th Edition). E Balagurusamy
Unit 3						
25	11/08/2023	5	Exceptions	CHALK AND TALK	https://www.geeksforgeeks.org/exceptions-in-java/	Programming with Java (6 th Edition). E Balagurusamy
26	14/08/2023	1	exception hierarchy	CHALK AND TALK	https://docs.oracle.com/javase/8/docs/api/java/lang/package-tree.html	Java : The complete reference
27	17/08/2023	2	throwing and catching exceptions	CHALK AND TALK	https://en.wikibooks.org/wiki/Java_Programming/Throwing_and_Catching_Exceptions	Programming with Java (6 th Edition). E Balagurusamy
28	19/08/2023	1	built-in exceptions, creating own exceptions	CHALK AND TALK	https://www.geeksforgeeks.org/built-exceptions-java-examples/	Java :The Complete Reference
29	21/08/2023	5	Stack Trace Elements	CHALK AND TALK	https://www.javatpoint.com/java-stack-trace	Java : The Complete reference
30	22/08/2023	1	Input / Output Basics	PPT	https://www.javatpoint.com/java-io	Java :The Complete Reference
31	24/08/2023	2	Streams	PPT	https://www.tutorialspoint.com/java8/java8_streams.htm	Programming with Java (6 th Edition). E Balagurusamy
32	30/08/2023	5	Java File Handling	PPT	https://www.geeksforgeeks.org/file-handling-in-java/	Java :The complete Reference
33	31/08/2023	1	Java Files -Java Create files	CHALK AND TALK	https://www.w3schools.com/java/java_files_create.asp	Programming with Java (6 th Edition). E Balagurusamy
34	04/09/2023	2	Write Files	CHALK AND TALK	https://www.w3schools.com/java/java_files_create.asp	Java :The complete Reference
35	07/09/2023	1	Java Read Files	CHALK AND TALK	https://www.w3schools.com/java/java_files_read.asp	Java :The complete Reference
36	08/09/2023	5	Java Delete Files	CHALK AND TALK	https://www.w3schools.com/java/java_files_delete.asp	Java :The complete Reference
37	11/09/2023	1	Differences between multi-threading and multitasking	PPT	https://www.geeksforgeeks.org/difference-between-multi-tasking-and-multi-threading/	Java : The complete Reference
38	13/09/2023	2	generic methods	PPT	https://docs.oracle.com/javase/tutorial/java/generics/methods.html#text=Generic%20methods%20are%20methods%20that%20use%20generic%20classes%20constructors	Java :The Complete Reference
Unit 4						
39	15/09/2023	1	thread life cycle	CHALK AND TALK	https://www.javatpoint.com/thread-life-cycle-of-a-thread	Programming with Java (6 th Edition). E Balagurusamy



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40	18/09/2023	5	creating threads	CHALK AND TALK	https://www.javatpoint.com/life-cycle-of-a-thread	Programming with Java (6th Edition), E Balagurusamy
41	19/09/2023	1	synchronizing threads	CHALK AND TALK	https://www.scaler.com/topics/thread-synchronization-in-java/	Programming with Java (6th Edition), E Balagurusamy
42	21/09/2023	2	Inter-thread communication	CHALK AND TALK	https://www.javatpoint.com/inter-thread-communication-example	Programming with Java (6th Edition), E Balagurusamy
43	25/09/2023	1	daemon threads	CHALK AND TALK	https://www.geeksforgeeks.org/daemon-thread-java/	Java :The complete Reference
44	26/09/2023	5	thread groups	CHALK AND TALK	https://www.javatpoint.com/threadgroup-in-java	Java :The complete Reference
45	27/09/2023	1	Generic Programming	PPT	https://www.geeksforgeeks.org/generics-in-java/	Java :The Complete Reference
46	04/10/2023	2	Generic classes	PPT	https://www.geeksforgeeks.org/generic-class-in-java/?ref=ml_lbp	Java :The Complete Reference
47	06/10/2023	1	Bounded Types	CHALK AND TALK	https://www.geeksforgeeks.org/bounded-types-generics-java/	Java :The Complete Reference
48	07/10/2023	5	Restrictions and Limitations.	CHALK AND TALK	https://www.geeksforgeeks.org/restrictions-on-generics-in-java/	Java :The Complete Reference
49	09/10/2023	1	Basics of event handling, event handlers	CHALK AND TALK	https://www.javatpoint.com/event-handling-in-java	Programming with Java (6th Edition), E Balagurusamy
Unit 5						
50	11/10/2023	2	Graphics programming	CHALK AND TALK	https://www.javatpoint.com/Graphics-in-applet	Programming with Java (6th Edition), E Balagurusamy
51	13/10/2023	1	Applet Programming, AWT Classes, Frame	PPT	https://www.javatpoint.com/java-applet	Programming with Java (6th Edition), E Balagurusamy
52	16/10/2023	5	working with 2D shapes	CHALK AND TALK	https://www.javatpoint.com/javafx-2d-shapes	Java :The complete Reference
53	17/10/2023	1	Using color, fonts, and images	CHALK AND TALK	https://www.oreilly.com/library/view/java-awt-reference/9781565922402/06_chapter-03.html	Programming with Java
54	19/10/2023	2	adapter classes	PPT	https://www.javatpoint.com/java-adapter-classes	Java :The complete Reference
55	24/10/2023	1	AWT event hierarchy	PPT	https://www.educba.com/what-is-awt-in-java/	Java :The complete Reference
56	25/10/2023	5	Introduction to Swing	CHALK AND TALK	https://www.geeksforgeeks.org/introduction-to-java-swing/	Programming with Java (6th Edition), E Balagurusamy
57	26/10/2023	1	layout management	CHALK AND TALK	https://www.javatpoint.com/java-layout-manager	Programming with Java (6th Edition), E Balagurusamy
58	30/10/2023	2	Swing Components	CHALK AND TALK	https://www.javatpoint.com/java-swing	Programming with Java (6th Edition), E Balagurusamy

Faculty Signature

Coordinator

Head of the Department



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : NARMADHA S.
Year/Semester/Section : II/III/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UDA3CN & CORE PRACTICAL 3 - OBJECT ORIENTED PROGRAMMING IN JAVA LAB

S.No	Date	Theme	Topic	Delivery Methods	Media	Read Material
Unit 1						
1	08/08/2023	*	Basic Structure of JAVA program	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
2	08/08/2023	*	Programming with Variables	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
3	08/08/2023	*	Programming with Data types	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
4	08/08/2023	*	Write a java program to receive the input from user.	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
5	08/08/2023	*	Develop a java program with operators	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
6	08/08/2023	*	Write a program to print "Hello World" on the screen and receive input from the user and display a given string on the screen.	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
7	08/08/2023	*	Java program to check if a number is positive or negative.	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
8	08/08/2023	*	Reverse a number in java with modulo operator	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
9	08/08/2023	*	Java program to find GCD of two numbers	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
10	08/08/2023	*	Programming with operators	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
11	08/08/2023	*	Programming with Conditional, Bitwise operators	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
12	08/08/2023	*	perform string manipulation operations	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
13	08/08/2023	*	Java Program to perform various Arithmetic Operations on two Integer given by the User	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
14	08/08/2023	*	Type conversions in Expressions Discussion	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
15	08/08/2023	*	Develop a java program with math functions.	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
16	08/08/2023	*	Java Program to Check Whether an Alphabet is Vowel or Consonant	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
Unit 2						
17	08/08/2023	*	Programming with if...else & Nested if	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
18	08/08/2023	*	Programming Decision making, branching	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
19	08/08/2023	*	Else - If Ladder discussion with example programs	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
20	08/08/2023	*	Develop a java program using arrays	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
21	08/08/2023	*	Find the Standard Deviation for a given set of numbers Discussion	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
22	08/08/2023	*	Program with Looping, while statements	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
23	08/08/2023	*	Develop a java program with Do, for loops discussion	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert
24	08/08/2023	*	Develop a java program with Do, for loops	1.00	https://www.programiz.com/java/tutorial	Programming with Java 10th Edition, T. H. Robert





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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : SUMITHA P,
Year/Semester/Section : II/III/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UDA3A3 & ALLIED PAPER 3: FUNDAMENTALS OF DATA ANALYTICS

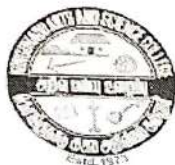
Subject Code & Name			22UASAS3 & ALLIED PAPER 5: FUNDAMENTALS OF DATA ANALYTICS			Book Reference
S.No	Date	Hours	Topic(s)	Delivery Methods	Links	
Unit 1						
1	19/06/2023	2	Introduction to Data Analytics	PPT, CHALK AND TALK LINK	https://cancerfamily.com/en/blog/data-analytics/what-is-data-analytics/	DATA ANALYTICS: WIS AND, WAGISTON AGE
2	20/06/2023	4	Pattern Recognition	PPT LINK	https://www.geckkarpedia.org/pattern-recognition-introduction/	DATA ANALYTICS: WIS AND, WAGISTON AGE
3	21/06/2023	3	Data Processing Chain	PPT LINK		



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : VANITHA R,
Year/Semester/Section : II/III/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UGC3S1 & SKILL BASED SUBJECT 1 - CYBER SECURITY

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	20/06/2023	1	Introduction To Cyber Security, Definition of Cyber Security, Why Cyber Security is Important	CHALK AND TALK, LINK	https://www.simplilearn.com/tutorials/cyber-security-tutorial/what-is-cyber-security	Cyber Security :Kongunadu college of Arts And Science
2	22/06/2023	1	Layers of Cyber Security, Evolution Of Cyber Security	CHALK AND TALK, LINK	https://www.intrasource.co.uk/blog/it-security/7-layers-of-cyber-security/	Cyber Security :Kongunadu College of Arts and Science
3	28/06/2023	1	Cyber Hacking	CHALK AND TALK, LINK	https://www.kaspersky.com/resource-center/definitions/what-is-hacking	Cyber Security:Kongunadu College of Arts and Science
4	03/07/2023	1	Cyber Fraud	CHALK AND TALK, LINK	https://www.delta-net.com/knowledge-base/compliance/fraud-awareness/what-is-cyber-fraud/	Cyber security:Kongunadu College of Arts and Science
5	07/07/2023	1	Definition -Different Modes Of Cyber Security	CHALK AND TALK, LINK	https://www.scaler.com/topics/cyber-security/what-is-cyber-security/	Cyber Security-Kongunadu College Of Arts And Science
6	11/07/2023	1	Cyber Fraud in India, Cyber Pornography	CHALK AND TALK, LINK	https://www.jetir.org/papers/JETIR1805227.pdf	Cyber Security-Kongunadu College Of Arts And Science
Unit 2						
7	17/07/2023	1	Cyber Terrorism-Definition	CHALK AND TALK, LINK	https://www.techtarget.com/searchsecurity/definition/cyberterrorism	Cyber Security-Kongunadu College of Arts and Science
8	19/07/2023	1	Cyber Crime: what is cyber Crime	CHALK AND TALK, LINK	https://en.wikipedia.org/wiki/Cybercrime	CyberSecurity :Kongunadu Arts and science College
9	25/07/2023	1	Cyber Crime Preventive Methods	CHALK AND TALK	https://pepc.gov.in/files/1.pdf	Cyber Security :Kongunadu College of Arts and Science
10	27/07/2023	1	Preventive Methods of Individuals	CHALK AND TALK, LINK	https://www.kaspersky.com/resource-center/threats/what-is-cybercrime	Cyber Security :Kongunadu college of Arts and Science
11	02/08/2023	1	Kinds of Cyber Crimes	CHALK AND TALK, LINK	https://www.kaspersky.com/resource-center/threats/what-is-cybercrime	Cyber Security :Kongunadu College of Arts And Science

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12	07/08/2023	1	Malware And its Types, Cyber Attacks	CHALK AND TALK, LINK	https://www.geeksforgeeks.org/malware-and-its-types/	Cyber Security:Kongunadu College of Arts And Science
Unit 3						
13	11/08/2023	1	Internet Mobile Phone and E-commerce Security issues	CHALK AND TALK	https://www.cloudways.com/blog/ecommerce-security-tips/	Cyber security:Kongunadu Collrgr of arts and Science
14	16/08/2023	1	Data Theft and Punishments of Data theft	CHALK AND TALK, LINK	https://www.legalserviceindia.com/article/I267-Data-Theft-in-Cyber-Space.html	Cyber Security:Kongunadu College of Arts And Science
15	21/08/2023	1	Thefts of Internet Hours, Internet Safety Tips for Children and Parents	CHALK AND TALK, LINK	https://www.safewise.com/resources/internet-safety-kids/	Cyber Security :Kongunadu College of Arts and Science
16	23/08/2023	1	Mobile Phone Privacy	CHALK AND TALK, LINK	https://www.vmware.com/in/topics/glossary/content/mobile-device-security.html	Cyber Security : Kongunadu College of Arts And Science
17	30/08/2023	1	E-Commerce Security Issues	CHALK AND TALK, LINK	https://www.oussourceaccelerator.com/articles/e-commerce-security-issues/	Cyber Security :Kongunadu College Of Arts and Science
Unit 4						
18	01/09/2023	1	Email and Social Media Issues	CHALK AND TALK	https://sendpulse.com/knowledge-base/email-service/general/how-to-use-social-media-email	Cyber Security: Kongunadu College Of Arts And Science
19	08/09/2023	1	Aspects Of Social Media	CHALK AND TALK, LINK	https://www.investopedia.com/terms/s/social-media.asp	Cyber Security : Kongunadu College Of Arts And Science
20	12/09/2023	1	The Vicious Cycle of Unhealthy social media use	CHALK AND TALK, LINK	https://www.issuewire.com/blog/social-media-and-mental-health-the-vicious-cycle	Cyber Security : Kongunadu College of Arts and Science
21	18/09/2023	1	Modifying social media use to improve mental health.	CHALK AND TALK	https://www.helpguide.org/articles/mental-health/social-media-and-mental-health.htm	Cyber Security: kongunadu College of arts and Science
22	20/09/2023	1	Computer Virus, Antivirus .	CHALK AND TALK, LINK	https://www.proofpoint.com/us/threat-reference/computer-viruses	Cyber Security:Kongunadu College of arts and Science
23	26/09/2023	1	Firewalls: How firewalls work and Types Of firewalls	CHALK AND TALK	https://www.checkpoint.com/cyber-hub/network-security/what-is-firewall/	Cyber Security:Kongunadu College Of Arts and Science
Unit 5						
24	03/10/2023	1	Cyber Forensics Digital Footprints and Cyber Law: What Does a Digital Footprint mean?	CHALK AND TALK, LINK	https://www.coursera.org/in/articles/computer-forensics	Cyber Security :Kongunadu College of Arts And Science
25	07/10/2023	1	Web Browsing and digital footprints, Digital footprints Examples.	CHALK AND TALK	https://www.kaspersky.com/resource-center/definitions/what-is-a-digital-footprint	Cyber Security:Kongunadu College of Arts and Science



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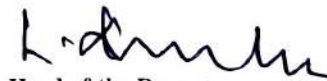
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26	10/10/2023	1	How to protect your Digital footprint,how to erase digital footprints	CHALK AND TALK, LINK	https://www.allstateidentityprotection.com/content-hubs/how-can-you-protect-and-reduce-your-digital-footprint	Cyber Security:Kongunadu College of Arts And Science
27	16/10/2023	1	Browsing Extensions and Search Engine Deletion	CHALK AND TALK, LINK	https://www.bleepingcomputer.com/news/technology/chrome-browser-extension-lets-you-remove-specific-sites-from-search-results/	Cyber Security: kongunadu College of arts and Science
28	18/10/2023	1	Cyber Crimes and Cyber Laws, Common Cyber Crimes and Application Legal provision: A Snapshots	CHALK AND TALK, LINK	https://www.legalserviceindia.com/legal/article-9589-the-law-related-to-cyber-crimes-in-india.html	Cyber Security:Kongunadu College of arts and Science
29	25/10/2023	1	Cyber Law (IT Law) in India,The Information Technology Act of India 2000-Cyber Law and Punishments in India	CHALK AND TALK	https://www.proind.in/blog/cyber-laws-in-india-and-information-technology-act-all-you-need-to-know/	Cyber Security:Kongunadu College of Arts And Science
30	27/10/2023	1	Cyber Law and Punishments in India, Cyber Crime Preventive Guide to Users, Regulatory Authorities	CHALK AND TALK, LINK	https://www.legalserviceindia.com/legal/article-9589-the-law-related-to-cyber-crimes-in-india.html	Cyber Security:Kongunadu College of Arts And Science


Faculty Signature

Coordinator


Head of the Department



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : VANITHA R,
Year/Semester/Section : II/III/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UHR3N1 & NON MAJOR ELECTIVE PAPER - HUMAN RIGHTS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	22/06/2023	3	Definition, Meaning, Concepts of human rights	CHALK AND TALK LINK	https://www.humanrightscareers.com/issues/the-concept-of-human-rights/	Human Rights (2019) - Kongunadu College Of Arts and Science
2	23/06/2023	3	Kinds Of Human Rights,	CHALK AND TALK LINK	https://www.humanrightscareers.com/issues/what-kind-of-human-rights-exist/	Human Rights - Kongunadu College of Arts and Science
3	03/07/2023	3	Evaluation and protection of human Rights	CHALK AND TALK LINK	https://www.researchgate.net/publication/318551323_The_Evaluation_of_Human_Rights_An_Overview_in_Historical_Perspective	Human Rights - Kongunadu College of Arts and Science
4	04/07/2023	3	Rights In India	CHALK AND TALK LINK	https://en.wikipedia.org/wiki/Fundamental_rights_in_India	Human Rights (2019) by Kongunadu College of Arts And Science
5	11/07/2023	3	Development Of Human Rights under the United nations	CHALK AND TALK LINK	https://www.humanrightscareers.com/issues/whats-the-role-of-the-un-in-protecting-human-rights/	Human Rights by Kongunadu college of arts and science
Unit 2						
6	12/07/2023	3	united Nations and charted and Human Rights	CHALK AND TALK LINK	https://www.un.org/en/about-us/un-charter/full-text	Human Rights by Kongunadu College of arts and Science
7	19/07/2023	3	U.N Commission on Human Rights	CHALK AND TALK LINK	https://hyjus.com/free-ias-prep/united-nations-human-rights-council-unhcr/	Human Rights - Kongunadu College of Arts And Science
8	20/07/2023	3	Universal Declaration Of Human Rights	CHALK AND TALK LINK	https://hcr.nic.in/sites/default/files/UDHR_Eng_0.pdf	Human Rights - Kongunadu College of Arts and Science
9	27/07/2023	3	International Covenant on Civil	CHALK AND TALK LINK	https://en.wikipedia.org/wiki/International_Covenant_on_Civil_and_Political_Rights	Human Rights - Kongunadu College of Arts And Science
10	28/07/2023	3	Civil and Political Rights	CHALK AND TALK LINK	https://treaties.un.org/doc/Treaties/1976/03/19760323/197606-17/19760617/Ch_IV_04.pdf	Human Rights - Kongunadu Arts And Science
11	07/08/2023	3	Economic Social And Culture Rights: Economic and Social rights	PDF, CHALK AND TALK		Human Rights - Kongunadu College of Arts And Science
12	08/08/2023	3	Economic Social And Culture rights: Culture Rights	CHALK AND TALK FILES		Human Rights - Kongunadu College of Arts and Science
Unit 3						
13	16/08/2023	3	Human Rights And Fundamental Rights Constitution	CHALK AND TALK LINK	https://www.toppr.com/guides/civics/the-indian-constitution/rights-and-fundamental-rights/	Human Rights - Kongunadu College of Arts And Science
14	17/08/2023	3	Enactments regarding human Rights Law india: Introduction	CHALK AND TALK LINK	https://www.legalservicesindia.com/law-india/Human-Rights-Law-in-India.htm	Human Rights - kongunadu College of Arts And Science
15	23/08/2023	3	Enachments Regarding Human Rights Law in india: Types of Laws	CHALK AND TALK LINK	https://www.legalservicesindia.com/law-india/Human-Rights-law-in-India.htm	Human Rights - Kongunadu College of Arts And Science
16	24/08/2023	3	Enachments Regarding Human Rights Law In India: Seccions under Crimes regarding Human Rights	CHALK AND TALK LINK	https://www.legalservicesindia.com/law-india/Human-Rights-Law-in-India.htm	Human Rights - Kongunadu College of Arts And Science
17	01/09/2023	3	National Human Rights Commission	CHALK AND TALK LINK	https://vajiramandavi.com/question-upsc-notes-national-human-rights-commission-and-state-human-rights-commission/	Human Rights - Kongunadu College of Arts And Science
18	04/09/2023	3	State human Rights Commission	CHALK AND TALK LINK	https://vajiramandavi.com/question-upsc-notes-national-human-right-commission-and-state-human-right-commission/	Human Rights - Kongunadu College of Arts and Science
Unit 4						

[Signature]
Faculty Signature

Coordinator

[Signature]
Head of the Department



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19	12/09/2023	3	Aged Person and their Human Rights	CHALK AND TALK LINK	https://www.lawcolumn.in/rights-of-elderly-people/	Human Rights Kongunadu College of Arts And Science
20	13/09/2023	3	Aged persons and their Human rights: Section and punishments on the crime regarding Aged persons	CHALK AND TALK LINK	https://www.lawcolumn.in/rights-of-elderly-people/	Human Rights Kongunadu College of Arts And Science
21	20/09/2023	3	Human Rights of Persons with Disabilities	ONLINE-LINK	https://blog.ipleaders.in/disability-law-in-india/	
22	21/09/2023	3	human rights for disable persons india: Facilities Given from Government disscussion	ONLINE-LINK	https://www.bing.com/search?q=human+rights+for+disable+persons+india&qs=msform=QJBR&qs=1&gs=1&gs=0&pg=human+rights+for+disable+persons+india&sc=0.38&sk=&evd=FEBA3A67FC8D401E778FFAC7CAFDC4B&gclid=0&gclid=0&gclid=0	
23	03/10/2023	3	Tribal Human Rights in india	CHALK AND TALK LINK	https://sociallawtoday.com/rights-of-tribal-communities-in-india/	Human Rights Kongunadu College of Arts And Science
24	04/10/2023	3	Three Generation Human Rights	CHALK AND TALK LINK	https://blog.ipleaders.in/classification-of-human-rights/	Human Rights Kongunadu College of Arts And Science
25	10/10/2023	3	Three generation human rights: classification of human Rights : Natural Rights	CHALK AND TALK LINK	https://blog.ipleaders.in/classification-of-human-rights/	Human Rights Kongunadu College of Arts And Science
26	11/10/2023	3	Social Awareness and Responsibilities of Individuals	CHALK AND TALK LINK	https://byjus.com/commerce/what-is-social-responsibility/	Human Rights Kongunadu College of Arts And Science
Unit 5						
27	18/10/2023	3	Rights of women, child, Refugees and minorities	CHALK AND TALK LINK	https://legalsid.nimms.edu/rights-of-women-and-children-in-india/	Human Rights Kongunadu College of Arts And Science
28	19/10/2023	3	Social media And Human Rights	CHALK AND TALK LINK	https://www.abcnews.com/2011/08/using-social-media-promote-human-rights	Human Rights Kongunadu College of Arts And Science
29	27/10/2023	3	NGO's in protection of Human Rights	CHALK AND TALK LINK	https://www.lawcolumn.in/role-of-ngos-in-protection-of-human-rights-2/	Human Rights Kongunadu College of Arts And Science
30	30/10/2023	3	Rights to Election	CHALK AND TALK LINK	https://www.abcnews.com/elections	Human Rights Kongunadu College of Arts And Science



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22	19/07/2023	3	Applying Functions to Matrix Rows and Columns	PDF, CHALK AND TALK LINK	https://www.statology.org/apply-function-to-each-row/	"THE ART of R Programming" by Norman Matloff
23	20/07/2023	1	Applying Functions to Matrix Rows and Columns	CHALK AND TALK LINK	https://www.tutorialkart.com/r-tutorial/apply-function-to-each-element-of-matrix/#csub=0	"THE ART of R Programming" by Norman Matloff
24	20/07/2023	4	Adding and deleting rows and columns	LINK	https://www.e-sharpcorner.com/article/matrix-in-r-adding-rows+columns-and-accessing-elements-by-name-in-matrix-4/	"THE ART of R Programming" by Norman Matloff
25	24/07/2023	4	Vector/Matrix Distinction	CHALK AND TALK LINK	https://dicedown.org/programming/matrices.html	"THE ART of R Programming" by Norman Matloff
26	25/07/2023	2	Higher Dimensional arrays	PPT LINK	https://www.geckofgeeks.org/multidimensional-array-in-r/	"THE ART of R Programming" by Norman Matloff
27	26/07/2023	5	lists	PPT LINK	https://www.tutorialspoint.com/r/lists.htm	"THE ART of R Programming" by Norman Matloff
28	27/07/2023	3	Creating lists	CHALK AND TALK	https://www.javatpoint.com/r-lists#:-text=Lists%20creation,vector%20high%20%20low%20%20type	"THE ART of R Programming" by Norman Matloff
29	28/07/2023	1	General list operations	PPT LINK	https://www.geckofgeeks.org/operations-on-list-in-r-programming/	"THE ART of R Programming" by Norman Matloff
30	28/07/2023	4	Accessing list components and values	CHALK AND TALK LINK	https://www.geckofgeeks.org/r-list/	"THE ART of R Programming" by Norman Matloff
31	01/08/2023	4	Accessing list components and values	CHALK AND TALK	https://www.dummies.com/article/technology/programming-web-design/how-to-extract-components-from-list-in-r-141529/	"THE ART of R Programming" by Norman Matloff
32	02/08/2023	2	Applying functions to lists	PPT LINK	https://dataispretty.com/apply-function-each-list-element/#creation-of-example-data	"THE ART of R Programming" by Norman Matloff
33	04/08/2023	5	Applying functions to lists	PPT, CHALK AND TALK	https://www.projecpro.in/recipes/apply-multiple-functions-on-list-in-r-one-go#:-text=The%20apply%20%20and%20apply.function%20both%20return%20a%20vector	"THE ART of R Programming" by Norman Matloff
34	07/08/2023	3	Applying functions to lists	PPT, CHALK AND TALK LINK	https://www.projecpro.in/recipes/apply-multiple-functions-on-list-in-r-one-go#:-text=The%20apply%20%20and%20apply.function%20both%20return%20a%20vector	"THE ART of R Programming" by Norman Matloff
35	08/08/2023	1	Recursive lists.	PPT, CHALK AND TALK LINK	https://dicedown.org/programming/lists.html	"THE ART of R Programming" by Norman Matloff
36	08/08/2023	4	Recursive lists.	PPT, CHALK AND TALK LINK	https://dicedown.org/programming/lists.html	"THE ART of R Programming" by Norman Matloff
Unit 3						
37	10/08/2023	4	Creating Data Frames	CHALK AND TALK LINK, FILES	https://dataispretty.com/create-data-frame-in-r/#:-text=Create%20a%20Data.Frame%20in%20R,-Let%20us%20look%20at%20how%20to%20create%20a%20Data.Frame%20in%20R,Where%20is%20a%20Data.Frame%20in%20R	"THE ART of R Programming" by Norman Matloff
38	11/08/2023	2	Matrix-like operations in frames	CHALK AND TALK LINK, FILES	https://www.emilly.com/library/view/the-art-of-9781593273842/d00502.html	"THE ART of R Programming" by Norman Matloff
39	14/08/2023	5	Merging Data frames	CHALK AND TALK, VIDEOS, FILES	https://youtu.be/b6t6jK72_qI	"THE ART of R Programming" by Norman Matloff
40	16/08/2023	3	Applying functions to Data Frames	CHALK AND TALK, VIDEOS, FILES	https://youtu.be/5uqKkOy4	"THE ART of R Programming" by Norman Matloff
41	17/08/2023	1	Factors and Tables	VIDEOS, LINK, FILES	https://youtu.be/7WE9326PmU	"THE ART of R Programming" by Norman Matloff
42	17/08/2023	4	Factors and levels	LINK, FILES	https://www.geckofgeeks.org/r-factors/	"THE ART of R Programming" by Norman Matloff
43	19/08/2023	4	Common Functions used with factors	CHALK AND TALK, FILES	https://www.datamanager.in/r-programming/factor	"THE ART of R Programming" by Norman Matloff
44	19/08/2023	2	Working with tables	CHALK AND TALK LINK	https://bookdown.org/douvan125/br_data_analysis_4/working-with-tables-in-r.html	"THE ART of R Programming" by Norman Matloff
45	21/08/2023	5	Other factors and table related functions	CHALK AND TALK LINK	https://www.geckofgeeks.org/how-to-use-aggregate-function-in-r/	"THE ART of R Programming" by Norman Matloff
46	22/08/2023	3	Control statements	CHALK AND TALK LINK, FILES	https://www.geckofgeeks.org/control-statements-in-r-programming/	"THE ART of R Programming" by Norman Matloff
47	23/08/2023	1	Arithmetic and Boolean operators and values	CHALK AND TALK, FILES	https://www.javatpoint.com/r/operations	"THE ART of R Programming" by Norman Matloff
48	24/08/2023	4	Default Values for arguments	CHALK AND TALK LINK, FILES	https://www.javatpoint.com/r/function-default-arguments	"THE ART of R Programming" by Norman Matloff
49	24/08/2023	4	Returning Boolean Values	CHALK AND TALK LINK	https://www.educative.io/answers/what-are-boolean-logical-values-in-r	"THE ART of R Programming" by Norman Matloff
50	29/08/2023	4	Functions are objects	CHALK AND TALK LINK	https://rstudio-pkgs.github.io/manuals/lang/Objects.html	"THE ART of R Programming" by Norman Matloff
51	30/08/2023	2	Environment and scope issues, Writing Upstairs	CHALK AND TALK LINK	https://www.datamanager.in/r-programming/environments-scope	"THE ART of R Programming" by Norman Matloff
52	31/08/2023	3	Environment and scope issues, Writing Upstairs	CHALK AND TALK LINK	https://www.datamanager.in/r-programming/environments-scope	"THE ART of R Programming" by Norman Matloff
53	01/09/2023	3	Recursion, Replacement functions	CHALK AND TALK LINK	https://www.datamanager.in/r-programming/recursion	"THE ART of R Programming" by Norman Matloff

Faculty Signature

Coordinator

Head of the Department



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53	04/09/2023	1	Tools for Composing function code IN R	CHALK AND TALK	https://www.dataquest.io/blog/write-functions-in-r/	THE ART of R Programming by Norman Matloff
54	04/09/2023	4	*Math and Simulation in R.	CHALK AND TALK LINK	https://www.w3schools.com/r/r_math.asp	THE ART of R Programming by Norman Matloff
Unit 4						
55	07/09/2023	4	S3 Classes	CHALK AND TALK LINK	https://www.geckhofgeeks.org/s3-class-in-r-programming/	THE ART of R Programming by Norman Matloff
56	08/09/2023	2	S4 Classes	CHALK AND TALK LINK	https://www.programit.com/r/s4-class	THE ART of R Programming by Norman Matloff
57	11/09/2023	5	Managing your objects	CHALK AND TALK LINK	https://www.oreilly.com/library/view/the-art-of/9781593273842/ch09b04.html	THE ART of R Programming by Norman Matloff
58	12/09/2023	3	Input/output	CHALK AND TALK LINK	https://www.w3schools.com/r-programming/input-output	THE ART of R Programming by Norman Matloff
59	13/09/2023	1	Accessing keyboard and monitor	CHALK AND TALK	https://www.w3schools.com/r-programming/input-output	THE ART of R Programming by Norman Matloff
60	13/09/2023	4	Reading and Writing files	CHALK AND TALK LINK	https://www.w3schools.com/r-programming/input-output/google_vignette	THE ART of R Programming by Norman Matloff
61	15/09/2023	4	reading and writing files	CHALK AND TALK LINK	https://www.geckhofgeeks.org/reading-files-in-r-programming/	THE ART of R Programming by Norman Matloff
62	18/09/2023	2	Accessing the internet	CHALK AND TALK	https://www.oreilly.com/library/view/the-art-of/9781593273842/ch10b02.html	THE ART of R Programming by Norman Matloff
63	19/09/2023	5	String Manipulation	CHALK AND TALK	https://www.geckhofgeeks.org/string-manipulation-in-r/	THE ART of R Programming by Norman Matloff
64	20/09/2023	3	String Manipulation	CHALK AND TALK LINK	https://www.parasight.com/guides/guide-manipulating-string-data-r	THE ART of R Programming by Norman Matloff
65	21/09/2023	1	Graphics	CHALK AND TALK	https://www.geckhofgeeks.org/r-charts-and-graphs/	THE ART of R Programming by Norman Matloff
66	21/09/2023	4	Creating Graphs	CHALK AND TALK LINK	https://www.geckhofgeeks.org/r-charts-and-graphs/	THE ART of R Programming by Norman Matloff
67	25/09/2023	4	Customizing Graphs	CHALK AND TALK LINK	https://kalecoff.github.io/demos/Customizing.html	THE ART of R Programming by Norman Matloff
68	26/09/2023	2	Customizing Graphs	CHALK AND TALK LINK	https://kalecoff.github.io/demos/Customizing.html	THE ART of R Programming by Norman Matloff
69	27/09/2023	5	Saving Graphs to files	CHALK AND TALK LINK	https://www.geckhofgeeks.org/saving-graphs-as-files-in-r/	THE ART of R Programming by Norman Matloff
70	03/10/2023	3	Creating Three-Dimensional plots.	CHALK AND TALK LINK	https://www.geckhofgeeks.org/creating-3d-plot-in-r-programming-prtp-function/	THE ART of R Programming by Norman Matloff
71	04/10/2023	1	Creating Three-Dimensional plots.	VIDEOS	https://youtu.be/h2Qc2MUT+M	THE ART of R Programming by Norman Matloff
72	04/10/2023	4	Creating Three-Dimensional plots.	CHALK AND TALK LINK	https://www.r-bloggers.com/2021/08/3d-plot-in-r-programming-quick-guide/	THE ART of R Programming by Norman Matloff
73	06/10/2023	4	Interfacing R to other languages	CHALK AND TALK	https://intudio.github.io/r-manuals/extra/System-and-foreign-language-interfaces.html	THE ART of R Programming by Norman Matloff
74	07/10/2023	2	Interfacing R to other languages	CHALK AND TALK LINK	https://intudio.github.io/r-manuals/extra/System-and-foreign-language-interfaces.html	THE ART of R Programming by Norman Matloff
75	09/10/2023	5	Parallel R	CHALK AND TALK LINK	https://www.tutorialspoint.com/parallel-programming-in-r	THE ART of R Programming by Norman Matloff
76	10/10/2023	3	Parallel R	CHALK AND TALK LINK	https://www.tutorialspoint.com/parallel-programming-in-r	THE ART of R Programming by Norman Matloff
Unit 5						
77	11/10/2023	1	Basic Statistics	CHALK AND TALK LINK	https://www.w3schools.com/r/r_sta_intro.asp	"R for Everyone" John Fox, Leiden
78	11/10/2023	4	Basic Statistics	CHALK AND TALK	https://www.w3schools.com/r/r_sta_intro.asp	"R for Everyone" John Fox, Leiden
79	13/10/2023	4	Linear Model	CHALK AND TALK	https://ucdavis-bioinformatics-training.github.io/2019-March-Bioinformatics-Prerequisites/thursday/linear_models.html	"R for Everyone" John Fox, Leiden
80	16/10/2023	2	Linear Model	CHALK AND TALK	https://ucdavis-bioinformatics-training.github.io/2019-March-Bioinformatics-Prerequisites/thursday/linear_models.html	"R for Everyone" John Fox, Leiden
81	17/10/2023	5	Generalized Linear models	CHALK AND TALK LINK	https://benwhalley.github.io/just-enough-r/generalized-linear-models.html	"R for Everyone" John Fox, Leiden
82	18/10/2023	3	Generalized Linear models	CHALK AND TALK LINK	https://benwhalley.github.io/just-enough-r/generalized-linear-models.html	"R for Everyone" John Fox, Leiden



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83	19/10/2023	1	Non- linear Models	CHALK AND TALK LINK	https://www.geeksforgreks.org/non-linear-regression-in-r/	"For Everyone" Jared P. Lander
84	19/10/2023	4	Non- linear Models	CHALK AND TALK LINK	https://www.geeksforgreks.org/non-linear-regression-in-r/	"For Everyone" Jared P. Lander
85	24/10/2023	4	Time Series and Auto-Correlation	CHALK AND TALK LINK	https://damino.ai/blog/time-series-with-r	"For Everyone"
86	25/10/2023	2	Time Series and Auto-Correlation	CHALK AND TALK LINK	https://damino.ai/blog/time-series-with-r	"For Everyone"
87	26/10/2023	5	Time Series and Auto-Correlation	CHALK AND TALK LINK	https://damino.ai/blog/time-series-with-r	"For Everyone" Jared P. Lander
88	27/10/2023	3	Clustering	CHALK AND TALK LINK	https://www.geeksforgreks.org/clustering-in-r-programming/	"For Everyone" Jared P. Lander
89	30/10/2023	1	Clustering	CHALK AND TALK LINK	https://www.geeksforgreks.org/clustering-in-r-programming/	"FOR EVERYONE" JARED LANDER
90	30/10/2023	4	Clustering	CHALK AND TALK LINK	https://www.geeksforgreks.org/clustering-in-r-programming/	"FOR EVERYONE" JARED LANDER



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : SUMITHA P.
Year/Semester/Section : III/V/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA5CS & CORE PRACTICAL 8 - R PROGRAMMING LABORATORY

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	19/06/2023	1	Discussed about r studio	PPT, LAB		
2	20/06/2023	3	Explained how to install of R studio	VIDEOS, LAB	https://youtu.be/NZxLA80P1I	
3	21/06/2023	4	Discussed about help function used in R studio	VIDEOS, LAB	https://youtu.be/w6f7TwxZyTA	
4	22/06/2023	1	Discussed about using Variables in R Programming	VIDEOS, LAB	https://youtu.be/8uqnd3N08	
5	23/06/2023	3	Explained about Data structure	PPT, LAB		
6	26/06/2023	2	Create a vector in R and perform operations on it.	LAB, ONLINE-LINK	https://youtu.be/9p5u5m5p5m5	
7	27/06/2023	1	Discussed about data types in R	LAB, LINK	https://www.youtube.com/watch?v=7p5u5m5p5m5	
8	28/06/2023	5	Discussed about integer data type	LAB, ONLINE-LINK	https://www.programiz.com/r/data-types	
9	29/06/2023	4	Discussed about complex data type with example	LAB, ONLINE-LINK	https://www.programiz.com/r/data-types	
10	01/07/2023	1	Discussed about logical data type with example program	LAB, ONLINE-LINK	https://www.programiz.com/r/data-types	
11	04/07/2023	3	Discussed about Character data type	LAB, ONLINE-LINK	https://www.programiz.com/r/data-types	
12	05/07/2023	2	Create integer, complex, logical, character data type objects in R and print their values and their class using print and class functions.	LAB, ONLINE-LINK	https://www.programiz.com/r/data-types	
13	06/07/2023	1	Discussed about function in R Programming	LAB, ONLINE-LINK	https://www.programiz.com/r/functions	
14	07/07/2023	5	Explained about types of function used in R Programming	LAB, ONLINE-LINK	https://www.programiz.com/r/functions	
15	10/07/2023	4	Discussed about Sum() with example	LAB, ONLINE-LINK	https://www.programiz.com/r/functions	
16	11/07/2023	1	Explained about min () with example	LAB, LINK	https://www.programiz.com/r/functions	



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17	12/07/2023	3	Explained about max() with example	LAB	https://www.programiz.com/r/minmax#:~:text=In%20R%2C%20the%20max%20vector%20of%20data%20name	
18	13/07/2023	2	Write code in R to demonstrate sum(), min(), max() and seq() functions.	LAB		
19	14/07/2023	1	Discussed about grep function with example	LAB	https://www.educative.io/answers/what-is-the-grep-function-in-r	
20	17/07/2023	5	Discussed about uppercase and lower case string function	LAB	https://www.geekforgeeks.org/convert-string-from-lowercase-to-uppercase-in-r-programming-toupper-function/	
21	18/07/2023	4	Explained about substring function	LAB	https://www.digitalocean.com/community/tutorials/substring-function-in-r	
22	19/07/2023	1	String manipulation function	VIDEOS	https://youtu.be/ZMD0PhLH1Ww	
23	26/07/2023	3	Write code in R to manipulate text in R using grep(), toupper(), tolower() and substr() functions	LAB,FILES		
24	21/07/2023	2	Write code in R to manipulate text in R using grep(), toupper(), tolower() and substr() functions	LAB,FILES		
25	24/07/2023	1	Discussed about 5. Grouping function	VIDEOS,LAB	https://youtu.be/EU3BQiy3LRA	
26	25/07/2023	5	Executed the loops	VIDEOS	https://youtu.be/GkQXsYic4HM	
27	26/07/2023	4	Conditional execution	VIDEOS,LAB	https://youtu.be/innEks75uqo	
28	27/07/2023	1	Functional exploratory data analytics	VIDEOS,LAB	https://youtu.be/7c7HNDcs-Y0	
29	28/07/2023	3	Execute code using Grouping, loops and conditional execution and Functions Exploratory data analysis	VIDEOS,LAB	https://youtu.be/7c7HNDcs-Y0	
30	31/07/2023	2	Grouping, loops and conditional execution, Functions Exploratory data analysis	VIDEOS,LAB	https://youtu.be/ep8GvYdWwU	
31	01/08/2023	1	Range, summary, mean, variance, median, standard deviation	VIDEOS,LAB	https://youtu.be/qj3swEL8LPg	
32	02/08/2023	5	Executed mean, median, mode	VIDEOS,LAB	https://youtu.be/qj3swEL8LPg	
33	04/08/2023	4	Discussed about variance, standard deviation	VIDEOS,LAB	https://youtu.be/h_gbCjGvO_Q	
34	07/08/2023	1	Discussed about variance, standard deviation (data summarization)	VIDEOS,LAB	https://youtu.be/h_gbCjGvO_Q	
35	08/08/2023	3	Discussed about range	VIDEOS,LAB	https://youtu.be/AWmzEFR-mkU	
36	09/08/2023	2	Range, summary, mean, variance, median, standard deviation, histogram, box plot, scatterplot	VIDEOS,LAB	https://youtu.be/HfM3jN1-qI	
37	10/08/2023	1	Explained about data structure	LAB,LINK	https://www.geekforgeeks.org/data-structures-in-r-programming/	



38	11/08/2023	5	Discussed about vector with example	LAB,ONLINE-LINK	https://www.javatpoint.com/r-data-structures	
39	14/08/2023	4	Explained about list with example	LAB,LINK	https://www.javatpoint.com/r-data-structures	
40	16/08/2023	1	Explained about array and matrices	LAB,ONLINE-LINK	https://www.geeksforgEEKS.org/data-structures-in-r-programming/	
41	17/08/2023	3	Discussed about data frames with example	LAB,ONLINE-LINK	https://www.geeksforgEEKS.org/data-structures-in-r-programming/	
42	18/08/2023	2	Executed data structure using r	VIDEOS,LAB	https://youtu.be/AKIyYh64Xqo	
43	19/08/2023	1	Discussed about Matrix manipulation	CHALK AND TALK,ONLINE-LINK	https://www.aptech.com/resources/tutorials/matrix-manipulation/	
44	21/08/2023	5	Explained about matrix manipulation with example	LAB,ONLINE-LINK	https://www.aptech.com/resources/tutorials/matrix-manipulation/	
45	22/08/2023	4	Discussed about vector manipulation	LAB,ONLINE-LINK	https://blog.devgenius.io/vector-programming-in-r-d24f0933d342	
46	23/08/2023	1	Expalin about vector manipulation with example	LAB,ONLINE-LINK	https://blog.devgenius.io/vector-programming-in-r-d24f0933d342	
47	24/08/2023	3	Manipulation of vectors and matrix	VIDEOS,LAB,FILES	https://youtu.be/8v9KQqokKVc	
48	25/08/2023	2	Executed Manipulation of vectors and matrix	VIDEOS,LAB	https://youtu.be/8v9KQqokKVc	
49	29/08/2023	1	Discussed about factor	LAB,ONLINE-LINK	https://www.geeksforgEEKS.org/r-factors/	
50	30/08/2023	5	Explain about factors	LAB,ONLINE-LINK	https://www.tutorialspoint.com/r/r_factors.htm	
51	31/08/2023	4	Explained about list	VIDEOS,LAB	https://youtu.be/XBNTDwiKIE	

Unit 3

52	01/09/2023	1	Explain about factor operation	LAB	https://www.geeksforgeeks.org/r-factors/
53	04/09/2023	3	Operating on factor	LAB LINK	https://4ds.had.co.nz/factors.html#--text=In%20R%2C%20factors%20are%20sed.in%20a%20non%2Dalphabetical%20order
54	05/09/2023	2	Executed the operation on factors	LAB ONLINE-LINK	https://xchrisdram.com/tutorials/r-factors/
55	07/09/2023	1	Explained about Factors operator	LAB LINK FILES	https://youtu.be/vkRBfy8_2MU
56	08/09/2023	5	Discussed about data frames	LAB ONLINE-LINK	https://www.w3schools.com/r/r_data_frames.asp
57	11/09/2023	4	Explained about creating data frames	VIDEOS	https://youtu.be/qsuPBbleJU
58	12/09/2023	1	Expalined function of data frames	LAB ONLINE-LINK	https://www.r-bloggers.com/2016/11/examine-a-data-frame-in-r-with-7-basic-functions/
59	13/09/2023	3	Explained types of data frames	LAB LINK	https://ewarpenstry.github.io/i-noovice-influencer/15-supp-data-structures.html#--text=A%20date%20range%25is%20a.%20E2%80A9Crectangular%E2%80 %9D%E2%80%A9



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60	14/09/2023	2	Executed data frames in r	LAB FILES	
61	15/09/2023	1	Executed about data frames	VIDEOS LAB	https://youtu.be/vhDN7TIC08
62	18/09/2023	5	Discussed about list	LAB ONLINE-LINK	https://youtu.be/P1he9Py5gU8
63	19/09/2023	4	List and operators	LAB LINK	https://www.geekforgeeks.org/operations-on-lists-in-r-programming/
64	20/09/2023	1	Operators	LAB LINK	https://www.w3schools.com/r/r_operators.asp
65	21/09/2023	3	List operation	LAB LINK	https://finuadon.com/r-list-operations/
66	22/09/2023	2	Executed the list and operation using r	LAB FILES	
Unit 4					
67	25/09/2023	1	Discussed about graphs	LAB ONLINE-LINK	https://www.geekforgeeks.org/r-charts-and-graphs/
68	26/09/2023	5	Explained types of chart	LAB LINK	https://www.educba.com/graphs-in-r/
69	27/09/2023	4	Discussed about plot function	LAB ONLINE-LINK	https://www.w3schools.com/r/r_graph_plot.asp#:~:text=The%20plot()%20function%20is,points%20on%20the%20y%20axis
70	03/10/2023	1	Discussed about types of graphs	LAB ONLINE-LINK	https://www.tutorialspoint.com/r/r_bar_charts.htm
71	04/10/2023	3	Explained about graphs	LAB ONLINE-LINK	https://to-coder.com/r-graphs/#google_vignette
72	05/10/2023	2	Discussed about Graphs	LAB FILES	
73	06/10/2023	1	Explained about bargraph	LAB FILES	
74	07/10/2023	5	Executed types of graphs	LAB FILES	https://www.datamentor.io/r-programming/bar-plot
75	09/10/2023	4	Discussed about 3D plots color	LAB ONLINE-LINK	https://www.datamentor.io/r-programming/color
76	10/10/2023	1	Explained about multiple plots in 3d plots	LAB ONLINE-LINK	https://www.datamentor.io/r-programming/subplot
77	11/10/2023	3	Discussed about saving plot	LAB ONLINE-LINK	https://www.datamentor.io/r-programming/saving-plot
78	12/10/2023	2	Executed 3d plots	LAB ONLINE-LINK	
Unit 5					
79	13/10/2023	1	Aggregate function	LAB ONLINE-LINK	https://www.geekforgeeks.org/how-to-use-aggregate-function-in-r/
80	16/10/2023	5	discussed about aggregate using group	LAB ONLINE-LINK	https://www.statology.org/aggregate-r/
81	17/10/2023	4	Explained about aggregate function with example	LAB ONLINE-LINK	https://www.statology.org/aggregate-r/

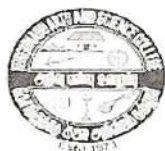


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82	18/10/2023	1	Explained about Aggregate function using table	LAB.ONLINE-LINK	https://www.statology.org/table-function-in-r/	
83	19/10/2023	3	Executed table with aggregate	LAB.ONLINE-LINK FILES	https://www.statology.org/table-function-in-r/	
84	20/10/2023	2	Executed aggregate using table function	LAB.ONLINE-LINK FILES	https://www.statology.org/aggregate-r/	
85	24/10/2023	1	Reading and Writing different types of Datasets	LAB.LINK	https://makemecanalyzer.com/r-programming/reading-and-writing-data-to-and-from-df/	
86	25/10/2023	3	Explained about the different ways of read the data set	LAB.ONLINE-LINK	https://www.datafiles.tamilna.gov.in/help/format-specific-issues/how-to-read-data-r	
87	26/10/2023	4	Discussed about reading and writing dataset	LAB.ONLINE-LINK	https://datacamp.com/reading-writing-data-r/	
88	27/10/2023	1	Discussed about reading and writing file with example	VIDEOS	https://youtu.be/qP0YKlq88	
89	30/10/2023	3	Reading file using table	VIDEOS	https://youtu.be/U4-RuTW5dWw	
90	31/10/2023	2	Executed read and write dataset using different types	VIDEOS	https://youtu.be/U4-RuTW5dWw	



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : KATHIRVELKUMARAN L,
Year/Semester/Section : III/V/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA509 & CORE PAPER 9 - DESIGN AND ANALYSIS OF ALGORITHMS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	20/06/2023	4	Introduction and Analysis	CHALK AND TALK	https://www.youtube.com/watch?v=9WPVT0CUZpE&t=95s	Algorithm Design, Jon Kleinberg, Eva Tardos, 1st edition
2	21/06/2023	1	Introduction and Analysis of Algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=0IAPZzGSbME	
3	22/06/2023	5	Fundamentals of algorithmic Problem solving	CHALK AND TALK	https://www.youtube.com/watch?v=EcPY7Mg8bjo	
4	23/06/2023	5	Fundamentals of algorithmic Problem solving	CHALK AND TALK	https://www.youtube.com/watch?v=PAWyludGU0	
5	26/06/2023	1	Important problem types;	CHALK AND TALK	https://www.youtube.com/watch?v=utfkW8Cugo8	
6	28/06/2023	4	Important problem types;	CHALK AND TALK	https://www.youtube.com/watch?v=V7-Nw8B7MAI&pp=ygUYSW1wb3J0YW50IHByb2JsZW0gdHlwZXRMg	
7	30/06/2023	1	Recursive algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=ngCox392W4w&pp=ygUULmVjdXJzaXZlIGFsZ29yaXR0bXM%3D	
8	03/07/2023	5	Fundamentals of the Analysis of Algorithm Efficiency	CHALK AND TALK	https://www.youtube.com/watch?v=7xXBpXySrKI	
9	04/07/2023	5	Fundamentals of the Analysis of Algorithm Efficiency	CHALK AND TALK	https://www.youtube.com/watch?v=Gsoc134Iweg	
10	05/07/2023	1	Analysis framework	CHALK AND TALK	https://www.youtube.com/watch?v=fw_pBjC74Tc	
11	07/07/2023	4	Analysis framework	CHALK AND TALK	https://www.youtube.com/watch?v=JdUTpr0X_Kw	
12	10/07/2023	1	Asymptotic notations and basic complexity classes	CHALK AND TALK	https://www.youtube.com/watch?v=7dz8laf_wcM	
13	11/07/2023	5	Asymptotic notations and basic complexity classes	CHALK AND TALK	https://www.youtube.com/watch?v=bxgTDN9c6eg	

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14	12/07/2023	5	Recurrences	CHALK AND TALK	https://www.youtube.com/watch?v=10iXqhqfDPu	
15	13/07/2023	1	Recurrences	CHALK AND TALK	https://www.youtube.com/watch?v=ngCos392Wdw	
Unit 2						
16	17/07/2023	4	Divide and Conquer strategy	PPT	https://www.youtube.com/watch?v=2Rr2iW9zvRg	Algorithm Design, Jon Kleinberg, Eva Tardos, 1st edition.
17	18/07/2023	1	Divide and Conquer strategy	CHALK AND TALK	https://www.youtube.com/watch?v=I8w2XN0w-fQ	
18	19/07/2023	5	Merge Sort	CHALK AND TALK	https://www.youtube.com/watch?v=4z9I6ZmcLOQ	
19	20/07/2023	5	Merge Sort	PPT	https://www.youtube.com/watch?v=mB5HXBb_HY8	
20	21/07/2023	1	Quicksort	CHALK AND TALK	https://www.youtube.com/watch?v=7h1s2S0jIRw&pp=ygUJUXVpY2tzh3J0	
21	25/07/2023	4	Multiplication of large integers	PPT	https://www.youtube.com/watch?v=VWmWlFu734c&pp=ygUgTXVsdGlwbGljYXRpb24gb2YgbGFyZ2UgaW50ZWJlc3M%3D	
22	26/07/2023	1	Strassen's matrix multiplication	CHALK AND TALK	https://www.youtube.com/watch?v=dEq9QuNpQ6E	
23	27/07/2023	5	Strassen's matrix multiplication	VIDEOS	https://www.youtube.com/watch?v=0uJyNmEbS4w	
24	28/07/2023	5	Closest pairs Greedy Strategy	CHALK AND TALK	https://www.youtube.com/watch?v=0W_m46Q4qMc	
25	31/07/2023	1	Closest pairs Greedy Strategy	PPT	https://www.youtube.com/watch?v=bYBmoNFyXlg	
26	02/08/2023	4	Huffman coding	CHALK AND TALK	https://www.youtube.com/watch?v=co4_ahEDCho&pp=ygUOSHVmZm1hbiBjb2Rpbmc%3D	
27	07/08/2023	5	Shortest paths algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=OrJ004Wjd4o	
28	08/08/2023	5	Minimum-cost spanning tree algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=KX8GDvRzBc	Algorithm Design, Jon Kleinberg, Eva Tardos, 1st edition.
29	09/08/2023	1	Minimum-cost spanning tree algorithms	PPT	https://www.youtube.com/watch?v=euWUBXuuHsk	Algorithm Design, Jon Kleinberg, Eva Tardos, 1st edition.
30	11/08/2023	4	Disjoint sets	CHALK AND TALK	https://www.youtube.com/watch?v=wU6udHRIkcc	
Unit 3						
31	12/08/2023	4	Dynamic Programming	PPT	https://www.youtube.com/watch?v=0Bt53YbR9Kk	Algorithm Design, Jon Kleinberg, Eva Tardos, 1st edition.



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32	14/08/2023	1	Computing binomial coefficient	CHALK AND TALK	https://www.youtube.com/watch?v=GmB0clY7uMk	
33	16/08/2023	5	Knapsack problem and memory functions	CHALK AND TALK	https://www.youtube.com/watch?v=nLmlmB6NzcM	
34	17/08/2023	5	Ordering of matrix multiplications	PPT	https://www.youtube.com/watch?v=prx1psByp7U&t=642s	
35	18/08/2023	1	Ordering of matrix multiplications	PPT	https://www.youtube.com/watch?v=prx1psByp7U&t=642s	
36	21/08/2023	4	Warshall	CHALK AND TALK	https://www.youtube.com/watch?v=_p8zhizock	
37	22/08/2023	1	Warshall	CHALK AND TALK	https://www.youtube.com/watch?v=_p8zhizock	
38	23/08/2023	5	Floyd's Algorithm State	PPT	https://www.youtube.com/watch?v=soNJOif2P9gE&t=208s	
39	24/08/2023	5	Floyd's Algorithm State	CHALK AND TALK	https://www.youtube.com/watch?v=IEluLXZSjtY&list=PLFKexf2NBjmP4OdUPy21-0TWHsepAKSUw	
40	25/08/2023	1	Breadth-First Search	PPT	https://www.youtube.com/watch?v=e2cF8a5uAhE	
41	30/08/2023	4	Breadth-First Search	CHALK AND TALK	https://www.youtube.com/watch?v=pcKY4hjDrxk&t=556s	
42	31/08/2023	1	Depth -First Search	CHALK AND TALK	https://www.youtube.com/watch?v=pcKY4hjDrxk&t=883s	
43	01/09/2023	5	Depth -First Search	PPT	https://www.youtube.com/watch?v=pcKY4hjDrxk&t=883s	
44	02/09/2023	5	Depth -First Search	VIDEOS	https://www.youtube.com/watch?v=pcKY4hjDrxk&t=883s	
45	04/09/2023	5	Iterative Deepening	CHALK AND TALK	https://www.youtube.com/watch?v=EHwPE5IDXIQ	
Unit 4						
46	05/09/2023	1	Backtracking and permutations	CHALK AND TALK	https://www.youtube.com/watch?v=IEluLXZSjtY&list=PLFKexf2NBjmP4OdUPy21-0TWHsepAKSUw	Algorithm Design, Jon Kleinberg, Eva Tardos, 1st edition.
47	08/09/2023	4	Backtracking and permutations	PPT	https://www.youtube.com/watch?v=IEluLXZSjtY&list=PLFKexf2NBjmP4OdUPy21-0TWHsepAKSUw	
48	11/09/2023	1	N-queens problem	CHALK AND TALK	https://www.youtube.com/watch?v=xFv_Hi4B83A	
49	12/09/2023	5	N-queens problem	VIDEOS	https://www.youtube.com/watch?v=xFv_Hi4B83A	
50	13/09/2023	5	Hamilton circuits	PPT	https://www.youtube.com/watch?v=v3s0DjRqhKA	

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51	14/09/2023	1	Hamilton circuits	VIDEOS	https://www.youtube.com/watch?v=v3s0DjRqhKA	
52	19/09/2023	1	Best-first search	CHALK AND TALK	https://www.youtube.com/watch?v=v3s0DjRqhKA	
53	20/09/2023	5	Iterative Improvement: Stable marriage	PPT	https://www.youtube.com/watch?v=v3s0DjRqhKA	
54	21/09/2023	5	Maximum matching in bipartite graphs	CHALK AND TALK	https://www.youtube.com/watch?v=v3s0DjRqhKA	
55	22/09/2023	1	Maximum flow Problem	VIDEOS	https://www.youtube.com/watch?v=NwenWITjMys	
56	23/09/2023	1	Branch and Bound	CHALK AND TALK	https://www.youtube.com/watch?v=XZbrmetb9VE	
57	26/09/2023	4	Branch and Bound	CHALK AND TALK	https://www.youtube.com/watch?v=XZbrmetb9VE	
58	27/09/2023	1	Knapsack problem	CHALK AND TALK	https://www.youtube.com/watch?v=yV1d-b_NeK8	
59	03/10/2023	5	Traveling salesman problem	CHALK AND TALK	https://www.youtube.com/watch?v=1FEP_sNb62k&t=829s	
60	04/10/2023	5	Traveling salesman problem	VIDEOS	https://www.youtube.com/watch?v=1FEP_sNb62k&t=829s	
Unit 5						
61	05/10/2023	1	Introduction to intractability	CHALK AND TALK	https://www.youtube.com/watch?v=EkmyDoiKZ8Q	Algorithm Design, Jon Kleinberg, Eva Tardos, 1st edition
62	07/10/2023	4	Polynomial reductions	CHALK AND TALK	https://www.youtube.com/watch?v=e2cF8a5aAhE	
63	09/10/2023	1	SAT and 3-SAT	CHALK AND TALK	https://www.youtube.com/results?search_query=%09SAT+and+3-SAT	
64	10/10/2023	5	SAT and 3-SAT	CHALK AND TALK	https://www.youtube.com/results?search_query=%09SAT+and+3-SAT	
65	11/10/2023	5	NP-complete problems	CHALK AND TALK	https://www.youtube.com/watch?v=vaIpD5Jx7aw	
66	12/10/2023	1	NP-complete problems	VIDEOS	https://www.youtube.com/watch?v=vaIpD5Jx7aw	
67	16/10/2023	4	NP Hard problems	VIDEOS	https://www.youtube.com/watch?v=vaIpD5Jx7aw	
68	17/10/2023	1	NP Hard problems	CHALK AND TALK	https://www.youtube.com/watch?v=vaIpD5Jx7aw	
69	18/10/2023	5	Approximation algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=e2cF8a5aAhE	

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70	19/10/2023	5	Approximation algorithms	VIDEOS	https://www.youtube.com/watch?v=e2cF8u5aAhE	
71	20/10/2023	1	Traveling salesman problem	CHALK AND TALK	https://www.youtube.com/watch?v=1FEP_sNb62k&t=829s	
72	26/10/2023	1	Traveling salesman problem	VIDEOS	https://www.youtube.com/watch?v=1FEP_sNb62k&t=829s	
73	27/10/2023	5	Knapsack problem	CHALK AND TALK	https://www.youtube.com/watch?v=nLmhmB6NzcM&t=35s	
74	30/10/2023	5	Introduction to randomized algorithms and Parallel algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=rfAHeilGWoE	
75	31/10/2023	1	Introduction to randomized algorithms and Parallel algorithms	VIDEOS	https://www.youtube.com/watch?v=rfAHeilGWoE	

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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : NARMADHA S,
Year/Semester/Section : III/V/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA510 & CORE PAPER 10 - DATABASE DESIGN AND MANAGEMENT

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	19/06/2023	2	Conceptual data modeling: Database Introduction	CHALK AND TALK	https://www.guru99.com/data-modelling-conceptual-logical.html	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
2	20/06/2023	1	Conceptual data modeling: Types of Data Model	CHALK AND TALK	https://www.guru99.com/data-modelling-conceptual-logical.html	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
3	21/06/2023	3	Conceptual data modeling Entities Attributes	PPT	https://vertabelo.com/blog/entities-attributes-data-model/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
4	22/06/2023	2	Other data models in DBMS	CHALK AND TALK	https://www.geeksforgeeks.org/data-models-in-dbms/	Elmasri, Navathe, "Fundamentals of Database systems" Sixth Edition.
5	22/06/2023	4	Advantages and disadvantages of data models	CHALK AND TALK	https://lmbd.org/types-of-data-models-advantages-and-disadvantages-of-traditional-data-models-which-data-model-to-use/	Elmasri, Navathe, "Fundamentals of Database systems" Sixth Edition.
6	26/06/2023	4	Database environment introduction	PPT	https://www.w3schools.in/dbms/database-environment	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
7	27/06/2023	2	Components of database environment	CHALK AND TALK	https://medium.com/@mangavkarsonali/components-of-dbms-environment-f410651e6daf	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
8	28/06/2023	1	System utilities of Database environment	CHALK AND TALK	https://www.techage.in/types-of-database-utilities-and-its-functions/	Elmasri, Navathe, "Fundamentals of Database systems" Sixth Edition.
9	30/06/2023	3	Database system development lifecycle	CHALK AND TALK	https://eng.libretexts.org/Courses/Delta_College/Introduction_to_Database_Systems/01%3A_Introduction_to_Database_Systems_and_SQL/1.09%3A_Database_Systems_Development_Life_Cycle	Elmasri, Navathe, "Fundamentals of Database systems" Sixth Edition.
10	03/07/2023	2	SDLC: Planning, analysis	LINK	https://www.javatpoint.com/software-engineering-software-development-life-cycle	Elmasri, Navathe, "Fundamentals of Database systems" Sixth Edition.
11	03/07/2023	4	SSDLC: System design	CHALK AND TALK	https://www.javatpoint.com/software-engineering-software-development-life-cycle	Elmasri, Navathe, "Fundamentals of Database systems" Sixth Edition.
12	05/07/2023	4	SDLC: Implementation, maintenance	CHALK AND TALK	https://www.javatpoint.com/software-engineering-software-development-life-cycle	Elmasri, Navathe, "Fundamentals of Database systems" Sixth Edition.
13	06/07/2023	2	Requirements collection	PPT	https://www.tutorialspoint.com/management_concepts/requirement_collection.html#:~:text=Requirement%20collection%20is%20the%20most,relationship%20can%20be%20severely%20damaged.	Elmasri, Navathe, "Fundamentals of Database systems" Sixth Edition.
14	07/07/2023	1	Database design	PPT	https://www.javatpoint.com/database-design	Elmasri, Navathe, "Fundamentals of Database systems" Sixth Edition.
15	10/07/2023	3	Entity-Relationship model	PPT	https://www.javatpoint.com/dbms-er-model-concept	Elmasri, Navathe, "Fundamentals of Database systems" Sixth Edition.



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16	11/07/2023	2	Enhanced-ER model	CHALK AND TALK	https://www.geeksforgeeks.org/enhanced-er-model/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition
17	11/07/2023	4	Enhanced-ER model Examples	CHALK AND TALK	https://www.geeksforgeeks.org/enhanced-er-model/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition
18	13/07/2023	4	UML class diagrams	CHALK AND TALK	https://www.tutorialspoint.com/uml/uml_class_diagram.htm	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition
Unit 2						
19	14/07/2023	2	RELATIONAL MODEL AND SQL introduction	CHALK AND TALK	https://db.in.tum.de/~gnast/teaching/ss06/DB/A/db1-01.pdf	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition
20	17/07/2023	1	Constraints in relational model	CHALK AND TALK	https://www.geeksforgeeks.org/constraints-on-relational-database-model/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition
21	18/07/2023	3	Anomalies in the relational model	CHALK AND TALK	https://www.geeksforgeeks.org/anomalies-in-relational-model/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition
22	19/07/2023	2	Relational model concepts	CHALK AND TALK	https://www.geeksforgeeks.org/relational-model-in-dbm/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
23	19/07/2023	4	Integrity constraints	CHALK AND TALK	https://www.javatpoint.com/dbms-integrity-constraints	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
24	21/07/2023	4	Domain constraints	CHALK AND TALK	https://www.geeksforgeeks.org/domain-constraints-in-dbm/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
25	24/07/2023	2	SQL Data manipulation (select,Insert)	CHALK AND TALK	https://opentextbc.ca/dbdesign01/chapter/chapter-sql-dml/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition
26	25/07/2023	1	SQL Data manipulation(Update, Delete)	PPT	https://opentextbc.ca/dbdesign01/chapter/chapter-sql-dml/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition
27	26/07/2023	3	Sql Data definition- Introduction	CHALK AND TALK	https://pudakku.com/sql-data-definition-371-article	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition
28	27/07/2023	2	SQL Data definition Basic data types	CHALK AND TALK	https://www.brainkart.com/article/SQL-Data-Definition-and-Data-Types_11409/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition
29	27/07/2023	4	Sql data definition (create)	CHALK AND TALK	https://www.geeksforgeeks.org/sql-create-table/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
30	31/07/2023	4	Sql data definition (Drop)	CHALK AND TALK	https://www.geeksforgeeks.org/sql-drop-truncate/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
31	01/08/2023	2	Sql data definition (Alter)	CHALK AND TALK	https://www.geeksforgeeks.org/difference-between-alter-and-update-command-in-sql/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
32	02/08/2023	1	Views (Create View)	PPT	https://www.javatpoint.com/dbms-sql-view	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
33	07/08/2023	2	Views (Advantages and Disadvantages)	CHALK AND TALK	https://www.javatpoint.com/dbms-sql-view	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
34	07/08/2023	4	View (Deleting view)	CHALK AND TALK	https://www.javatpoint.com/dbms-sql-view	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
35	09/08/2023	4	SQL programming (Group By, Having)	CHALK AND TALK	https://opentextbc.ca/dbdesign01/chapter/chapter-sql-dml/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
36	10/08/2023	2	SQL programming (Group by clause)	CHALK AND TALK	https://opentextbc.ca/dbdesign01/chapter/chapter-sql-dml/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
Unit 3						



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37	11/08/2023	1	RELATIONAL DATABASE DESIGN AND NORMALIZATION Introduction	CHALK AND TALK	https://en.wikibooks.org/wiki/Relational_Database_Design/Normalization	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
38	14/08/2023	3	ER and EER-to-Relational mapping (Mapping strong Entities, Mapping Weak Entities)	CHALK AND TALK	https://www.geeksforgeeks.org/mapping-from-er-model-to-relational-model/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
39	16/08/2023	2	ER and EER-to-Relational mapping (Mapping binary one to one relations)	CHALK AND TALK	https://www.geeksforgeeks.org/mapping-from-er-model-to-relational-model/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
40	16/08/2023	4	ER and EER-to-Relational mapping (Mapping binary one to many relations)	PPT	https://www.geeksforgeeks.org/mapping-from-er-model-to-relational-model/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
41	18/08/2023	4	ER and EER-to-Relational mapping (Mapping binary many to many relations)	CHALK AND TALK	https://www.geeksforgeeks.org/mapping-from-er-model-to-relational-model/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
42	19/08/2023	2	ER and EER-to-Relational mapping (Mapping multivalued attributes, Map N-ary relations)	CHALK AND TALK	https://www.geeksforgeeks.org/mapping-from-er-model-to-relational-model/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
43	21/08/2023	1	ER and EER-to-Relational schemes	PPT	https://medium.com/nerd-for-tech/drawing-er-and-eer-diagrams-mapping-4965e2b3cc3e	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
44	22/08/2023	3	Update anomalies (Introduction and Types of Anomalies)	CHALK AND TALK	https://www.javatpoint.com/anomalies-in-dbms	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
45	23/08/2023	2	Update anomalies	CHALK AND TALK	https://www.javatpoint.com/anomalies-in-dbms	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
46	23/08/2023	4	Functional dependencies	PPT	https://www.javatpoint.com/dbms-functional-dependency	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
47	25/08/2023	4	Rules of Functional Dependencies	CHALK AND TALK	https://www.tutorialspoint.com/explain-the-inference-rules-for-functional-dependencies-in-dbms	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
48	30/08/2023	1	Inference Rules	CHALK AND TALK	https://www.javatpoint.com/dbms-inference-rule	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
49	31/08/2023	3	Minimal cover	PPT	https://www.tutorialspoint.com/what-is-the-minimal-set-of-functional-dependencies-or-canonical-cover-of-fd	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
50	01/09/2023	2	Minimal set of functional dependencies Examples	CHALK AND TALK	https://www.tutorialspoint.com/what-is-the-minimal-set-of-functional-dependencies-or-canonical-cover-of-fd	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
51	01/09/2023	4	Relational Decomposition	CHALK AND TALK	https://www.javatpoint.com/dbms-relational-decomposition	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
52	05/09/2023	4	Types of Relational Decomposition	PPT	https://www.javatpoint.com/dbms-relational-decomposition	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
53	07/09/2023	2	Properties of relational decomposition	CHALK AND TALK	https://www.geeksforgeeks.org/properties-of-relational-decomposition/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
54	08/09/2023	1	Relational Decomposition examples	CHALK AND TALK	https://www.geeksforgeeks.org/properties-of-relational-decomposition/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
Unit 4						
55	11/09/2023	3	Normalization Introduction	CHALK AND TALK	https://www.geeksforgeeks.org/introduction-of-database-normalization/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.



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56	12/09/2023	2	Normalization Types	PPT	https://www.knowledgehut.com/blog/database/normalization-in-dbm	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
57	12/09/2023	4	First and Second Normal Form	CHALK AND TALK	https://www.geeksforgeeks.org/difference-between-1nf-and-2nf-in-dbms/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
58	14/09/2023	4	Third and BCNF	CHALK AND TALK	https://www.geeksforgeeks.org/difference-between-3nf-and-bcnf-in-dbms/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
59	15/09/2023	2	Advantages and Disadvantages of Normalization	CHALK AND TALK	https://www.geeksforgeeks.org/advantages-and-disadvantages-of-normalization/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
60	18/09/2023	1	TRANSACTION MANAGEMENT Example	CHALK AND TALK	https://www.guru99.com/dbms-transaction-management.html	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
61	19/09/2023	3	Properties	PPT	https://byjus.com/gate/acid-properties-in-dbms-notes/#:-text=In%20the%20transaction%20processing%20context,%20C%20consistency%20C%20isolation%20C%20durability	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
62	20/09/2023	2	Transaction isolation levels in DBMS	CHALK AND TALK	https://www.geeksforgeeks.org/transaction-isolation-levels-dbms/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
63	20/09/2023	4	Uses of Transaction Management	CHALK AND TALK	https://www.geeksforgeeks.org/transaction-management/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
64	22/09/2023	4	Advantages and Disadvantages of Transaction Management	CHALK AND TALK	https://www.itrelease.com/2022/02/advantages-and-disadvantages-of-transaction-processing-system-ips/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
65	25/09/2023	2	Serializability in DBMS	CHALK AND TALK	https://www.javatpoint.com/serializability-in-dbms	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
66	26/09/2023	1	Types of serializability	PPT	https://www.javatpoint.com/serializability-in-dbms	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
67	27/09/2023	3	Testing of serializability in DBMS	CHALK AND TALK	https://www.javatpoint.com/dbms-testing-of-serializability	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
68	03/10/2023	2	Benefits of Serializability	CHALK AND TALK	https://www.javatpoint.com/serializability-in-dbms	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
69	03/10/2023	4	Concurrency Control Execution	CHALK AND TALK	https://www.geeksforgeeks.org/concurrency-control-in-dbms/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
70	05/10/2023	4	Concurrency control problems	CHALK AND TALK	https://www.geeksforgeeks.org/concurrency-control-in-dbms/	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
71	06/10/2023	2	Concurrency control protocols	CHALK AND TALK	https://www.geeksforgeeks.org/lock-based-concurrency-control-protocol-in-dbms/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
72	07/10/2023	1	Two phase locking techniques	PPT	https://www.geeksforgeeks.org/two-phase-locking-protocol/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
73	09/10/2023	3	OBJECT RELATIONAL AND NO-SQL DATABASES	CHALK AND TALK		Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
74	10/10/2023	2	Introduction to Sql databases	PPT	https://www.solarwinds.com/resources/it-glossary/sql-database	Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
75	10/10/2023	4	Categories of SQL Databases	CHALK AND TALK		Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
Unit 5						
76	12/10/2023	4	Key Features of No SQL	CHALK AND TALK	https://www.geeksforgeeks.org/introduction-to-nosql/	
77	13/10/2023	2	Advantages and disadvantages of NO SQL	CHALK AND TALK	https://technologypoint.in/advantages-and-disadvantages-of-nosql-databases/	



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78	16/10/2023	1	Object Database Design	CHALK AND TALK		Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
79	17/10/2023	3	Mapping EER to ODB schema	CHALK AND TALK		Elmasri,Navathe, "Fundamentals of Database systems" Sixth Edition.
80	18/10/2023	2	Challenges of Object Database Design	CHALK AND TALK		Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
81	18/10/2023	4	Object identifier	CHALK AND TALK	https://cyberhoot.com/cybrary/object-identifier-oid/	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
82	20/10/2023	4	reference types	CHALK AND TALK	https://www.youtube.com/watch?v=AMggWsf1WL4	Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
83	24/10/2023	2	rowtypes	CHALK AND TALK		Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
84	25/10/2023	1	UDTs, Subtypes and supertypes	CHALK AND TALK		Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
85	26/10/2023	3	User-defined routines	CHALK AND TALK		Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
86	27/10/2023	2	Collection types, Object Query Language	CHALK AND TALK		Thomas Connolly, Carolyn Begg, Database systems: a practical approach to design, implementation and management, Fourth Edition.
87	27/10/2023	4	No-SQL: CAP theorem	CHALK AND TALK	https://www.geeksforgeeks.org/the-cap-theorem-in-dbms/	
88	31/10/2023	4	Document-based: MongoDB data model and CRUD operations	PPT	https://www.mongodb.com/docs/manual/crud/	



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : VANITHA R.
Year/Semester/Section : III/V/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA5E1 & MAJOR ELECTIVE PAPER 1 - CLOUD COMPUTING FUNDAMENTALS

S.No	Date	Hours	Topic	Delivery Methods	Links	Book Refered
Unit 1						
1	19/08/2023	1	Introduction to cloud computing	CHALK AND TALK LINK	https://www.bbc.com/news/technology-56404444	Mastering of Cloud Computing - Rajan Bappa and S. Thirumala Sethi
2	21/08/2023	2	A Closer Look, Cloud Computing Reference Model	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/a-closer-look-to-cloud-computing-reference-model	Mastering Cloud Computing - Rajan Bappa and S. Thirumala Sethi
3	23/08/2023	2	Characteristics and benefits of Cloud Computing	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/characteristics-and-benefits-of-cloud-computing	Mastering Of Cloud Computing - Rajan Bappa and S. Thirumala Sethi
4	26/08/2023	3	Challenges and Historical developments :Distributed Systems	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/challenges-and-historical-developments-of-cloud-computing	Mastering Of Cloud Computing
5	28/08/2023	3	Virtualization, Web 2.0,	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/virtualization-web-2-0	Mastering of Cloud Computing - Rajan Bappa
6	29/08/2023	3	Service Oriented Computing	CHALK AND TALK LINK	https://www.yourself.com/what-is-soa/	Mastering Of Cloud Computing
7	30/08/2023	2	Utility Oriented Computing	CHALK AND TALK LINK	https://www.yourself.com/what-is-utility-computing/	Mastering Of Cloud Computing
8	04/09/2023	2	Building Cloud Computing Environments, Application Development	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/building-cloud-computing-environments	Mastering Of Cloud Computing
9	05/09/2023	3	Infrastructure and System Development	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/infrastructure-and-system-development	Mastering Of Cloud Computing
10	06/09/2023	3	Computing Platforms and Technologies	CHALK AND TALK LINK	https://www.yourself.com/what-is-cloud-computing/	Mastering of Cloud Computing
11	08/09/2023	3	Computing platforms and Technologies:Microsoft Azure,Hadoop	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/computing-platforms-and-technologies	Mastering Of Cloud Computing
12	09/09/2023	2	Computing Technologies And Technologies:Microsoft Azure, Hadoop	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/computing-technologies	Mastering Of Cloud Computing
13	13/09/2023	2	Computing Platform and Technologies :Force.com and Sales .com and Manjrasoft Aneka	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/computing-platform-and-technologies	Mastering of Cloud Computing
14	18/09/2023	3	computing platforms and technologies : Additional information discussion	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/computing-platforms-and-technologies	Mastering of Cloud Computing
15	19/09/2023	2	Historical Developments of Cloud Computing-An Overview session	CHALK AND TALK LINK	https://www.coursera.org/lecture/cloud-computing/historical-developments-of-cloud-computing	Mastering of Cloud Computing - Rajan Bappa
Unit 2						
16	19/09/2023	1	Cloud Computing Architecture: Introduction And Diagram references	CHALK AND TALK LINK	https://www.yourself.com/what-is-cloud-computing-architecture/	Mastering Of Cloud Computing
17	18/09/2023	2	The Cloud Reference Models-Architecture	CHALK AND TALK LINK	https://www.yourself.com/what-is-cloud-computing-reference-models-architecture/	Mastering Of Cloud Computing



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16	20/1/2023	2	Infrastructure / Hardware-as-a-Service	CHALK AND TALK LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	Mastering Of Cloud Computing
17	21/1/2023	1	Platform-as-a-Service, Software-as-a-Service	CHALK AND TALK LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	Mastering Of Cloud Computing
18	22/1/2023	1	platform-as-a-Service-Classification	CHALK AND TALK LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	Mastering Of Cloud Computing
19	24/1/2023	1	Types of Clouds-Introduction and Public Cloud	LINK FILE	https://www.geogebra.org/m/typo-of-clouds	Mastering of Cloud Computing-Redmine Page
20	26/1/2023	2	Types of Clouds-Private Clouds	LINK FILE	https://www.geogebra.org/m/typo-of-clouds	Mastering of Cloud Computing
21	28/1/2023	2	Types Of Cloud Computing-Hybrid Cloud	LINK FILE	https://www.geogebra.org/m/typo-of-clouds	
22	29/1/2023	1	Types of Cloud - Community Clouds	LINK FILE	https://www.geogebra.org/m/typo-of-clouds	Mastering of Cloud Computing - Redmine Page
23	31/1/2023	1	Economics of Clouds	CHALK AND TALK LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	Mastering Of Cloud Computing
24	1/2/2023	1	Economics of Clouds-Strategies	CHALK AND TALK LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	Mastering Of Cloud Computing
25	3/2/2023	1	Open Challenges: Cloud Computing, Cloud interoperability	CHALK AND TALK	https://www.geogebra.org/m/typo-of-clouds	Mastering Of Cloud Computing
26	5/2/2023	2	Open Challenges: Standards, Scalability, Fault Tolerance	CHALK AND TALK LINK	https://www.geogebra.org/m/typo-of-clouds	Mastering Of Cloud Computing
27	7/2/2023	1	Open Challenges: Security, Trust, and Privacy	CHALK AND TALK LINK	https://www.geogebra.org/m/typo-of-clouds	Mastering of Cloud Computing
28	9/2/2023	1	Open Challenges: Organizational Aspects	CHALK AND TALK LINK	https://www.geogebra.org/m/typo-of-clouds	Mastering of Cloud Computing
Unit 3						
29	10/2/2023	1	Exploring Cloud Infrastructures	LINK FILE	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
30	12/2/2023	2	Managing the Cloud	LINK FILE	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
31	14/2/2023	2	Administering the clouds	LINK FILE	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
32	16/2/2023	1	Cloud Management products	CHALK AND TALK LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
33	18/2/2023	1	Understanding Cloud Security	LINK FILE	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
34	19/2/2023	1	Understanding Cloud Security: pending topics	LINK FILE	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
35	20/2/2023	2	Securing The Cloud	CHALK AND TALK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
36	21/2/2023	2	Securing the Clouds	CHALK AND TALK LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
37	22/2/2023	1	Moving Application to the Cloud	CHALK AND TALK LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
38	23/2/2023	1	Moving Application to the Clouds- Types and ideas	PDF LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
39	24/2/2023	1	Moving Application to the Clouds-Ideas with real time examples	PDF		
40	25/2/2023	2	Application in the Clouds	CHALK AND TALK LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	
41	26/2/2023	2	Application in the Clouds /Types of Applications	PDF		
42	27/2/2023	1	Application in the Clouds: Benefits and Workability	PDF LINK	https://www.coursera.org/courses/course-landing-page?course=coursera-naac-a-service-link	

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Faculty Signature

Coordinator

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Head of the Department

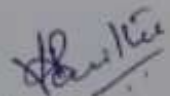


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47	15/04/2023	1	Architecture and Core Concepts	CHALK AND TALK LIVE	https://www.youtube.com/watch?v=7D8K8a8a8a8a	Monitoring of Cloud Computing
48	16/04/2023	2	Application Life Cycle	CHALK AND TALK LIVE	https://www.youtube.com/watch?v=7D8K8a8a8a8a	Monitoring of Cloud Computing
49	16/04/2023	1	Application Life Cycles : diagrams and its Functions	CHALK AND TALK	https://www.youtube.com/watch?v=7D8K8a8a8a8a	Monitoring of Cloud Computing
50	16/04/2023	1	Cost Models	CHALK AND TALK LIVE	https://www.youtube.com/watch?v=7D8K8a8a8a8a	Monitoring of Cloud Computing
51	16/04/2023	1	Microsoft Azure Core Concepts	CHALK AND TALK LIVE	https://www.youtube.com/watch?v=7D8K8a8a8a8a	Monitoring of Cloud Computing
52	16/04/2023	1	Microsoft Azure Core Concepts: Services and benefits	CHALK AND TALK LIVE	https://www.youtube.com/watch?v=7D8K8a8a8a8a	Monitoring of Cloud Computing
53	16/04/2023	1	SQL Azure	CHALK AND TALK LIVE	https://www.youtube.com/watch?v=7D8K8a8a8a8a	Monitoring of Cloud Computing
54	16/04/2023	1	Windows Azure platform appliances	CHALK AND TALK LIVE	https://www.youtube.com/watch?v=7D8K8a8a8a8a	Monitoring of Cloud Computing
55	15/04/2023	1	Windows Azure Platform appliance -workable, characteristics, drawbacks.	CHALK AND TALK LIVE	https://www.youtube.com/watch?v=7D8K8a8a8a8a	Monitoring of Cloud Computing


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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : KATHIRVEL KUMARAN L,
Year/Semester/Section : III/V/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA5XL & EDC PAPER - INTERNET BASICS AND ADVANCED EXCEL - LAB

Unit 1

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	19/06/2023	3	Create an email account in Gmail. Using the account created compose a mail to invite other college students for your college fest, enclose the invitation as attachment and send the mail to at least 50 recipients. Use CC and BCC options accordingly.	LAB	https://www.youtube.com/watch?v=nbYQdW-pAI	The Ultimate Gmail Guide
2	20/06/2023	3	Create an email account in Gmail. Using the account created compose a mail to invite other college students for your college fest, enclose the invitation as attachment and send the mail to at least 50 recipients. Use CC and BCC options accordingly.	LAB	https://www.youtube.com/watch?v=nbYQdW-pAI	The Ultimate Gmail Guide

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Unit 2

8	17/07/2023	3	Create a online quiz with multiple-choice types of questions for a subject of your choice, using Google Forms.	LAB	https://www.youtube.com/watch?v=Pu4W95gAAg	The Ultimate Google Guide
9	24/07/2023	3	Create a online quiz with multiple-choice types of questions for a subject of your choice, using Google Forms.	LAB	https://www.youtube.com/watch?v=Pu4W95gAAg	
10	25/07/2023	3	Create student's mark statement and share the Google sheets via link.	LAB	https://www.youtube.com/watch?v=DN8YE4HSgA	
11	01/08/2023	3	Create student's mark statement and share the Google sheets via link.	LAB	https://www.youtube.com/watch?v=DN8YE4HSgA	
12	02/08/2023	3	Create student's mark statement and share the Google sheets via link.	LAB	https://www.youtube.com/watch?v=DN8YE4HSgA	
13	10/08/2023	3	Create student's mark statement and share the Google sheets via link.	LAB	https://www.youtube.com/watch?v=DN8YE4HSgA	
14	11/08/2023	3	Create a Excel program to Perform Data Validation in Excel like Filters, Grouping, Sorting	LAB	https://www.youtube.com/watch?v=pQRCe4DQs0	Microsoft Excel: Advanced Participant Guide

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22	08/09/2023	3	To Perform AND, OR & NOT Logical operations using Ms- Excel	LAB	https://www.youtube.com/watch?v=KKTQ50JACk	Microsoft Excel: Advanced Participant Guide
23	13/09/2023	3	To Perform AND, OR & NOT Logical operations using Ms- Excel	LAB	https://www.youtube.com/watch?v=KKTQ50JACk	
24	25/09/2023	3	To Perform AND, OR & NOT Logical operations using Ms- Excel	LAB	https://www.youtube.com/watch?v=KKTQ50JACk	
25	26/09/2023	3	Create Sheet and Charts in Excel to analysis Student Mark of your Class	LAB	https://www.youtube.com/watch?v=6zbnbpKuf6c	
26	06/10/2023	3	Create Sheet and Charts in Excel to analysis Student Mark of your Class	LAB	https://www.youtube.com/watch?v=6zbnbpKuf6c	

Unit 5

27	07/10/2023	3	Create a mail merge using MS-Word.	LAB	https://www.youtube.com/watch?v=Zc_JbHnde7o	Microsoft Excel: Advanced Participant Guide
28	13/10/2023	3	Create a mail merge using MS-Word.	LAB	https://www.youtube.com/watch?v=Zc_JbHnde7o	
29	16/10/2023	3	Payroll calculation using MS-Excel.	LAB	https://www.youtube.com/watch?v=c-kd1450R4	
30	21/10/2023	3	Payroll calculation using MS-Excel.	LAB	https://www.youtube.com/watch?v=c-kd1450R4	

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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. PRAVEENA BALASUBRAMANIAN .,
Year/Semester/Section : I/II/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 23UDA202 & CORE PAPER 2 - OBJECT ORIENTED PROGRAMMING IN C ++

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	04/12/2023	5	Introduction to C++	CHALK AND TALK	https://www.w3schools.com/cpp/cpp_intro.asp	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
2	05/12/2023	1	Key concepts of Object-Oriented Programming	CHALK AND TALK	https://www.geeksforgeeks.org/object-oriented-programming-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
3	06/12/2023	1	Advantages of Object oriented Programming	CHALK AND TALK	https://www.w3schools.com/cpp/cpp_oop.asp	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
4	08/12/2023	4	Object Oriented Languages	CHALK AND TALK	https://www.orientsofware.com/blog/list-of-object-oriented-programming-languages/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
5	11/12/2023	1	I/O streams in C++	CHALK AND TALK	https://www3.ntu.edu.sg/home/chtchua/programming/cpp/cpl0_io.html	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
6	12/12/2023	5	C++ Declarations.	CHALK AND TALK	https://www.oreilly.com/library/view/practical-c-programming/0596004192/ch04.html	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
7	13/12/2023	1	Control Structures	CHALK AND TALK	https://www.javaipoint.com/cpp-flow-control	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
8	14/12/2023	1	Decision Making Statements	CHALK AND TALK	https://www.geeksforgeeks.org/decision-making-c-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
9	18/12/2023	4	If. else, jump	CHALK AND TALK	https://www.geeksforgeeks.org/decision-making-c-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
10	19/12/2023	1	goto, break	CHALK AND TALK	https://www.geeksforgeeks.org/decision-making-c-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
11	20/12/2023	5	continue, switch case statements	CHALK AND TALK	https://www.geeksforgeeks.org/decision-making-c-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
12	21/12/2023	1	Loops in C++ for, while, do	CHALK AND TALK	https://www.w3schools.com/cpp/cpp_do_while_loop.asp#:~:text=The%20do%20while%20loop%20is,as%20the%20condition%20is%20true.	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
13	22/12/2023	1	functions in C++	CHALK AND TALK	https://www.w3schools.com/cpp/cpp_functions.asp	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education

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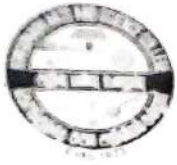


14	27/12/2023	4	inline functions	CHALK AND TALK	https://www.geeksforgeeks.org/inline-functions-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
15	02/01/2024	1	Function Overloading.	CHALK AND TALK	https://www.geeksforgeeks.org/function-overloading-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
Unit 2						
16	03/01/2024	1	Classes and Objects	CHALK AND TALK	https://www.geeksforgeeks.org/c-classes-and-objects/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
17	05/01/2024	4	Classes and Objects	CHALK AND TALK	https://www.geeksforgeeks.org/c-classes-and-objects/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
18	08/01/2024	1	Declaring Objects	CHALK AND TALK	https://www.geeksforgeeks.org/c-classes-and-objects/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
19	09/01/2024	5	Defining Member Functions	CHALK AND TALK	https://www.shiksha.com/online-courses/articles/member-function-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
20	10/01/2024	1	Static Member variables and functions	PPT	https://www.geeksforgeeks.org/static-member-function-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
21	11/01/2024	1	Array of objects	CHALK AND TALK	https://www.geeksforgeeks.org/array-of-objects-in-c-with-examples/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
22	22/01/2024	5	Array of objects	CHALK AND TALK	https://www.geeksforgeeks.org/array-of-objects-in-c-with-examples/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
23	23/01/2024	1	Friend functions	CHALK AND TALK	https://www.javatpoint.com/cpp-friend-function	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
24	24/01/2024	1	Friend functions	CHALK AND TALK	https://www.javatpoint.com/cpp-friend-function	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
25	29/01/2024	4	Overloading member functions	CHALK AND TALK	https://www.ibm.com/docs/it/zos/2.4.0?topic=udcmco-overloading-member-functions-from-base-derived-classes-c-only	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
26	30/01/2024	1	Overloading member functions	CHALK AND TALK	https://www.ibm.com/docs/it/zos/2.4.0?topic=udcmco-overloading-member-functions-from-base-derived-classes-c-only	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
27	31/01/2024	5	Bit fields and classes	CHALK AND TALK	https://en.cppreference.com/w/cpp/language/bit_field	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
28	01/02/2024	1	Constructor and destructor with static members.	CHALK AND TALK	https://groups.google.com/a/isocpp.org/g/std-proposals/c/82Xen0jQe10	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
29	02/02/2024	1	Constructor and destructor with static members.	CHALK AND TALK	https://groups.google.com/a/isocpp.org/g/std-proposals/c/82Xen0jQe10	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
30	03/02/2024	1	Constructor and destructor with static members.	CHALK AND TALK	https://groups.google.com/a/isocpp.org/g/std-proposals/c/82Xen0jQe10	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
Unit 3						

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31	06/02/2024	4	Operator Overloading	CHALK AND TALK	https://javatpoint.com/cpp-overloading	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
32	07/02/2024	1	Operator Overloading	CHALK AND TALK	https://javatpoint.com/cpp-overloading	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
33	08/02/2024	5	Overloading unary operator	CHALK AND TALK	https://www.geeksforgeeks.org/types-of-operator-overloading-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
34	09/02/2024	1	Overloading binary operators	CHALK AND TALK	https://www.geeksforgeeks.org/types-of-operator-overloading-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
35	13/02/2024	4	Overloading Friend functions	CHALK AND TALK	https://doctortutorials.net/lesson/operator-overloading-using-friend-function-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
36	14/02/2024	1	Type conversion	CHALK AND TALK	https://www.geeksforgeeks.org/type-conversion-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
37	15/02/2024	5	Inheritance	CHALK AND TALK	https://www.geeksforgeeks.org/inheritance-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
38	16/02/2024	1	Types of Inheritance	CHALK AND TALK	https://www.geeksforgeeks.org/inheritance-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
39	17/02/2024	5	Single, Multilevel Inheritance	CHALK AND TALK	https://www.geeksforgeeks.org/inheritance-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
40	19/02/2024	1	Multiple, Hierarchical Inheritance	CHALK AND TALK	https://www.geeksforgeeks.org/inheritance-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
41	21/02/2024	4	Hybrid Inheritance	CHALK AND TALK	https://www.geeksforgeeks.org/inheritance-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
42	22/02/2024	1	Multi path inheritance	CHALK AND TALK	https://www.geeksforgeeks.org/inheritance-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
43	23/02/2024	5	Virtual base classes	CHALK AND TALK	https://www.geeksforgeeks.org/virtual-base-class-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
44	26/02/2024	1	Virtual base classes	CHALK AND TALK	https://www.geeksforgeeks.org/virtual-base-class-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
45	27/02/2024	1	Abstract Classes	CHALK AND TALK	https://www.geeksforgeeks.org/pure-virtual-functions-and-abstract-classes/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
Unit 4						
46	29/02/2024	4	Pointers	CHALK AND TALK	https://www.w3schools.com/cpp/cpp_pointers.asp	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
47	01/03/2024	1	Declaration of pointers	CHALK AND TALK	https://www.geeksforgeeks.org/cpp-pointers/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
48	02/03/2024	4	Pointer to Class	CHALK AND TALK	https://www.tutorialspoint.com/cplusplus/cpp_pointer_to_class.htm	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.
49	04/03/2024	5	Pointer to Class	CHALK AND TALK	https://www.tutorialspoint.com/cplusplus/cpp_pointer_to_class.htm	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education.

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50	05/03/2024	1	Pointer to Object	CHALK AND TALK	https://www.codewithharry.com/videos/cpp-tutorials-in-hindi-31/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
51	06/03/2024	1	this pointer	CHALK AND TALK	https://www.geeksforgeeks.org/this-pointer-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
52	08/03/2024	4	Pointers to derived classes and Base classes	CHALK AND TALK	https://donetutorials.net/lesson/base-class-pointer-and-derived-class-object-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
53	11/03/2024	1	Pointers to derived classes and Base classes	CHALK AND TALK	https://donetutorials.net/lesson/base-class-pointer-and-derived-class-object-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
54	12/03/2024	5	Arrays	CHALK AND TALK	https://www.javatpoint.com/cpp-arrays#:~:text=Like%20other%20programming%20languages%2C%20array,of%20elements%20in%20C%2B%2B%20array.	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
55	13/03/2024	1	Characteristics of arrays	CHALK AND TALK	https://tutorialspoint.com/explain-the-characteristics-and-operations-of-arrays-in-c-language	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
56	14/03/2024	1	array of classes	CHALK AND TALK	https://www.geeksforgeeks.org/array-of-objects-in-c-with-examples/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
57	16/03/2024	1	Memory models	CHALK AND TALK	https://people.cs.pitt.edu/~xiancizhang/notes/cpp11_mem.html	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
58	18/03/2024	4	new and delete operators	CHALK AND TALK	https://www.geeksforgeeks.org/new-and-delete-operators-in-cpp-for-dynamic-memory/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
59	19/03/2024	1	dynamic object	CHALK AND TALK	https://www.geeksforgeeks.org/dynamic-initialization-of-object-in-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
60	20/03/2024	5	Binding, Polymorphism and Virtual Functions.	CHALK AND TALK	https://www.geeksforgeeks.org/virtual-functions-and-runtime-polymorphism-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
Unit 5						
61	21/03/2024	1	Files	CHALK AND TALK	https://www.w3schools.com/cpp/cpp_files.asp	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
62	22/03/2024	1	File stream classes	CHALK AND TALK	https://www.edureka.co/blog/file-handling-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
63	26/03/2024	4	file modes	CHALK AND TALK	https://www.mygreatlearning.com/blog/file-handling-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
64	27/03/2024	1	Sequential Read / Write operations	CHALK AND TALK	https://codescracker.com/cpp/cpp-sequential-io-with-files.htm	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
65	28/03/2024	5	Sequential Read / Write operations	CHALK AND TALK	https://codescracker.com/cpp/cpp-sequential-io-with-files.htm	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
66	30/03/2024	1	Binary and ASCII Files	CHALK AND TALK	https://www.geeksforgeeks.org/difference-between-cpp-text-file-and-binary-file/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
67	01/04/2024	1	Random Access Operation	CHALK AND TALK	https://www.infobrother.com/Tutorial/C++/C++-Random-files.php	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
68	02/04/2024	1	Templates	CHALK AND TALK	https://www.geeksforgeeks.org/templates-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education



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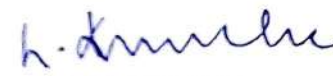
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69	04/04/2024	4	Templates	CHALK AND TALK	https://www.geeksforgeeks.org/templates-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
70	05/04/2024	1	Exception Handling	CHALK AND TALK	https://www.geeksforgeeks.org/exception-handling-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
71	06/04/2024	5	Exception Handling	CHALK AND TALK	https://www.geeksforgeeks.org/exception-handling-c/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
72	08/04/2024	1	Strings	CHALK AND TALK	https://www.geeksforgeeks.org/strings-in-cpp/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
73	10/04/2024	1	Declaring and Initializing string objects	CHALK AND TALK	https://tutorials.freshersnow.com/cpp-programming/cpp-strings/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
74	13/04/2024	4	String Attributes	CHALK AND TALK	https://www.geeksforgeeks.org/cpp-string-functions/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education
75	15/04/2024	1	Miscellaneous functions	CHALK AND TALK	https://www.fresh2fresh.com/c-programming/c-miscellaneous-functions/	Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi and Turbo C++", Pearson Education


Faculty Signature

Coordinator


Head of the Department



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. PRAVEENA BALASUBRAMANIAN.,
Year/Semester/Section : I/II/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 23UDA2CM & CORE PRACTICAL 2 - OBJECT ORIENTED PROGRAMMING IN C ++ LABORATORY

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	04/12/2023	2	a. C++ Program to Print "Hello, World!".	PPT,LAB	https://www.programiz.com/cpp-programming/examples/print-sentence	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
2	05/12/2023	4	b. C++ Program to Add Two Integers.	PPT,LAB	https://www.javatpoint.com/add-two-numbers-in-cpp-program	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
3	07/12/2023	3	c. C++ Program to Swap Values of Two Variables.	PPT,LAB	https://www.programiz.com/cpp-programming/examples/swapping	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
4	08/12/2023	2	d. C++ Program to Print ASCII Value.	PPT,LAB	https://www.programiz.com/cpp-programming/examples/ASCII-value-character	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
5	11/12/2023	5	f. C++ Program to convert days to years, weeks and days.	PPT,LAB	https://codescracker.com/cpp/program/cpp-convert-days-in-years-weeks-days.htm	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
6	12/12/2023	2	a. C++ Program to perform various Operator	PPT,LAB	https://www.programiz.com/cpp-programming/operators	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
7	13/12/2023	4	b. C++ Program to Calculate Area of Circle.	PPT,LAB	https://aspiringcoders.com/program-to-find-out-the-area-of-circle/	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
8	15/12/2023	3	c. C++ Program to Calculate Area of Square.	PPT,LAB	https://www.codingbroz.com/cpp-program-to-calculate-area-of-square/	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
9	18/12/2023	2	d. C++ Program to Calculate Area of Rectangle.	PPT,LAB	https://www.tutorialspoint.com/cppplus-program-to-create-one-rectangle-class-and-calculate-its-area	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
10	19/12/2023	5	C++ language to perform various string and string functions operations	PPT,LAB	https://blog.hubspot.com/website/c-string-functions	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
11	20/12/2023	2	String functions	PPT,LAB	https://blog.hubspot.com/website/c-string-functions	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
12	21/12/2023	4	String function examples	PPT,LAB	https://blog.hubspot.com/website/c-string-functions	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
13	26/12/2023	3	Example Programs	PPT,LAB	https://www.programiz.com/cpp-programming/examples	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
14	27/12/2023	2	Example Programs	PPT,LAB	https://www.programiz.com/cpp-programming/examples	1.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.



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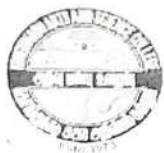
15	02/01/2024	4	conditional statements	PPT, LAB	https://www.w3schools.com/cpp/cpp_conditions.asp	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
Unit 2						
16	04/01/2024	3	Conditional statements	PPT, LAB	https://www.w3schools.com/cpp/cpp_conditions.asp	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
17	05/01/2024	2	4. Develop a C++ Program to perform various conditional statements	PPT, LAB	https://doctormanojals.netlify.com/conditional-statement-in-cpp/	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
18	06/01/2024	5	4. Develop a C++ Program to perform various conditional statements	PPT, LAB	https://doctormanojals.netlify.com/conditional-statement-in-cpp/	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
19	09/01/2024	2	Examples of conditional statements	PPT, LAB	https://www.w3schools.com/cpp/cpp_conditions.asp	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
20	10/01/2024	4	Examples of Conditional statements	PPT, LAB	https://www.w3schools.com/cpp/cpp_conditions.asp	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
21	12/01/2024	3	5. Develop a C++ Program to perform various looping operations	PPT, LAB	https://www.programiz.com/cpp-programming/for-loop	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
22	22/01/2024	2	5. Develop a C++ Program to perform various looping operations	PPT, LAB	https://www.programiz.com/cpp-programming/for-loop	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
23	23/01/2024	4	Examples of looping operations	PPT, LAB	https://www.programiz.com/cpp-programming/for-loop	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
24	27/01/2024	3	Book example programs	PPT, LAB		1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
25	29/01/2024	2	6. Develop a C++ Program to perform Switch Case Operations	PPT, LAB	https://www.peckdopeeks.org/switch-statement-in-cpp/	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
26	30/01/2024	5	looping operations	PPT, LAB	https://www.peckdopeeks.org/switch-statement-in-cpp/	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
27	31/01/2024	2	Switch case	PPT, LAB	https://www.peckdopeeks.org/switch-statement-in-cpp/	https://www.peckdopeeks.org/switch-statement-in-cpp/
28	01/02/2024	4	Switch case examples	PPT, LAB	https://www.peckdopeeks.org/switch-statement-in-cpp/	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
29	03/02/2024	5	Switch case examples	PPT, LAB	https://www.peckdopeeks.org/switch-statement-in-cpp/	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
30	05/02/2024	3	Book example Programs	LAB		1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.
Unit 3						
31	06/02/2024	2	7. Develop a C++ Program to perform a various array Operations	PPT, LAB	https://www.programiz.com/cpp-programming/arrays	1. Ashok N Kamthane (2003), "Object Oriented Programming with Ansi And Turbo C++", Pearson Education.



32	07/02/2024	5	Arrays	PPT.LAB	https://www.programiz.com/cpp-programming/arrays#prelude_vignette	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
33	08/02/2024	2	7. Develop a C++ Program to perform a various array Operations	PPT.LAB	https://www.programiz.com/cpp-programming/arrays#prelude_vignette	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
34	09/02/2024	4	Example program for arrays	PPT.LAB	https://www.geeksforgeeks.org/array-of-objects-in-c-with-examples/	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
35	12/02/2024	3	Array of Objects in C++ with Examples	PPT.LAB	https://www.geeksforgeeks.org/array-of-objects-in-c-with-examples/	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
36	13/02/2024	2	8. Develop a C++ Program to perform functions Operations	PPT.LAB	https://www.geeksforgeeks.org/functions-in-cpp/	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
37	14/02/2024	5	8. Develop a C++ Program to perform functions Operations	PPT.LAB	https://www.geeksforgeeks.org/functions-in-cpp/	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
38	15/02/2024	2	Example programs	PPT.LAB	https://www.geeksforgeeks.org/cpp-programming-examples/	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
39	16/02/2024	4	Example programs	PPT.LAB	https://www.geeksforgeeks.org/cpp-programming-examples/	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
40	17/02/2024	2	Book programs	LAB		I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
41	20/02/2024	3	9. Develop a C++ Program to perform a pointer Operations	PPT.LAB	https://www.geeksforgeeks.org/cpp-pointer-arithmetic/	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
42	21/02/2024	2	9. Develop a C++ Program to perform a pointer Operations	PPT.LAB	https://www.geeksforgeeks.org/cpp-pointer-arithmetic/	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
43	22/02/2024	5	pointers	PPT.LAB	https://www.geeksforgeeks.org/cpp-pointers/	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
44	23/02/2024	2	pointer examples	LAB	https://www.geeksforgeeks.org/cpp-pointers/	I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.
45	26/02/2024	4	Book Examples	LAB		I Ashok N Kamthure (2003), "Object-Oriented Programming with Ansa And Turbo C++", Pearson Education.

Unit 4

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51	05/03/2024	4	Book programs	LAB		I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
52	07/03/2024	3	Book programs	LAB		I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
53	08/03/2024	2	Book programs	LAB		I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
54	11/03/2024	5	11. Develop a C++ Program to perform a various file operations.	LAB	https://www.geeksforgeeks.org/file-handling-c-classes/	I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
55	12/03/2024	2	11. Develop a C++ Program to perform a various file operations.	PPT.LAB	https://www.geeksforgeeks.org/file-handling-c-classes/	I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
56	13/03/2024	4	11. Develop a C++ Program to perform a various file operations.	PPT.LAB	https://www.geeksforgeeks.org/file-handling-c-classes/	I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
57	15/03/2024	3	File operations	PPT.LAB	https://www.mygreatlearning.com/blog/file-handling-in-cpp/	
58	16/03/2024	5	Example of file operations	PPT.LAB	https://www.mygreatlearning.com/blog/file-handling-in-cpp/	I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
59	18/03/2024	2	Example programs	PPT.LAB	https://www.programiz.com/cpp-programming/examples	
60	19/03/2024	5	Example programs	PPT.LAB	https://www.programiz.com/cpp-programming/examples	I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
Unit 5						
61	20/03/2024	2	12. Write a C++ Program to create class, which consists of EMPLOYEE Detail like Employee Number, Employee Name, Department, Basic, Salary, and Grade. Write a member function to get and display them. Derive a class PAY from the above class and write a member function to calculate DA, HRA and PF depending on the grade.	PPT.LAB	http://www.btechsmarclass.com/c_plus_plus/practical_tutorials/C_plus_plus_example_program_4.html	I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
62	21/03/2024	4	12. Write a C++ Program to create class, which consists of EMPLOYEE Detail like Employee Number, Employee Name, Department, Basic, Salary, and Grade. Write a member function to get and display them. Derive a class PAY from the above class and write a member function to calculate DA, HRA and PF depending on the grade.	PPT.LAB	http://www.btechsmarclass.com/c_plus_plus/practical_tutorials/C_plus_plus_example_program_4.html	I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.

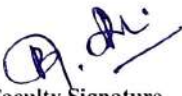


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63	25/03/2024	3	12. Write a C++ Program to create class, which consists of EMPLOYEE Detail like Employee Number, Employee Name, Department, Basic, Salary, and Grade. Write a member function to get and display them. Derive a class PAY from the above class and write a member function to calculate DA, HRA and PF depending on the grade.	PPT.LAB	http://www.btechsmartclass.com/c_plus_plus/practical_tutorials/C_plus_plus_example_program_4.html#google_vignette	I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
64	26/03/2024	2	Revision on program 1 and 2	PPT.LAB		I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
65	27/03/2024	5	revision on program 2 and 3	LAB		I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
66	28/03/2024	2	Revision on program 5 and 6	LAB		
67	01/04/2024	4	Revision on program 7 AND 8	LAB	https://www.programiz.com/cpp-programming/examples	
68	03/04/2024	3	Revision on program 9 and 10	LAB		I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
69	04/04/2024	2	Revision on program 11 and 12	LAB		
70	05/04/2024	5	Example programs	LAB	https://www.programiz.com/cpp-programming/examples	
71	06/04/2024	2	Example programs	LAB	https://www.programiz.com/cpp-programming/examples	
72	08/04/2024	4	Book examples	LAB		I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
73	12/04/2024	3	pointers example	LAB		I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
74	13/04/2024	2	Files Examples	LAB		I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.
75	15/04/2024	5	Examples in book	LAB		I.Ashok N Kamthane (2003), "Object-Oriented Programming with Ansi And Turbo C++", Pearson Education.


Faculty Signature

Coordinator


Head of the Department



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : SUMITHA P.,
Year/Semester/Section : I/II/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 23VED201 & VALUE EDUCATION - MORAL AND ETHICS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	06/12/2023	3	Introduction – Meaning of Moral and Ethics	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
2	07/12/2023	5	Social Ethics	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
3	14/12/2023	3	Social Ethics – Ethics and Culture	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
4	15/12/2023	5	Aim of Education	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
Unit 2						



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5	22/12/2023	3	Life and Teachings of Swami Vivekananda	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
6	26/12/2023	5	Life and Teachings of Swami Vivekananda	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
7	03/01/2024	3	Birth and Childhood days of Swami Vivekananda	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
8	04/01/2024	5	At the Parliament of Religions	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
9	11/01/2024	3	At the Parliament of Religions	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
10	12/01/2024	5	Teachings of Swami Vivekananda	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
Unit 3						
11	24/01/2024	3	Warriors of our Nation: Subhas Chandra Bose – sardar vallabhbhai patel	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).



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12	27/01/2024	5	Udham Singh – V. O. Chidambaram Pillai – Bhagat Singh	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
13	02/02/2024	3	Tiruppur Kumaran – Dheeran Chinnamalai – Thillaiaadi Valliammai	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
14	05/02/2024	5	– Velu Nachiyar – Vanchinathan	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
Unit 4						
15	12/02/2024	5	Physical Fitness and Mental Harmony: Simplified Physical Exercise – Hand Exercises	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
16	19/02/2024	3	Leg Exercises – Neuro Muscular Breathing Exercises	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).



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17	20/02/2024	5	Eye Exercises – Kabalabathi – Maharasana A & B	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
18	27/02/2024	3	Massage - Acupressure – Relaxation –	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
19	28/02/2024	5	Kayakalpa Yogam - LifeForce – Aim & Objectives	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
20	06/03/2024	3	Principle – Methods. Introspection – Analysis of Thoughts –	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
21	07/03/2024	5	Moralization of Desires –	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
22	14/03/2024	3	Neutralization of Anger – Eradication of Worries	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
Unit 5						



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23	15/03/2024	5	Yoga and Meditation – The Asset of India: Yogasanam – Rules & Regulations	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
24	22/03/2024	3	Surya Namaskar – Asanas –Sitting –	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
25	25/03/2024	5	Stanging =Prone - Supine -	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
26	30/03/2024	3	Pranayama – Naadi Sudhi	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
27	02/04/2024	3	Ujjayi – Seethali – Sithkari	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
28	03/04/2024	5	Benefits. Meditation	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
29	10/04/2024	3	Thanduvasudhi - Agna – Shanthi	CHALK AND TALK		Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).



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30	12/04/2024	5	Thuriyam – Benefits	CHALK AND TALK	Value Based Education – Moral and Ethics – compiled by Kongunadu Arts and Science College (Autonomous), 2nd Edition (2021).
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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Dr. NARMADHA S.,
Year/Semester/Section : II/IV/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UDA404 & CORE PAPER 4 - PYTHON PROGRAMMING

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	05/12/2023	5	Computer Hardware Architecture	CHALK AND TALK	https://www.cdstab.org/python/notes/preliminary-foundations/computer-hardware/computer-hardware.html	Kenneth A. Lambert, (2012) "Fundamentals of Python: First Programs", CENGAGE Learning. : Chapter-1, Pages:6-7
2	06/12/2023	3	Overview of Programming Languages	PPT	https://www.linkedin.com/pulse/overview-programming-languages-saik-at-hose	Kenneth A. Lambert, (2012) "Fundamentals of Python: First Programs", CENGAGE Learning. : Chapter-1, Pages:11-16
3	08/12/2023	5	Introduction to Python	CHALK AND TALK	https://www.w3schools.com/python/python_intro.asp	Kenneth A. Lambert, (2012) "Fundamentals of Python: First Programs", CENGAGE Learning. : Chapter-1, Pages:23-28
4	11/12/2023	1	Python Overview	CHALK AND TALK	https://www.tutorialspoint.com/python/python_overview.htm	Kenneth A. Lambert, (2012) "Fundamentals of Python: First Programs", CENGAGE Learning. : Chapter-1, Pages:22-29
5	13/12/2023	5	Comments in Python	CHALK AND TALK	https://www.w3schools.com/python/python_comments.asp	Allen B. Downey, (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3, Shroff/O'Reilly Publishers: Chapter-2, Pages:13-14
6	14/12/2023	3	Python Identifiers	PPT	https://www.geeksforgeeks.org/python-keywords-and-identifiers/	Charles Dierbach, (2013) "Introduction to Computer Science using Python: A Computational Problem-Solving Focus, Wiley India Edition. : Chapter-2, Pages:53-57
7	18/12/2023	5	Python Identifiers	CHALK AND TALK	https://www.geeksforgeeks.org/python-keywords-and-identifiers/	Charles Dierbach, (2013) "Introduction to Computer Science using Python: A Computational Problem-Solving Focus, Wiley India Edition. : Chapter-2, Pages:53-57
8	19/12/2023	1	Reserved Keywords	CHALK AND TALK	https://www.geeksforgeeks.org/python-keywords-and-identifiers/	Allen B. Downey, (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3, Shroff/O'Reilly Publishers: Chapter-2, Pages:9-12
9	21/12/2023	5	Variables	CHALK AND TALK	https://www.w3schools.com/python/python_variables.asp	Allen B. Downey, (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3, Shroff/O'Reilly Publishers: Chapter-2, Pages:9-15
10	22/12/2023	3	Variables - Examples	CHALK AND TALK	https://www.w3schools.com/python/python_variables.asp	Allen B. Downey, (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3, Shroff/O'Reilly Publishers: Chapter-2, Pages:9-15
11	27/12/2023	5	Standard Data Types	CHALK AND TALK	https://www.w3schools.com/python/python_datatypes.asp	John Zelle, (2017) "Python Programming : An introduction to computer Science", Chapter-3, Pages:57-60
12	02/01/2024	5	Python Casting	CHALK AND TALK	https://www.w3schools.com/python/python_casting.asp	John Zelle, (2017) "Python Programming : An introduction to computer Science", Chapter-3, Pages:57-62
Unit 2						
13	03/01/2024	3	Statement and Expressions	PPT	https://codepiet.com/expressions-and-statements-in-python/	Allen B. Downey, (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3, Shroff/O'Reilly Publishers: Chapter-2, Pages:9-15
14	05/01/2024	5	String Operations: Creating String in Python	FLIPPED CLASS	https://www.programiz.com/python-programming/string	Allen B. Downey, (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3, Shroff/O'Reilly Publishers: Chapter-8, Pages:71-79
15	08/01/2024	1	Strings indexing and splitting	CHALK AND TALK	https://pythonguides.com/split-a-string-by-index-in-python/	Allen B. Downey, (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3, Shroff/O'Reilly Publishers: Chapter-8, Pages:71-79



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16	10/01/2024	5	Reassigning Strings	CHALK AND TALK	https://www.scaler.com/topics/python/strings-in-python/	Allen B. Downey, (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3, Shroff/O'Reilly Publishers: Chapter-8, Pages:71-79
17	11/01/2024	3	Deleting the String	CHALK AND TALK	https://www.geeksforgeeks.org/ways-to-remove-ith-character-from-string-in-python/	Allen B. Downey, (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3, Shroff/O'Reilly Publishers: Chapter-8, Pages:71-79
18	23/01/2024	5	Multiline Strings	CHALK AND TALK	https://www.w3schools.com/python/gloss_python_multi_line_strings.asp	John Zelle, (2017) "PYTHON PROGRAMMING AN INTRODUCTION TO COMPUTER SCIENCE", THIRD EDITION: Chapter-5, Pages:158-159
19	24/01/2024	3	Built-in String Methods	PPT	https://www.w3schools.com/python/python_ref_string.asp	John Zelle, (2017) "PYTHON PROGRAMMING AN INTRODUCTION TO COMPUTER SCIENCE", THIRD EDITION: Chapter-5, Pages:142-150
20	29/01/2024	5	Boolean Expressions	VIDEOS	https://www.youtube.com/watch?v=6lCKvzwa9AQ	Kenneth A. Lambert, (2017) "Fundamentals of Python First Programs", Second Edition: Chapter-2, Pages:49-54
21	30/01/2024	1	Python List	PPT	https://www.w3schools.com/python/python_lists.asp	Kenneth A. Lambert, (2017) "Fundamentals of Python First Programs", Second Edition: Chapter-5, Pages:135-144
22	01/02/2024	5	Various List Operation	CHALK AND TALK	https://www.codingninjas.com/studio/library/what-are-the-python-list-operations	Kenneth A. Lambert, (2017) "Fundamentals of Python First Programs", Second Edition: Chapter-5, Pages:135-144
23	02/02/2024	3	Loop List	CHALK AND TALK	https://www.w3schools.com/python/python_lists_loop.asp	Kenneth A. Lambert, (2017) "Fundamentals of Python First Programs", Second Edition: Chapter-5, Pages:135-144
24	03/02/2024	1	List Methods	CHALK AND TALK	https://www.w3schools.com/python/python_ref_list.asp	Kenneth A. Lambert, (2017) "Fundamentals of Python First Programs", Second Edition: Chapter-5, Pages:135-141
Unit 3						
25	06/02/2024	5	Python Tuples	PPT	https://www.geeksforgeeks.org/tuples-in-python/	Allen Downey, (2015) "Think Python" Green Tea Press: Chapter-12, Pages:115-117
26	07/02/2024	1	Various Tuples Operations	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2024/01/tuple-methods-and-operations/	Allen Downey, (2015) "Think Python" Green Tea Press: Chapter-12, Pages:115-120
27	09/02/2024	5	Loop Tuples - Tuple Methods	CHALK AND TALK	https://www.w3schools.com/python/python_ref_tuple.asp	Allen Downey, (2015) "Think Python" Green Tea Press: Chapter-12, Pages:115-120
28	13/02/2024	5	Python Set	CHALK AND TALK	https://www.javatpoint.com/python-set	Jennifer Campbell, (2009) "Practical Programming An introduction to computer Science using Python": Chapter-9, Pages:186-190
29	14/02/2024	1	Various Set Operations	CHALK AND TALK	https://www.freecodecamp.org/news/python-set-operations-explained-with-examples/	Jennifer Campbell, (2009) "Practical Programming An introduction to computer Science using Python": Chapter-9, Pages:186-190
30	16/02/2024	5	Loop Set – Set Methods	PPT	https://www.w3schools.com/python/gloss_python_loop_set_items.asp#:~:text=You%20cannot%20access%20items%20in,by%20using%20the%20in%20keyword.	Jennifer Campbell, (2009) "Practical Programming An introduction to computer Science using Python": Chapter-9, Pages:186-190
31	19/02/2024	3	Python Dictionaries	CHALK AND TALK	https://www.w3schools.com/python/python_dictionaries.asp	Jennifer Campbell, (2009) "Practical Programming An introduction to computer Science using Python": Chapter-9, Pages:190-199
32	21/02/2024	5	Various Dictionaries Operations –Nested Dictionaries	CHALK AND TALK	https://www.w3schools.com/python/python_dictionaries.asp	Jennifer Campbell, (2009) "Practical Programming An introduction to computer Science using Python": Chapter-9, Pages:190-199
33	22/02/2024	1	Dictionary Methods	CHALK AND TALK	https://www.w3schools.com/python/python_ref_dictionary.asp	Jennifer Campbell, (2009) "Practical Programming An introduction to computer Science using Python": Chapter-9, Pages:190-199
34	26/02/2024	5	Python Dates- Python Conditions and Python IF Statement	PPT	https://www.w3schools.com/python/python_conditions.asp	Jennifer Campbell, (2009) "Practical Programming An introduction to computer Science using Python": Chapter-6, Pages:118-126
35	27/02/2024	3	Python IF ELIF ELSE Statements	CHALK AND TALK	https://www.datacamp.com/tutorial/elif-statements-python	Jennifer Campbell, (2009) "Practical Programming An introduction to computer Science using Python": Chapter-6, Pages:118-126
36	29/02/2024	5	Python nested IF statements- The pass Statement	CHALK AND TALK	https://www.geeksforgeeks.org/nested-if-statement-in-python/	Jennifer Campbell, (2009) "Practical Programming An introduction to computer Science using Python": Chapter-6, Pages:118-126
Unit 4						
37	01/03/2024	1	Python Loops - Python while Loop Statements	CHALK AND TALK	https://www.w3schools.com/python/python_while_loops.asp	Kenneth A. Lambert, (2017) "Fundamentals of Python First Programs": Chapter-3, Pages:86-91



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38	02/03/2024	5	Infinite Loop	CHALK AND TALK	https://www.scaler.com/topics/infinite-loop-in-python/	Kenneth A Lambert, (2017) "Fundamentals of Python First Programs": Chapter-3, Pages:86-91
39	05/03/2024	5	for Loop Statements- Iterating by Sequence Index	CHALK AND TALK	https://www.geeksforgeeks.org/for-loop-that-iterates-over-a-sequence-in-python/	John Zelle, (2017) "Python Programming : An introduction to computer Science": Chapter-8, Pages:252-256
40	06/03/2024	3	Python nested loops	CHALK AND TALK	https://www.geeksforgeeks.org/python-nested-loops/ , https://www.w3schools.com/python/python_numbers.asp	John Zelle, (2017) "Python Programming : An introduction to computer Science": Chapter-8, Pages:243-255
41	08/03/2024	5	Mathematical Functions	CHALK AND TALK	https://www.javatpoint.com/mathematical-functions	Allen Downey, (2015) "Think Python How to Think Like a Computer Scientist": Chapter-3, Pages:18-19
42	11/03/2024	1	Random Number Functions	CHALK AND TALK	https://www.geeksforgeeks.org/random-numbers-in-python/	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist: Chapter-13, Pages:126-127
43	13/03/2024	5	Python Functions - Introduction	PPT	https://www.geeksforgeeks.org/python-functions/	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist: Chapter-3, Pages:17-26
44	14/03/2024	3	Pass by reference vs value	CHALK AND TALK	https://www.geeksforgeeks.org/pass-by-reference-vs-value-in-python/	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist: Chapter-3, Pages:17-26
45	16/03/2024	1	Function Arguments	CHALK AND TALK	https://www.w3schools.com/python/gloss_python_function_arguments.asp	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist: Chapter-3, Pages:17-26
46	18/03/2024	5	The return Statement	CHALK AND TALK	https://www.geeksforgeeks.org/python-return-statement/	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist: Chapter-3, Pages:17-26
47	19/03/2024	1	Python Lambda functions	CHALK AND TALK	https://www.w3schools.com/python/python_lambda.asp	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist: Chapter-3, Pages:17-26
48	21/03/2024	5	Python Lambda functions examples	CHALK AND TALK	https://www.w3schools.com/python/python_lambda.asp	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist: Chapter-3, Pages:17-26
Unit 5						
49	22/03/2024	3	Scope of Variables	CHALK AND TALK	https://www.geeksforgeeks.org/python-scope-of-variables/	Kenneth A Lambert, (2017) "Fundamentals of Python First Programs": Chapter-6, Pages:191-194
50	26/03/2024	5	Local Scope- Global Scope of variables	CHALK AND TALK	https://www.geeksforgeeks.org/global-local-variables-python/	Kenneth A Lambert, (2017) "Fundamentals of Python First Programs": Chapter-6, Pages:190-194
51	27/03/2024	1	Python Exceptions Handling	PPT	https://www.geeksforgeeks.org/python-exception-handling/	John Zelle, (2017) "Python Programming : An introduction to computer Science": Chapter-7, Pages:223-227
52	30/03/2024	3	Assertions in Python - Handling an exception	CHALK AND TALK	https://studyganza.in/python/raise-assert.php	John Zelle, (2017) "Python Programming : An introduction to computer Science": Chapter-7, Pages:223-227
53	01/04/2024	5	Python String Formatting	PPT	https://realpython.com/python-string-formatting/	John Zelle, (2017) "Python Programming : An introduction to computer Science": Chapter-5, Pages:154-158
54	02/04/2024	3	Python User Input	CHALK AND TALK	https://www.w3schools.com/python/python_user_input.asp	Robert Sedgewick, (2013) "Introduction to Programming in Python": Chapter-1, Pages:150-152
55	04/04/2024	5	Python Files I/O - File Handling	VIDEOS	https://www.youtube.com/watch?v=evcUagVyuY	Charles Dierbach, (2013) "Introduction to Computer Science using Python": Chapter-8, Pages:290-294
56	05/04/2024	1	File Open- Read Only Parts of the File	CHALK AND TALK	https://www.geeksforgeeks.org/file-handling-python/	Charles Dierbach, (2013) "Introduction to Computer Science using Python": Chapter-8, Pages:291-294
57	08/04/2024	5	Read Lines- Close Files	CHALK AND TALK	https://www.w3schools.com/python/ref_file_readlines.asp	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist: Chapter-14, Pages:137-145
58	10/04/2024	3	Python File Write- Create a New File	CHALK AND TALK	https://unacademy.com/blog/python-create-file/#:~:text=To%20create%20a%20file%20in%20Python%20you%20need%20to%20use%20the%20open%20function%20to%20create%20a%20new%20file.	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist: Chapter-14, Pages:137-145
59	13/04/2024	5	Delete File- Delete Folder	CHALK AND TALK	https://sentry.io/news/delete-a-file-or-folder-in-python/	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist: Chapter-14, Pages:137-145
60	15/04/2024	1	Python Matplotlib	PPT	https://www.w3schools.com/python/matplotlib_intro.asp	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Dr. NARMADHA S.,
Year/Semester/Section : II/IV/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UDA4CO & CORE PRACTICAL 4 - PYTHON PROGRAMMING LABORATORY

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	04/12/2023	4	Get started with Python	LAB	https://www.programiz.com/python-programming/first-program	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
2	05/12/2023	1	Python program to print "Hello Python"	LAB	https://www.javatpoint.com/hello-python-program	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
3	06/12/2023	2	Python Program to Add Two Numbers	LAB	https://www.programiz.com/python-programming/examples/add-number	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
4	07/12/2023	5	Add Two Numbers With User Input	LAB	https://www.programiz.com/python-programming/examples/add-number	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
5	08/12/2023	4	Control Structures of python : Introduction and Explanation	LAB	https://www.programiz.com/python-programming/if-elif-else	Jennifer Campell, (2009) "Practical Programming An introduction to computer Science using Python"
6	12/12/2023	4	1. Develop programs to understand the control structures of python	LAB	https://www.programiz.com/python-programming/if-elif-else	Jennifer Campell, (2009) "Practical Programming An introduction to computer Science using Python"
7	13/12/2023	1	Lists in Python	LAB	https://www.w3schools.com/python/python_datatypes.asp	Robert Sedgewick, (2015) "Introduction to Programming in Python"
8	14/12/2023	2	Find the Length of a List in Python	LAB	https://www.geeksforgeeks.org/python-ways-to-find-length-of-list/	Robert Sedgewick, (2015) "Introduction to Programming in Python"
9	15/12/2023	5	Create a Tuple in python	LAB	https://www.w3schools.com/python/python_tuples.asp	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist
10	18/12/2023	4	Create a Dictionary , Methods in Dictionary	LAB	https://www.w3schools.com/python/python_dictionaries.asp	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist

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Faculty Signature

Coordinator

Head of the Department



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11	20/12/2023	4	Develop programs to learn different types of structures (list, dictionary, tuples) in python	LAB	https://www.w3schools.com/python/python_datatypes.asp	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist
Unit 2						
12	21/12/2023	1	Discussion on List Methods	LAB	https://www.w3schools.com/python/python_lists_methods.asp	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist
13	22/12/2023	2	List Methods with Example Programs	LAB	https://www.w3schools.com/python/python_lists_methods.asp	Allen Downey, (2015) Think Python How to Think Like a Computer Scientist
14	26/12/2023	5	Write a python program to implement List methods	LAB	https://www.w3schools.com/python/python_lists_methods.asp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
15	27/12/2023	4	Exception Handling in Python Introduction	PPT	https://www.geeksforgeeks.org/python-exception-handling/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
16	02/01/2024	1	User-defined Exceptions in Python with Examples	LAB	https://www.geeksforgeeks.org/user-defined-exceptions-python-examples/?ref=lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
17	03/01/2024	2	Develop programs to understand working of exception handling and assertions.	LAB	https://www.geeksforgeeks.org/python-exception-handling/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
18	04/01/2024	5	Data Structures in Python	LAB	https://www.geeksforgeeks.org/python-data-structures/?ref=ml_lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
19	05/01/2024	4	Sorting and Searching elements using python	LAB	https://www.geeksforgeeks.org/sorting-algorithms-in-python/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
20	09/01/2024	4	Develop programs for data structure algorithms using python – searching, sorting and hash tables	LAB	https://www.geeksforgeeks.org/sorting-algorithms-in-python/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
Unit 3						
21	10/01/2024	1	Python Regular Expression Introduction	PPT	https://www.w3schools.com/python/python_regex.asp	John Zelle, (2017) "Python Programming : An introduction to computer Science"
22	11/01/2024	2	Develop a Python Program using regular Expression	LAB	https://www.w3schools.com/python/python_regex.asp	John Zelle, (2017) "Python Programming : An introduction to computer Science"



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23	12/01/2024	5	Develop programs to learn regular expressions using python.	LAB	https://www.geeksforgeeks.org/regular-expression-python-examples/	John Zelle, (2017) "Python Programming : An introduction to computer Science"
24	22/01/2024	4	Develop a python program with regular Expression functions	LAB	https://www.geeksforgeeks.org/regular-expression-python-examples/	John Zelle, (2017) "Python Programming : An introduction to computer Science"
25	23/01/2024	1	Develop a Python Program with Data Types	LAB	https://www.javatpoint.com/python-data-types	Charles Dierbach, (2013) "Introduction to Computer Science using Python"
26	24/01/2024	2	Develop a Python Program to check the type of variables in a given LIST	LAB	https://www.javatpoint.com/python-data-types	Charles Dierbach, (2013) "Introduction to Computer Science using Python"
27	27/01/2024	5	The floor() and ceil() Functions in Python	LAB	https://www.javatpoint.com/floor-and-ceil-functions-in-python	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
28	29/01/2024	4	Python Math Module Explanation	LAB	https://www.javatpoint.com/python-math-module	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
29	31/01/2024	4	Introduction to Function in Python	LAB	https://www.javatpoint.com/python-functions	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
30	01/02/2024	1	Create a function in Python	LAB	https://www.javatpoint.com/python-functions	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
31	02/02/2024	2	Function Pass by Reference vs. Pass by Value	LAB	https://www.javatpoint.com/python-functions	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
32	05/02/2024	5	Explore Lambda Function in Python	LAB	https://www.javatpoint.com/python-functions	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
33	06/02/2024	4	Built in functions in Python	LAB	https://www.javatpoint.com/python-functions	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
34	08/02/2024	4	Python Date and time	LAB	https://www.javatpoint.com/python-date	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
35	09/02/2024	1	Chat Room in Python Introduction	LAB	https://www.geeksforgeeks.org/simple-chat-room-using-python/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
36	12/02/2024	5	Sockets and Multi threading Explanation	PPT	https://www.geeksforgeeks.org/simple-chat-room-using-python/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
37	13/02/2024	4	Develop a Client Side Script For Chat Room Application in Python	LAB	https://www.geeksforgeeks.org/simple-chat-room-using-python/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education



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38	15/02/2024	4	Develop a Client Side Script in Python For chat Room Application	LAB	https://www.geeksforgeeks.org/simple-chat-room-using-python/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
39	16/02/2024	1	Create a server side script in Python for Chat room Application	LAB	https://www.geeksforgeeks.org/simple-chat-room-using-python/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
40	17/02/2024	4	Create a Server Side script in python for chat room application	LAB	https://www.geeksforgeeks.org/simple-chat-room-using-python/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
Unit 4						
41	19/02/2024	2	Chat Room Application with Client and Server Side scripts	LAB	https://www.geeksforgeeks.org/simple-chat-room-using-python/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
42	20/02/2024	5	Chat Bot Explanation	LAB	https://www.geeksforgeeks.org/chat-bot-in-python-with-chatterbot-module/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
43	21/02/2024	4	Write a python program to implement simple Chat bot with minimum TEN conversations	LAB	https://www.javatpoint.com/chatbot-in-python	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
44	23/02/2024	4	Write a python program to implement simple Chat bot with minimum TEN conversations	LAB	https://www.javatpoint.com/chatbot-in-python	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
45	26/02/2024	1	Run Chat bot Application using python	LAB	https://www.javatpoint.com/chatbot-in-python	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
46	27/02/2024	2	Introduction to Data Visualization	LAB	https://www.geeksforgeeks.org/data-visualization-with-python/	Jennifer Campell, (2009) "Practical Programming An introduction to computer Science using Python"
47	28/02/2024	5	Introduction to Matplotlib	PPT	https://www.geeksforgeeks.org/data-visualization-with-python/	Jennifer Campell, (2009) "Practical Programming An introduction to computer Science using Python"
48	29/02/2024	4	Data Visualization using Matplotlib	LAB	https://www.geeksforgeeks.org/data-visualization-using-matplotlib/?ref=lbp	Jennifer Campell, (2009) "Practical Programming An introduction to computer Science using Python"
49	02/03/2024	4	Line chart in Matplotlib – Python	LAB	https://portal.kongunaducollege.ac.in/Lesson_plan/add_course_plan/23605/38036/1	Jennifer Campell, (2009) "Practical Programming An introduction to computer Science using Python"
Unit 5						

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50	04/03/2024	4	Bar Plot in Matplotlib	LAB	https://portal.kongunaducollege.ac.in/Lesson_plan/add_course_plan/23605/38036/1	Jennifer Campell, (2009) "Practical Programming An introduction to computer Science using Python"
51	05/03/2024	1	Scatter Plot in Matplotlib	LAB	https://www.geeksforgeeks.org/matplotlib-pyplot-scatter-in-python/?ref=lbp	Jennifer Campell, (2009) "Practical Programming An introduction to computer Science using Python"
52	06/03/2024	2	Plot a pie chart in Python using Matplotlib	LAB	https://www.geeksforgeeks.org/plot-a-pie-chart-in-python-using-matplotlib/?ref=lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
53	07/03/2024	5	Write a python program to plot different types of graphs using PyPlot.	LAB	https://www.geeksforgeeks.org/plot-a-pie-chart-in-python-using-matplotlib/?ref=lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
54	08/03/2024	4	Create Multiple Subplots in Matplotlib in Python	LAB	https://www.geeksforgeeks.org/how-to-create-multiple-subplots-in-matplotlib-in-python/?ref=lbp	Jennifer Campell, (2009) "Practical Programming An introduction to computer Science using Python"
55	12/03/2024	4	Caesar Cipher in Python	LAB	https://www.javatpoint.com/caesar-cipher-in-python	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
56	13/03/2024	1	Encryption and Decryption in Caesar Cipher	LAB	https://www.javatpoint.com/caesar-cipher-in-python	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
57	14/03/2024	2	Implement classical ciphers using python.	LAB	https://www.tutorialspoint.com/cryptography_with_python/cryptography_with_python_caesar_cipher.htm	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
58	15/03/2024	5	Implement classical ciphers using python.	LAB	https://www.tutorialspoint.com/cryptography_with_python/cryptography_with_python_caesar_cipher.htm	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
59	18/03/2024	4	Encryption of Files in Python	LAB	https://www.tutorialspoint.com/cryptography_with_python/cryptography_with_python_encryption_of_files.htm	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
60	20/03/2024	4	Decryption of files in Python	LAB	https://www.tutorialspoint.com/cryptography_with_python/cryptography_with_python_decryption_of_files.htm	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
61	21/03/2024	1	GUI Introduction in Python	LAB	https://www.geeksforgeeks.org/python-gui-tkinter/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
62	22/03/2024	2	To create a tkinter Python app Explanation	PPT	https://www.geeksforgeeks.org/python-gui-tkinter/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
63	25/03/2024	5	Widgets in Tkinter	LAB	https://www.geeksforgeeks.org/what-are-widgets-in-tkinter/?ref=lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education



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64	26/03/2024	4	Create First GUI Application using Python-Tkinter	LAB	https://www.geeksforgeeks.org/create-first-gui-application-using-python-tkinter/?ref=previous_article	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
65	28/03/2024	4	Hello World in Tkinter	LAB	https://www.geeksforgeeks.org/hello-world-in-tkinter/?ref=lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
66	30/03/2024	2	Simple GUI calculator using Tkinter	LAB	https://www.geeksforgeeks.org/python-simple-gui-calculator-using-tkinter/?ref=next_article	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
67	01/04/2024	1	Develop programs to learn GUI programming using Tkinter.	LAB	https://www.geeksforgeeks.org/create-first-gui-application-using-python-tkinter/?ref=lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
68	02/04/2024	2	Introduction to File Handling in Python	LAB	https://www.geeksforgeeks.org/file-handling-in-python/?ref=lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
69	03/04/2024	5	Open a File in Python	LAB	https://www.geeksforgeeks.org/open-a-file-in-python/?ref=lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
70	04/04/2024	4	Read from a file in Python	LAB	https://www.geeksforgeeks.org/how-to-read-from-a-file-in-python/?ref=lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
71	06/04/2024	4	Writing to file in Python	LAB	https://www.geeksforgeeks.org/writing-to-file-in-python/?ref=lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
72	08/04/2024	1	Develop a python program to find the most frequent words in a text read from a file	LAB	https://www.geeksforgeeks.org/find-the-most-repeated-word-in-a-text-file/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
73	10/04/2024	2	Develop a Program to Find the most frequent words in a text read from a file	LAB	https://www.geeksforgeeks.org/find-the-most-repeated-word-in-a-text-file/	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
74	12/04/2024	5	Read content from one file and write it into another file	LAB	https://www.geeksforgeeks.org/read-content-from-one-file-and-write-it-into-another-file/?ref=ml_lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education
75	13/04/2024	4	Read content from one file and write it into another file	LAB	https://www.geeksforgeeks.org/read-content-from-one-file-and-write-it-into-another-file/?ref=ml_lbp	Martin C. Brown, (2018) "Python: The Complete Reference", McGraw Hill Education



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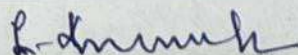
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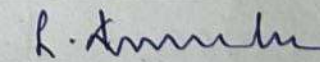
LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mr. KATHIRVELKUMARAN LOGANATHAN .,
Year/Semester/Section : II/IV/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UDA4A4 & ALLIED PAPER 4 - DESIGN AND ANALYSIS OF ALGORITHMS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	04/12/2023	5	Introduction and Analysis of Algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=9WPVToCUZpE&t=95s	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
2	05/12/2023	4	Introduction and Analysis of Algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=0IAPZzGSbME	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
3	06/12/2023	1	Fundamentals of Algorithmic Problem Solving	CHALK AND TALK	https://www.youtube.com/watch?v=EcPY7Mg8bjo	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
4	07/12/2023	4	Fundamentals of Algorithmic Problem Solving	CHALK AND TALK	https://www.youtube.com/watch?v=PAWyuludGU0	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
5	11/12/2023	5	Important Problem Types	CHALK AND TALK	https://www.youtube.com/watch?v=utfkW8Cugo8	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
6	12/12/2023	5	Important Problem Types	CHALK AND TALK	https://www.youtube.com/watch?v=V7-Nw8B7MAI&pp=ygUYSW	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
7	13/12/2023	4	Recursive Algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=ngCos392W4w&pp=ygUYUUm	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.


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8	14/12/2023	1	Recursive Algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=ngCos392W4w&pp=ygUUUm	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
9	15/12/2023	4	Fundamentals of the Analysis of Algorithm Efficiency	CHALK AND TALK	https://www.youtube.com/watch?v=7xXBpXySrKI	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
10	19/12/2023	5	Fundamentals of the Analysis of Algorithm Efficiency	CHALK AND TALK	https://www.youtube.com/watch?v=Gsoc1341weg	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
11	20/12/2023	5	Analysis Framework	CHALK AND TALK	https://www.youtube.com/watch?v=fw_pBjC74Tc	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
12	21/12/2023	4	Analysis Framework	CHALK AND TALK	https://www.youtube.com/watch?v=fw_pBjC74Tc	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
13	22/12/2023	1	Asymptotic Notations and Basic Complexity Classes	CHALK AND TALK	https://www.youtube.com/watch?v=7dz8laf_weM	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
14	26/12/2023	4	Asymptotic Notations and Basic Complexity Classes	CHALK AND TALK	https://www.youtube.com/watch?v=7dz8laf_weM	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
15	02/01/2024	4	Recurrences	CHALK AND TALK	https://www.youtube.com/watch?v=l0iXqhQfDPo	Anany Levitin , (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
Unit 2						
16	03/01/2024	1	Divide and Conquer Strategy	PPT	https://www.youtube.com/watch?v=2Rr2tW9zvRg	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
17	04/01/2024	4	Divide and Conquer Strategy	PPT	https://www.youtube.com/watch?v=18w2XN0w-fQ	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
18	08/01/2024	5	Merge Sort	CHALK AND TALK	https://www.youtube.com/watch?v=4z9I6ZmeLOQ	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.

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19	09/01/2024	5	Merge Sort	PPT	https://www.youtube.com/watch?v=mB5HXBb_HY8	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
20	10/01/2024	4	Quicksort	CHALK AND TALK	https://www.youtube.com/watch?v=7h1s2SojIRw&pp=ygUJUXVp	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
21	11/01/2024	1	Multiplication of large integers	CHALK AND TALK	https://www.youtube.com/watch?v=VWmWIFu734c&pp=ygUgTX	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
22	12/01/2024	4	Strassen's matrix multiplication	PPT	https://www.youtube.com/watch?v=dEq9QuNpQ6E	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
23	22/01/2024	5	Strassen's matrix multiplication	CHALK AND TALK	https://www.youtube.com/watch?v=0oJyNmEbS4w	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
24	23/01/2024	4	Closest Pairs Greedy Strategy	CHALK AND TALK	https://www.youtube.com/watch?v=0W_m46Q4qMc	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
25	24/01/2024	1	Closest Pairs Greedy Strategy	VIDEOS	https://www.youtube.com/watch?v=bYBmoNFyXIg	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
26	27/01/2024	4	Huffman coding	CHALK AND TALK	https://www.youtube.com/watch?v=co4_ahEDCho&pp=ygUOSH	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
27	30/01/2024	5	Shortest Paths Algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=OrJ004Wid4o	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
28	31/01/2024	5	Minimum-Cost Spanning tree Algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=_KX8GDvRzBc	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
29	01/02/2024	4	Disjoint Sets	VIDEOS	https://www.youtube.com/watch?v=wU6udHRIkcc	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
30	02/02/2024	1	Disjoint sets	VIDEOS	https://www.youtube.com/watch?v=wU6udHRIkcc	Jon Kleinberg and Eva Tardos , (2006) "Algorithm Design", Pearson Education.
Unit 3						

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31	03/02/2024	5	Dynamic Programming	PPT	https://www.youtube.com/watch?v=oBt53YbR9Kk	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
32	05/02/2024	4	Dynamic Programming	CHALK AND TALK	https://www.youtube.com/watch?v=oBt53YbR9Kk	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
33	07/02/2024	5	Computing Binomial Coefficient	VIDEOS	https://www.youtube.com/watch?v=GmB0cIY7uMk	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
34	08/02/2024	5	Computing Binomial Coefficient	VIDEOS	https://www.youtube.com/watch?v=GmB0cIY7uMk	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
35	09/02/2024	4	Knapsack problem and Memory Functions	CHALK AND TALK	https://www.youtube.com/watch?v=GmB0cIY7uMk	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
36	12/02/2024	4	Ordering of Matrix Multiplications	CHALK AND TALK	https://www.youtube.com/watch?v=prx1psByp7U&t=642s	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
37	14/02/2024	5	Warshall and Floyd's Algorithm	VIDEOS	https://www.youtube.com/watch?v=-p8zhizock	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
38	15/02/2024	5	Warshall and Floyd's algorithm	VIDEOS	https://www.youtube.com/watch?v=oNI0rf2P9gE&t=208s	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
39	16/02/2024	4	State-space Approach	PPT	https://www.youtube.com/watch?v=IEluLXZSjtY&list=PLFKexf2	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
40	17/02/2024	5	State Space Approach	CHALK AND TALK	https://www.youtube.com/watch?v=ISZmyDEypak	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.

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41	19/02/2024	1	Exhaustive search: BFS	PPT	https://www.youtube.com/watch?v=e2cF8a5aAhE	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
42	20/02/2024	4	Exhaustive search: BFS	CHALK AND TALK	https://www.youtube.com/watch?v=pcKY4hjDrxk&t=556s	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
43	22/02/2024	5	Exhaustive search: DFS	CHALK AND TALK	https://www.youtube.com/watch?v=pcKY4hjDrxk&t=883s	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
44	23/02/2024	5	Exhaustive search: DFS	CHALK AND TALK	https://www.youtube.com/watch?v=pcKY4hjDrxk&t=883s	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
45	26/02/2024	4	Iterative Deepening	CHALK AND TALK	https://www.youtube.com/watch?v=EHwPE5IDXiQ	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
Unit 4						
46	27/02/2024	1	Backtracking and Permutations	CHALK AND TALK	https://www.youtube.com/watch?v=IEIuLXZSjtY&list=PLFKexf2	S Dasgupta, C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
47	28/02/2024	4	Backtracking and Permutations	PPT	https://www.youtube.com/watch?v=IEIuLXZSjtY&list=PLFKexf2	Thomas H Cormen, Charles E Leiserson, Ronald L Rivest, Clifford Stein, (2012) "Introduction to Algorithms", 3rd Edition, PHI Learning Private Limited.
48	01/03/2024	5	N-Queens Problem	VIDEOS	https://www.youtube.com/watch?v=xFv_Hl4B83A	S Dasgupta, C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
49	04/03/2024	5	N-Queens Problem	PPT	https://www.youtube.com/watch?v=xFv_Hl4B83A	S Dasgupta, C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
50	05/03/2024	4	Hamilton Circuits	VIDEOS	https://www.youtube.com/watch?v=v3s0DjRqhKA	S Dasgupta, C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
51	06/03/2024	1	Hamilton Circuits	VIDEOS	https://www.youtube.com/watch?v=v3s0DjRqhKA	S Dasgupta, C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.

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52	07/03/2024	4	Best-First Search	CHALK AND TALK	https://www.youtube.com/watch?v=v3s0DjRqhKA	S Dasgupta , C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
53	11/03/2024	5	Best-First Search	VIDEOS	https://www.youtube.com/watch?v=v3s0DjRqhKA	S Dasgupta , C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
54	12/03/2024	5	Iterative Improvement: Stable marriage	CHALK AND TALK	https://www.youtube.com/watch?v=v3s0DjRqhKA	S Dasgupta , C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
55	13/03/2024	4	Iterative Improvement: Stable marriage	CHALK AND TALK	https://www.youtube.com/watch?v=v3s0DjRqhKA	S Dasgupta , C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
56	14/03/2024	1	Maximum matching in bipartite graphs	CHALK AND TALK	https://www.youtube.com/watch?v=v3s0DjRqhKA	S Dasgupta , C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
57	15/03/2024	4	Maximum matching in bipartite graphs	CHALK AND TALK	https://www.youtube.com/watch?v=v3s0DjRqhKA	S Dasgupta , C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
58	16/03/2024	5	Branch and Bound Problem	CHALK AND TALK	https://www.youtube.com/watch?v=v3s0DjRqhKA	S Dasgupta , C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
59	19/03/2024	5	Knapsack Problem	CHALK AND TALK	https://www.youtube.com/watch?v=yV1d-b_NeK8	S Dasgupta , C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
60	20/03/2024	5	Traveling Salesman Problem	VIDEOS	https://www.youtube.com/watch?v=1FEP_sNb62k&t=829s	S Dasgupta , C H Papadimitriou, U V Vazirani, (2017) "Algorithms", 1st Edition, McGraw Hill Education.
Unit 5						
61	21/03/2024	4	Introduction to Intractability	CHALK AND TALK	https://www.youtube.com/watch?v=EkujDjKZ8Q	Sara Baase and Allen Vangelder, (2000) "Computer Algorithms", Third Edition, Pearson Education.
62	22/03/2024	1	Introduction to Intractability	CHALK AND TALK	https://www.youtube.com/watch?v=e2cF8a5aAhE	Sara Baase and Allen Vangelder, (2000) "Computer Algorithms", Third Edition, Pearson Education.

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63	25/03/2024	4	Polynomial Reductions	VIDEOS	https://www.youtube.com/watch?v=e2cF8a5aAhE	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
64	27/03/2024	5	SAT and 3-SAT	CHALK AND TALK	https://www.youtube.com/results?search_query=%09SAT+and+3-S	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
65	28/03/2024	5	SAT and 3-SAT	CHALK AND TALK	https://www.youtube.com/results?search_query=%09SAT+and+3-S	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
66	30/03/2024	1	NP-Complete and NP Hard Problems	CHALK AND TALK	https://www.youtube.com/watch?v=valpD5Jx7aw	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
67	01/04/2024	4	NP-Complete and NP Hard Problems	VIDEOS	https://www.youtube.com/watch?v=valpD5Jx7aw	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
68	02/04/2024	1	NP-complete and NP Hard Problems	PPT	https://www.youtube.com/watch?v=valpD5Jx7aw	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
69	03/04/2024	4	Approximation Algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=e2cF8a5aAhE	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
70	05/04/2024	5	Approximation Algorithms: Traveling salesman Problem	PPT,CHALK AND TALK	https://www.youtube.com/watch?v=1FEP_sNb62k&t=829s	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
71	06/04/2024	5	Approximation Algorithms: Traveling salesman Problem	CHALK AND TALK,VIDEOS	https://www.youtube.com/watch?v=1FEP_sNb62k&t=829s	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
72	08/04/2024	4	Approximation algorithms: Knapsack Problem	PPT,VIDEOS	https://www.youtube.com/watch?v=nLmhB6NzcM&t=35s	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
73	10/04/2024	1	Knapsack Problem	CHALK AND TALK	https://www.youtube.com/watch?v=nLmhB6NzcM&t=35s	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.

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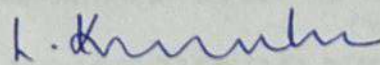


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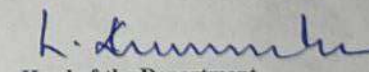
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74	12/04/2024	4	Introduction to Randomized algorithms and Parallel algorithms	CHALK AND TALK	https://www.youtube.com/watch?v=rfAHeilGWoE	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.
75	15/04/2024	5	Introduction to Randomized algorithms and Parallel algorithms	CHALK AND TALK,VIDEOS	https://www.youtube.com/watch?v=rfAHeilGWoE	Sara Baase and Allen Vangelder ,(2000) "Computer Algorithms", Third Edition, Pearson Education.


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LESSON PLAN

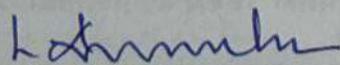
ACADEMIC YEAR : 2023-2024
Faculty Name : Mr. KATHIRVELKUMARAN LOGANATHAN .,
Year/Semester/Section : II/IV/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UDA4SL & SKILL BASED SUBJECT 2 - WEB DESIGN LABORATORY

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	04/12/2023	1	Design a page having suitable background colour and text colour with title "My First Web Page" using all the attributes of the Font tag and Create a HTML document giving details of your [Name, Age], [Address, Phone] and [Register Number, Class] aligned in proper order using alignment attributes of Paragraph tag.	LAB	https://www.youtube.com/watch?v=qz0aGYrrlhU	Jon Duckett (2000) – "Beginning Web Programming With HTML, XHTML AND CSS", – Second Edition, Wiley India Pvt Ltd

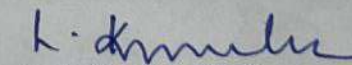
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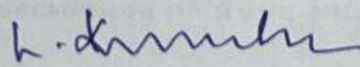


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2	11/12/2023	2	Design a page having suitable background colour and text colour with title "My First Web Page" using all the attributes of the Font tag and Create a HTML document giving details of your [Name, Age], [Address, Phone] and [Register Number, Class] aligned in proper order using alignment attributes of Paragraph tag.	LAB	https://www.youtube.com/watch?v=qz0aGYrrlhU	Jon Duckett (2000) – "Beginning Web Programming With HTML, XHTML AND CSS", – Second Edition, Wiley India Pvt Ltd
3	12/12/2023	1	Design a page having suitable background colour and text colour with title "My First Web Page" using all the attributes of the Font tag and Create a HTML document giving details of your [Name, Age], [Address, Phone] and [Register Number, Class] aligned in proper order using alignment attributes of Paragraph tag.	LAB	https://www.youtube.com/watch?v=qz0aGYrrlhU	Jon Duckett (2000) – "Beginning Web Programming With HTML, XHTML AND CSS", – Second Edition, Wiley India Pvt Ltd


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4	19/12/2023	2	Design a page having suitable background colour and text colour with title "My First Web Page" using all the attributes of the Font tag and Create a HTML document giving details of your [Name, Age], [Address, Phone] and [Register Number, Class] aligned in proper order using alignment attributes of Paragraph tag.	LAB	https://www.youtube.com/watch?v=qz0aGYrrlhU	Jon Duckett (2000) – "Beginning Web Programming With HTML, XHTML AND CSS", – Second Edition, Wiley India Pvt Ltd
5	20/12/2023	1	Write HTML code to design a page containing some text in a paragraph by giving suitable heading style.	LAB	https://www.youtube.com/watch?v=mEMrFbX4Agg	Jon Duckett (2000) – "Beginning Web Programming With HTML, XHTML AND CSS", – Second Edition, Wiley India Pvt Ltd
6	08/01/2024	2	Write HTML code to design a page containing some text in a paragraph by giving suitable heading style.	LAB	https://www.youtube.com/watch?v=FJhL8SwS1Jw	Jon Duckett (2000) – "Beginning Web Programming With HTML, XHTML AND CSS", – Second Edition, Wiley India Pvt Ltd
7	09/01/2024	1	Write HTML code to create a Web Page that contains an Image at its center and description of the image.	LAB	https://www.youtube.com/watch?v=_w6N_nplmAw	Jon Duckett (2000) – "Beginning Web Programming With HTML, XHTML AND CSS", – Second Edition, Wiley India Pvt Ltd

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8	22/01/2024	1	Write HTML code to create a Web Page that contains an Image at its center and description of the image.	LAB	https://www.youtube.com/watch?v=_w6N_nplmAw	Jon Duckett (2000) – "Beginning Web Programming With HTML, XHTML AND CSS", – Second Edition, Wiley India Pvt Ltd
9	30/01/2024	2	Write HTML code to create a Web Page that contains an Image at its center and description of the image.	LAB	https://www.youtube.com/watch?v=_w6N_nplmAw	Jon Duckett (2000) – "Beginning Web Programming With HTML, XHTML AND CSS", – Second Edition, Wiley India Pvt Ltd
Unit 2						
10	31/01/2024	1	Use table tag to format web page and also create the Time Table of your class using table	LAB	https://www.youtube.com/watch?v=6Kq3QZGdr7s	Thomas A. Powell, "The Complete Reference HTML", – Second Edition Tata McGraw Hill Publication.
11	03/02/2024	2	Use table tag to format web page and also create the Time Table of your class using table	LAB	https://www.youtube.com/watch?v=K21yqCmo6Qg	Thomas A. Powell, "The Complete Reference HTML", – Second Edition Tata McGraw Hill Publication.
12	07/02/2024	2	Use table tag to format web page and also create the Time Table of your class using table	LAB	https://www.youtube.com/watch?v=aNC6LY34yVM	Thomas A. Powell, "The Complete Reference HTML", – Second Edition Tata McGraw Hill Publication.

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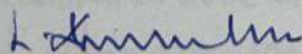


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13	08/02/2024	1	Create your profile page i.e. educational details, Hobbies, Achievement, My Ideals etc.	LAB	https://www.youtube.com/watch?v=CDe5wfHAIAY	Chris Bates - "Web Programming Building Internet Applications", Second Edition, John Wiley & Sons, Ltd.
14	14/02/2024	2	Create your profile page i.e. educational details, Hobbies, Achievement, My Ideals etc.	LAB	https://www.youtube.com/watch?v=HrcpBtKe-Vg	Chris Bates - "Web Programming Building Internet Applications", Second Edition, John Wiley & Sons, Ltd.
15	15/02/2024	1	Create your profile page i.e. educational details, Hobbies, Achievement, My Ideals etc.	LAB	https://www.youtube.com/watch?v=HrcpBtKe-Vg	Chris Bates - "Web Programming Building Internet Applications", Second Edition, John Wiley & Sons, Ltd.
Unit 3						
16	17/02/2024	1	Develop and demonstrate the usage of inline, internal and external style sheet using CSS	LAB	https://www.youtube.com/watch?v=y4gWr2fya0I	Chris Bates - "Web Programming Building Internet Applications", Second Edition, John Wiley & Sons, Ltd.
17	22/02/2024	2	Develop and demonstrate the usage of inline, internal and external style sheet using CSS	LAB	https://www.youtube.com/watch?v=4OMdzHnys9o	Chris Bates - "Web Programming Building Internet Applications", Second Edition, John Wiley & Sons, Ltd.
18	23/02/2024	1	Develop and demonstrate the usage of inline, internal and external style sheet using CSS	LAB	https://www.youtube.com/watch?v=6EMkq7UqMGE	Thomas A. Powell, "The Complete Reference HTML", - Second Edition Tata McGraw Hill Publication


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19	01/03/2024	2	Write an HTML page that contains a selection box with a list of 5 countries. When the user selects a country, its capital should be printed next in the list. Add CSS to customize the properties of the font of the capital (color, bold and font size).	LAB	https://www.youtube.com/watch?v=1PnVor36_40	Chris Bates - "Web Programming Building Internet Applications", Second Edition, John Wiley & Sons, Ltd
20	04/03/2024	1	Write an HTML page that contains a selection box with a list of 5 countries. When the user selects a country, its capital should be printed next in the list. Add CSS to customize the properties of the font of the capital (color, bold and font size).	LAB	https://www.youtube.com/watch?v=1PnVor36_40	Chris Bates - "Web Programming Building Internet Applications", Second Edition, John Wiley & Sons, Ltd

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21	11/03/2024	2	A web application that takes name and age from an HTML page. If the age is less than 18, it should send a page with "Hello, you are not authorized to visit the site" message, where should be replaced with the entered name. Otherwise, it should send "Welcome to this site" message.	LAB	https://www.youtube.com/watch?v=Cg40KWtmHPY	Thomas A. Powell, "The Complete Reference HTML", - Second Edition Tata McGraw Hill Publication.
22	12/03/2024	1	8. A web application that takes name and age from an HTML page. If the age is less than 18, it should send a page with "Hello, you are not authorized to visit the site" message, where should be replaced with the entered name. Otherwise, it should send "Welcome to this site" message.	LAB	https://www.youtube.com/watch?v=Cg40KWtmHPY	Thomas A. Powell, "The Complete Reference HTML", - Second Edition Tata McGraw Hill Publication.
Unit 4						
23	16/03/2024	2	Design a web page for your Department.	LAB	https://www.youtube.com/watch?v=sWoMNeHRenk	Bootstrap for Quick Start: A Beginner's Guide to Building Responsive Layouts with Bootstrap

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24	19/03/2024	2	Design a web page for your Department.	LAB	https://www.youtube.com/watch?v=sWoMNeHRenk	Bootstrap for Quick Start: A Beginner's Guide to Building Responsive Layouts with Bootstrap
25	20/03/2024	1	Design the following static web pages required for an online bookstore web site. 1) HOME PAGE: The static home page must contain three frames. 2) LOGIN PAGE 3) CATALOGUE PAGE: The catalogue page should contain the details of all the books available in the web site in a table. 4) REGISTRATION PAGE	LAB	https://www.youtube.com/watch?v=PlxWf493en4	Chris Bates - "Web Programming Building Internet Applications", Second Edition, John Wiley & Sons, Ltd.
26	27/03/2024	2	Design the following static web pages required for an online bookstore web site. 1) HOME PAGE: The static home page must contain three frames. 2) LOGIN PAGE 3) CATALOGUE PAGE: The catalogue page should contain the details of all the books available in the web site in a table. 4) REGISTRATION PAGE	LAB	https://www.youtube.com/watch?v=PlxWf493en4	Chris Bates - "Web Programming Building Internet Applications", Second Edition, John Wiley & Sons, Ltd.



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Unit 5

27	28/03/2024	1	Write JavaScript to validate the following fields of the Registration page. 1. First Name (Name should contains alphabets and the length should not be less than 6 characters). 2. Password (Password should not be less than 6 characters length). 3. E-mail id (should not contain any invalid and must follow the standard pattern name@domain.com) 4. Mobile Number (Phone number should contain 10 digits only). 5. Last Name and Address (should not be Empty).	LAB	https://www.youtube.com/watch?v=PkZNo7MFNFg	Bootstrap for Quick Start: A Beginner's Guide to Building Responsive Layouts with Bootstrap
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28	05/04/2024	2	Write JavaScript to validate the following fields of the Registration page. 1. First Name (Name should contains alphabets and the length should not be less than 6 characters). 2. Password (Password should not be less than 6 characters length). 3. E-mail id (should not contain any invalid and must follow the standard pattern name@domain.com) 4. Mobile Number (Phone number should contain 10 digits only). 5. Last Name and Address (should not be Empty).	LAB	https://www.youtube.com/watch?v=PkZNo7MFNFg	Bootstrap for Quick Start: A Beginner's Guide to Building Responsive Layouts with Bootstrap
29	06/04/2024	1	Write PHP program to upload registration form into database and Display the Registration form from the database.	LAB	https://www.youtube.com/watch?v=3wz4iaLvV0I	Bootstrap for Quick Start: A Beginner's Guide to Building Responsive Layouts with Bootstrap
30	15/04/2024	2	Write PHP program to upload registration form into database and Display the Registration form from the database.	LAB	https://www.youtube.com/watch?v=6fuEauNhq90	Bootstrap for Quick Start: A Beginner's Guide to Building Responsive Layouts with Bootstrap

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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : SUMITHA P.,
Year/Semester/Section : II/IV/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UWR4N2 & NON MAJOR ELECTIVE PAPER 2 - WOMEN'S RIGHTS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	07/12/2023	3	Basic concepts of Women's studies in Higher education,	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
2	15/12/2023	3	Women's studies perspectives- Socialization	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
3	26/12/2023	3	Patriarchy	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
4	04/01/2024	3	Women's studies as an academic discipline	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.



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5	12/01/2024	3	Growth and development of Women's studies as a discipline internationally and in India.	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
6	27/01/2024	3	Growth and development of Women's studies as a discipline internationally and in India.	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
Unit 2						
7	05/02/2024	3	Socio-Economic Development of Women: Family welfare measures	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
8	12/02/2024	3	Role of Women in economic development	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
9	20/02/2024	3	Representation of Women in media,	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.



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10	28/02/2024	3	Status of Women land rights,	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
11	07/03/2024	3	Women Entrepreneurs	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
12	15/03/2024	3	National policy for the empowerment of women	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
Unit 3						
13	25/03/2024	3	Women's Rights - Access to Justice: Crime against Women,	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
14	03/04/2024	3	Domestic violence	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
15	12/04/2024	3	Physical abuse- verbal abuse - emotional abuse - economic abuse	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.



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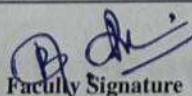
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Coimbatore - 641 029, Tamil Nadu, India



LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. PRAVEENA BALASUBRAMANIAN .,
Year/Semester/Section : II/IV/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UWR4N2 & NON MAJOR ELECTIVE PAPER 2 - WOMEN'S RIGHTS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 3						
1	08/12/2023	3	minorities, dowry-harassment and death	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
2	18/12/2023	3	code of conduct for work place	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
3	27/12/2023	3	abetment of suicide.	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
Unit 4						
4	05/01/2024	3	Protective legislation for Women in the Indian constitution	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.


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5	29/01/2024	3	Protective legislation for Women in the Indian constitution	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
6	06/02/2024	3	Anti dowry, SITA, PNDDT, and Prevention Sexual Harassment at Workplace (Visaka case)	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
7	13/02/2024	3	Anti dowry, SITA, PNDDT, and Prevention Sexual Harassment at Workplace (Visaka case)	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
8	21/02/2024	3	Domestic violence (Prevention) Act.	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
9	29/02/2024	3	Domestic violence (Prevention) Act.	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
Unit 5						

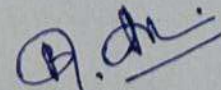


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10	02/03/2024	3	Women and Child welfare	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
11	08/03/2024	3	Safety provisions - various forms of mass media, radio	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
12	18/03/2024	3	visual, internet, cyber space, texting	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
13	26/03/2024	3	SMS and smart phone usage	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
14	04/04/2024	3	Healing measures for the affected Women and child society by private and public sector	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
15	13/04/2024	3	NGO and society	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.


Faculty Signature

Coordinator

Head of the Department



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. PRAVEENA BALASUBRAMANIAN .,
Year/Semester/Section : II/IV/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 22UWR4N2 & NON MAJOR ELECTIVE PAPER 2 - WOMEN'S RIGHTS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 3						
1	08/12/2023	3	minorities, dowry-harassment and death	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
2	18/12/2023	3	code of conduct for work place	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
3	27/12/2023	3	abetment of suicide.	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.
Unit 4						
4	05/01/2024	3	Protective legislation for Women in the Indian constitution	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore – 641 029.



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5	29/01/2024	3	Protective legislation for Women in the Indian constitution	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
6	06/02/2024	3	Anti dowry, SITA, PNDT, and Prevention Sexual Harassment at Workplace (Visaka case)	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
7	13/02/2024	3	Anti dowry, SITA, PNDT, and Prevention Sexual Harassment at Workplace (Visaka case)	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
8	21/02/2024	3	Domestic violence (Prevention) Act.	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
9	29/02/2024	3	Domestic violence (Prevention) Act.	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
Unit 5						


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Coordinator


Head of the Department



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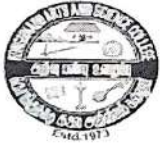


10	02/03/2024	3	Women and Child welfare	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
11	08/03/2024	3	Safety provisions - various forms of mass media, radio	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
12	18/03/2024	3	visual, internet, cyber space, texting	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
13	26/03/2024	3	SMS and smart phone usage	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
14	04/04/2024	3	Healing measures for the affected Women and child society by private and public sector	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.
15	13/04/2024	3	NGO and society	CHALK AND TALK		Women's Rights (2021), compiled by Kongunadu Arts & Science College, Coimbatore - 641 029.


Faculty Signature

Coordinator


Head of the Department



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : SUMITHA P.,
Year/Semester/Section : III/VI/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA611 & CORE PAPER 11 - ARTIFICIAL INTELLIGENCE AND ITS APPLICATIONS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	04/12/2023	1	Introduction to Artificial Intelligence	CHALK AND TALK, VIDEOS	https://youtu.be/2eP9trt1A6?si=faz51H...XJ28As	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
2	04/12/2023	4	What Is AI?	CHALK AND TALK, ONLINE LINK	https://www.geeksforgeeks.org/artificial-intelligence-an-introduction/	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
3	05/12/2023	4	The Foundations of Artificial Intelligence	CHALK AND TALK, VIDEOS	https://youtu.be/K3lgecHtDg?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
4	06/12/2023	2	The History of Artificial Intelligence	CHALK AND TALK, VIDEOS	https://youtu.be/_5LaYcGg?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
5	08/12/2023	2	The History of Artificial Intelligence	CHALK AND TALK	https://www.tableau.com/data-insights/ai/history#:~:text=Birth%20of%20AI%3A%201950%2D1956&text=Alan%20Turing%20published%20his%20work.and%20came%20into%20popular%20use.	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
6	11/12/2023	2	The History of Artificial Intelligence	CHALK AND TALK, ONLINE LINK	https://www.tableau.com/data-insights/ai/history#:~:text=Birth%20of%20AI%3A%201950%2D1956&text=Alan%20Turing%20published%20his%20work.and%20came%20into%20popular%20use.	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
7	12/12/2023	1	The State of the Art	CHALK AND TALK, VIDEOS	https://youtu.be/YybmJK3qU?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
8	12/12/2023	4	Intelligent Agents	CHALK AND TALK, VIDEOS	https://youtu.be/3Nt4-79C8?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
9	13/12/2023	4	Intelligent Agents	CHALK AND TALK, LINK	https://www.javatpoint.com/gems-in-ai	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
10	14/12/2023	2	Agents and Environments	CHALK AND TALK, ONLINE LINK		https://www.tutorialspoint.com/artificial_intelligence/artificial_intelligence_agents_and_environments.htm
11	18/12/2023	2	Agents and Environments	CHALK AND TALK, ONLINE LINK	https://www.tutorialspoint.com/artificial_intelligence/artificial_intelligence_agents_and_environments.htm	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
12	19/12/2023	2	Good Behavior	CHALK AND TALK, ONLINE LINK	https://web.pdx.edu/~arhodes/a5.pdf	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
13	20/12/2023	1	The Concept of Rationality	CHALK AND TALK, ONLINE LINK	https://www.javatpoint.com/gems-in-ai#:~:text=Rationality%3A,prim%20knowledge%20of%20the%20environment.	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
14	20/12/2023	4	The Concept of Rationality	CHALK AND TALK, VIDEOS	https://youtu.be/xN2CNK8bw?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
15	21/12/2023	4	The Nature of Environments	CHALK AND TALK, VIDEOS	https://youtu.be/Xd7NLaQbH?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
16	22/12/2023	2	The Nature of Environments	CHALK AND TALK, VIDEOS	https://youtu.be/Xd7NLaQbH?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
17	27/12/2023	2	The Nature of Environments	CHALK AND TALK, VIDEOS	https://youtu.be/Xd7NLaQbH?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
18	02/01/2024	4	The Structure of Agents	CHALK AND TALK, VIDEOS	https://youtu.be/9C0iAC0Z-A4?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence - A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.



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Unit 2						
19	03/01/2024	2	Problem-solving :Solving Problems by Searching Problem-Solving Agents	CHALK AND TALK,VIDEOS	https://youtu.be/3fzatekCSgY?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
20	05/01/2024	2	Problems: Toy problems	CHALK AND TALK,VIDEOS	https://youtu.be/Cpand0FWH0Y?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
21	08/01/2024	2	8-Puzzle	CHALK AND TALK,VIDEOS	https://youtu.be/Cpand0FWH0Y?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
22	09/01/2024	1	Sliding-block	CHALK AND TALK,VIDEOS	https://youtu.be/y11TjaQzQY?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
23	09/01/2024	4	8-Queens problem-	CHALK AND TALK,VIDEOS	https://youtu.be/7m7720Mup0?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
24	10/01/2024	4	Real-world problems: route-finding	CHALK AND TALK,VIDEOS	https://youtu.be/SapFyghU3Y?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
25	11/01/2024	2	touring problem	CHALK AND TALK,VIDEOS	https://youtu.be/SapFyghU3Y?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
26	22/01/2024	1	traveling salesperson problem	CHALK AND TALK,VIDEOS	https://youtu.be/SapFyghU3Y?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
27	22/01/2024	4	Searching for Solutions	CHALK AND TALK,VIDEOS	https://youtu.be/CnqMV_wXaBgNanYXoPQVODs?list=PL	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
28	23/01/2024	4	Uninformed Search Strategies	CHALK AND TALK,VIDEOS	https://youtu.be/9qFROU?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
29	24/01/2024	2	Informed (Heuristic) Search Strategies,Heuristic Functions	CHALK AND TALK,VIDEOS	https://youtu.be/Hu5SQ23Um8?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
30	29/01/2024	2	Beyond Classical Search	CHALK AND TALK,VIDEOS	https://youtu.be/290lg7L5XE?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
31	30/01/2024	2	Local Search Algorithms and Optimization Problems	CHALK AND TALK,VIDEOS	https://youtu.be/290lg7L5XE?list=PLMQTN8wLh7Zw6	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
32	31/01/2024	1	Local Search in Continuous Spaces	CHALK AND TALK,VIDEOS	https://youtu.be/KXU8uSPAM7u03mLYE-Xr4Js_8Q	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
33	31/01/2024	4	Searching with Nondeterministic Actions	CHALK AND TALK,VIDEOS	https://youtu.be/8dFpMLSAM7u03mLYE-Xr4Js_8Q	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
34	01/02/2024	4	Searching with Partial Observations	CHALK AND TALK,VIDEOS	https://youtu.be/9s_WLD7eo3a-4N8E1uQm0FVub	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
35	02/02/2024	2	Online Search Agents and Unknown Environments.	CHALK AND TALK,VIDEOS	https://youtu.be/GDmBL7IVY?list=PLMQTN8wLh7Zw6	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
36	03/02/2024	2	Online Search Agents and Unknown Environments.	CHALK AND TALK,VIDEOS	https://youtu.be/GDmBL7IVY?list=PLMQTN8wLh7Zw6	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
Unit 3						
37	06/02/2024	2	Adversarial Search: Games	CHALK AND TALK,VIDEOS	https://youtu.be/6k8WGGGXyNo?list=PLMQTN8wLh7Zw6	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
38	07/02/2024	2	Optimal Decisions in Games	CHALK AND TALK,VIDEOS	https://youtu.be/8tUY3kEWg?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
39	08/02/2024	1	Alpha–Beta Pruning	CHALK AND TALK,VIDEOS	https://youtu.be/Y23vYKQ8u7?feature=shared	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
40	08/02/2024	4	Imperfect Real-Time Decisions	CHALK AND TALK,VIDEOS	https://youtu.be/X63WpT7N4?list=PLMQTN8wLh7Zw6	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
41	09/02/2024	4	Imperfect Real-Time Decisions	PDF,CHALK AND TALK	https://web.ecs.brockport.edu/~djay/Courses/VRM688/lec06_adversarial_zch.pdf	Stuart Russell, Peter Norvig, (2009) "Artificial Intelligence – A Modern Approach", Third Edition, Pearson Education / Prentice Hall of India.
42	13/02/2024	2	Stochastic Games	CHALK AND TALK,VIDEOS	https://www.youtube.com/watch?v=U6RQX-C3JKA	

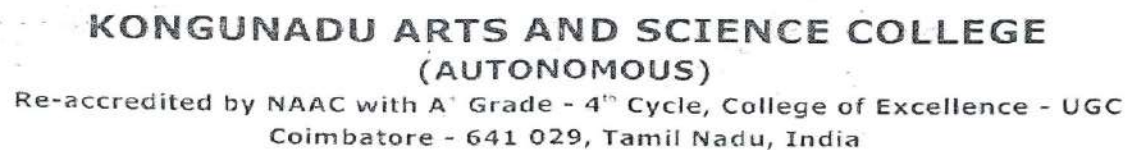


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43	14/03/2024	2	Partially Observable Games	CHALK AND TALK, VIDEOS	https://youtu.be/8u51aXT70?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
44	15/03/2024	1	State-of-the-Art Game Programs	CHALK AND TALK, VIDEOS	https://youtu.be/Dj06pLJ0?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
45	15/03/2024	4	Alternative Approaches	CHALK AND TALK, VIDEOS	https://youtu.be/kpy78WFTdC?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
46	16/03/2024	4	Constraint Satisfaction Problems	CHALK AND TALK, VIDEOS	https://youtu.be/R2kWL0f0w?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
47	17/03/2024	1	Defining Constraint Satisfaction Problems	CHALK AND TALK, ONLINE LINK	https://youtu.be/R2kWL0f0w?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
48	17/03/2024	4	Constraint Propagation:	CHALK AND TALK, ONLINE LINK	http://www.geekstogeeks.org/constraint-satisfaction-problems-csp-in-artificial-intelligence/	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
49	19/03/2024	2	Inference in CSPs	CHALK AND TALK, FLIPPED CLASS VIDEOS	https://youtu.be/HpQfIm25mo?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
50	21/03/2024	2	Backtracking Search for CSPs	CHALK AND TALK, VIDEOS	https://youtu.be/8XKAPsN0G?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
51	22/03/2024	2	Local Search for CSPs	CHALK AND TALK, VIDEOS	https://youtu.be/f-qQThC0X8EY?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
52	23/03/2024	1	Local Search for CSPs	CHALK AND TALK, VIDEOS	https://youtu.be/f-qQThC0X8EY?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
53	23/03/2024	4	The Structure of Problems	CHALK AND TALK, ONLINE LINK	https://youtu.be/f-qQThC0X8EY?feature=shared	
54	26/03/2024	4	The Structure of Problems	CHALK AND TALK, VIDEOS	https://youtu.be/f-qQThC0X8EY?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
Unit 4						
55	27/03/2024	2	Knowledge, reasoning, and planning	CHALK AND TALK, VIDEOS	https://youtu.be/AETGmYy6U?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
56	29/03/2024	2	Logical Agents	CHALK AND TALK, ONLINE LINK	https://courses.edx.org/assets/1/ColumbiaX+CSMM.101+1T2017+type@asset+block@AI_edu_jpgs_2_.pdf	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
57	01/04/2024	2	Knowledge-Based Agents	PDF, CHALK AND TALK	https://courses.edx.org/assets/1/ColumbiaX+CSMM.101+1T2017+type@asset+block@AI_edu_jpgs_2_.pdf	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
58	02/04/2024	2	The Wumpus World	CHALK AND TALK, VIDEOS	https://youtu.be/fm-jp0A9y0?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
59	04/04/2024	1	Logic	CHALK AND TALK, VIDEOS	https://youtu.be/QQwBj09ad?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
60	04/04/2024	4	Propositional Logic	CHALK AND TALK, VIDEOS	https://youtu.be/7rdABu30?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
61	05/04/2024	4	A Very Simple Logic	CHALK AND TALK, VIDEOS	https://youtu.be/r6TazZ186?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
62	06/04/2024	2	Propositional Theorem Proving	CHALK AND TALK, VIDEOS	https://youtu.be/rqjP8w8y4?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
63	08/04/2024	2	Effective Propositional Model Checking	CHALK AND TALK, VIDEOS	https://youtu.be/7rdABu30?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
64	11/04/2024	2	Agents Based on Propositional Logic	CHALK AND TALK, VIDEOS	https://youtu.be/7m-jp0A9y0?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
65	12/04/2024	1	First-Order Logic	CHALK AND TALK, VIDEOS	https://youtu.be/7m-jp0A9y0?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
66	12/04/2024	4	Representation Revisited	CHALK AND TALK, VIDEOS	https://youtu.be/7m-jp0A9y0?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India
67	15/04/2024	4	Syntax and Semantics of First-Order Logic	CHALK AND TALK, VIDEOS	https://youtu.be/7m-jp0A9y0?feature=shared	Smart Raveel, Prior Navin, (2009) "Artificial Intelligence - A Modern Approach" Third Edition, Pearson Education, Prentice Hall of India

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Faculty Signature

Coordinator


Head of the Department



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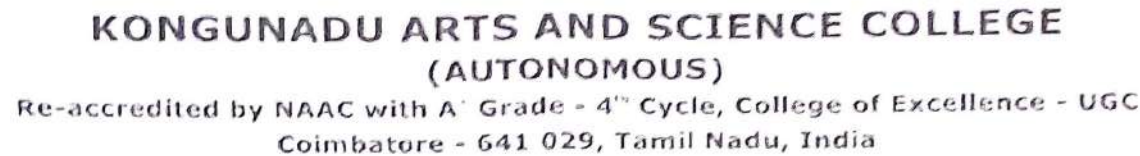
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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : SUMITHA P.,
Year/Semester/Section : III/VI/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA6CT & CORE PRACTICAL 9 - ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING LABORATORY

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	04/12/2023	3	Overview of the electricity bill calculation problem.	LAB, LINK	https://www.javatpoint.com/electricity-bill-program-in-java	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
2	05/12/2023	5	Discussion on the key components: Consumer No, Consumer Name, Previous Month Reading, Current Month Reading, and Connection Type (domestic or commercial).	LAB, LINK	https://oncompiler.com/java/3kaff9p9c	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
3	06/12/2023	4	Introduction to the tariff rates for domestic and commercial connections.	LAB, LINK	https://oncompiler.com/java/3kaff9p9c	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
4	07/12/2023	1	Recap of class and object concepts in Java.	VIDEOS, LAB	https://www.tutorialspoint.com/java/java_img_enum.htm	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
5	11/12/2023	3	Creating a class template for ElectricityBill with attributes and methods.	VIDEOS, LAB	https://youtu.be/zFcEnJRNEic	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
6	12/12/2023	3	Discussing the importance of encapsulation.	LAB, LINK	https://www.simplilearn.com/tutorials/java-tutorial/java-encapsulation#:~:text=Encapsulation%20in%20Java%20is%20the,the%20class%20can%20access%20them	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
7	13/12/2023	5	Implementing the ElectricityBill class with appropriate constructor and methods.	LAB, LINK	https://www.javatpoint.com/electricity-bill-program-in-java	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
8	14/12/2023	4	Adding necessary methods to calculate the electricity bill based on the provided tariff rates.	LAB, LINK	https://www.javatpoint.com/electricity-bill-program-in-java	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
9	15/12/2023	1	Explained about electricity bill program	LAB, LINK	https://in.docworkspace.com/d/4lHTaxJU7ZOQwY	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
10	19/12/2023	3	Testing the application with different input scenarios.	LAB, LINK	https://in.docworkspace.com/d/4lHTaxJU7ZOQwY	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
11	20/12/2023	3	Introduction to Constraint Satisfaction Problems (CSP)	LAB, LINK	https://www.alnabettor.com/bytes/tutorials/artificial-intelligence/constraint-satisfaction-problem-in-ai	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
12	21/12/2023	5	Definition of CSP	LAB, LINK	https://www.alnabettor.com/bytes/tutorials/artificial-intelligence/constraint-satisfaction-problem-in-ai	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
13	22/12/2023	4	Examples of real-world problems modeled as CSPs	LAB, LINK	https://www.alnabettor.com/bytes/tutorials/artificial-intelligence/constraint-satisfaction-problem-in-ai	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.
14	26/12/2023	1	Components of CSP: variables, domains, and constraints	VIDEOS, LAB	https://youtu.be/0REx1705T7w?si=e2lCctXz0sp4A0T	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education.




Head of the Department



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35	09/02/2024	5	Executed program breadth first search algorithm using R program	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
36	12/02/2024	1	Executed breath first search program using r	LAB,LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education
37	14/02/2024	3	Introduced about importance of classical planning algorithms	LAB,ONLINE-LINK	https://www.slideshare.net/ahmad1957/classical-planning-presentation	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
38	15/02/2024	3	Discussed about advantages of classical planning	LAB,ONLINE-LINK	https://www.tutorialandexample.com/classical-planning	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
39	16/02/2024	5	Discuss about disadvantages of classical planning	LAB,ONLINE-LINK	https://cw.fel.cvut.cz/old/_media/ousova/2b33ku/knihy/artificial_intelligence_a_modern_approach_3rd_edition_chapter_10.pdf?cache=none	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
40	17/02/2024	3	Explain about classical planning algorithm using program	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
41	19/02/2024	4	Explain about classical planning using R	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
42	20/02/2024	1	Executed a classical planning algorithm using R Program	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
43	22/02/2024	3	Execute a R program using classical planning algorithm	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
44	23/02/2024	3	Classical planning algorithm using R program	LAB,LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Anany Levitin, (2012) "Introduction to the Design and Analysis of Algorithms", 3rd Edition, Pearson Education
45	26/02/2024	5	Executed a classical planning algorithm	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
46	27/02/2024	4	Discussed about word count using R	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
47	28/02/2024	1	Discussed about word search in R	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
48	01/03/2024	3	Explain about word count program using R	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
49	04/03/2024	3	Explain about word search in R	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
50	05/03/2024	5	Discussed about importing text file in R	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
51	06/03/2024	4	Explain about importing text file in R	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
52	07/03/2024	1	Discussed about Write and execute word count, word search and pattern search problems from large text files in r programming	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
53	11/03/2024	3	Execute word count, word search and pattern search problems from large text files in r programming	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
54	12/03/2024	3	Execute word count, word search and pattern search problems from large text files in r programming	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
55	13/03/2024	5	Discussed about binary file	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
56	14/03/2024	4	Discussed about text file	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
57	15/03/2024	1	Explained about text file and binary file	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZlOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.

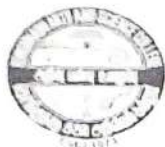


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58	16/03/2024	3	Executed python program to read text file	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
59	19/03/2024	3	Executed Python program to find the most repeated word	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
60	20/03/2024	3	Explain about Finding the max occurred word using python	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
61	21/03/2024	5	Explained about for loop for Finding the max occurred word	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
62	22/03/2024	4	Explained Python program to find the most repeated word	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
63	25/03/2024	1	Executed Python program to find the most repeated word	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Allen B Downey (2016)"Think Python : How to Think Like a Computer Scientist", 2nd edition,Updated for Python 3,Shroff/O' Reilly Publishers,(http://greentaeapress.com/wp/think-python/)
64	27/03/2024	3	Introduce about Divide and Conquer	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
65	28/03/2024	3	Discussed about Divide and Conquer algorithm:	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
66	30/03/2024	4	Explain about Divide and Conquer algorithm:	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
67	01/04/2024	5	Explain about Quick Sort	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
68	02/04/2024	4	Discussed about quick sort using r	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
69	03/04/2024	1	Explain about quick sort in R	LAB,ONLINE-LINK	https://portal.kongunaducollege.ac.in/Lesson_plan/add_course_plan/23615/37812/1	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
70	05/04/2024	3	Discussed about function that used in quick sort program	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
71	06/04/2024	3	Discussed about return function used in quick sort program	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
72	08/04/2024	5	Executed quicksort using R program	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
Unit 4						
73	10/04/2024	4	Introduced about spam email	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Stuart russell,Peter Norvig(2009)"artificial intelligence- A Modern Approach",Third Edition ,Pearson Education/ Prentice Hall of India.
74	12/04/2024	1	Explained about ham mail	LAB,ONLINE-LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	EthemAlpaydin,(2020)"Introduction to Machine Learning",MIT Press,Fourth Edition.
75	15/04/2024	3	Explain about csv file	LAB,LINK	https://classroom.google.com/c/NTMwNjU2MzZmOTE3/m/NjQ2MjUwMjgwODM3/details	Allen B Downey (2016)"Think Python : How to Think Like a Computer Scientist", 2nd edition,Updated for Python 3,Shroff/O' Reilly Publishers,(http://greentaeapress.com/wp/think-python/)



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. VANITHA R,
Year/Semester/Section : III/VI/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA6CT & CORE PRACTICAL 9 - ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING LABORATORY

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 4						
1	18/12/2023	3	Explain about importing numpy in python	LAB LINK	https://classroom.google.com/j/NTMwNjU2MmM0OTU3MmNjQ2MjUwMjpsODM3deta	Ethem Alpaydin (2020)
2	18/12/2023	3	Discussed about importing pandas for data processing and csv file	LAB ONLINE LINK	https://classroom.google.com/j/NTMwNjU2MmM0OTU3MmNjQ2MjUwMjpsODM3deta	Allen B Downey (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3. Standard of Really Publishers, http://greenleafpress.com/wpthink-python/
3	27/12/2023	3	Discussed about reading csv file in python	LAB ONLINE LINK	https://classroom.google.com/j/NTMwNjU2MmM0OTU3MmNjQ2MjUwMjpsODM3deta	Allen B Downey (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3. Standard of Really Publishers, http://greenleafpress.com/wpthink-python/
4	05/01/2024	3	Discussed about detecting spam mail using support vector machine	LAB ONLINE LINK	https://classroom.google.com/j/NTMwNjU2MmM0OTU3MmNjQ2MjUwMjpsODM3deta	Ethem Alpaydin (2020) "Introduction to Machine Learning", MIT Press, Fourth Edition
5	29/01/2024	3	Explain about spam mail using support vector	LAB LINK	https://classroom.google.com/j/NTMwNjU2MmM0OTU3MmNjQ2MjUwMjpsODM3deta	Ethem Alpaydin (2020)
6	06/02/2024	3	Executed spam mail detection using support vector machine	LAB ONLINE LINK	https://classroom.google.com/j/NTMwNjU2MmM0OTU3MmNjQ2MjUwMjpsODM3deta	Ethem Alpaydin (2020) "Introduction to Machine Learning", MIT Press, Fourth Edition
7	13/02/2024	3	Introduction on machine learning	LAB LINK	https://www.pinkfoxybooks.org/introduction-machine-learning/	Ethem Alpaydin (2020)
Unit 5						
8	21/02/2024	3	Overview of machine learning concepts	LAB ONLINE LINK	https://www.pydatascience.com/basic-concepts-in-machine-learning	Ethem Alpaydin (2020) "Introduction to Machine Learning", MIT Press, Fourth Edition
9	28/02/2024	3	Discussed about Types of machine learning algorithms used in fraud detection	LAB ONLINE LINK	https://forthipart.com/blog/fraud-detection-machine-learning-algorithms/#:~:text=Fraud%20Detection%20Machine%20Learning%20Algorithms%20Using%20Logistic%20Regression,a%20%20Logistic%20Regression%20and%20Na%20ive%20Bayesian%20Models	Ethem Alpaydin (2020) "Introduction to Machine Learning", MIT Press, Fourth Edition
10	03/03/2024	3	Explain the Importance of feature engineering in fraud detection	LAB ONLINE LINK	https://pubs.com/data/bases/feature-engineering-for-fraud-detection	Ethem Alpaydin (2020) "Introduction to Machine Learning", MIT Press, Fourth Edition
11	06/03/2024	3	Examples of online fraud cases	LAB ONLINE LINK	https://www.aon.com/learn/examples-of-fraud	Ethem Alpaydin (2020) "Introduction to Machine Learning", MIT Press, Fourth Edition
12	18/03/2024	3	Install Python and necessary libraries (scikit-learn, pandas, numpy)	LAB ONLINE LINK	https://medium.com/@smita-lapara-97y8w/to-install-numpy-scipy-matplotlib-pandas-sci-kit-learn-on-windows-6bb8e366e36f	Ethem Alpaydin (2020) "Introduction to Machine Learning", MIT Press, Fourth Edition
13	26/03/2024	3	Introduction to IDLE(PYTHON 3.12 64 BIT) for code demonstration	LAB ONLINE LINK	https://docs.python.org/3/library/idle.html	Allen B Downey (2016) "Think Python: How to Think Like a Computer Scientist", 2nd edition, Updated for Python 3. Standard of Really Publishers, http://greenleafpress.com/wpthink-python/
14	04/04/2024	3	Explained about online fraud detection using python code	LAB ONLINE LINK	https://classroom.google.com/j/NTMwNjU2MmM0OTU3MmNjQ2MjUwMjpsODM3deta	Ethem Alpaydin (2020) "Introduction to Machine Learning", MIT Press, Fourth Edition
15	13/04/2024	3	Executed Best Machine learning algorithm to implement online fraud detection using python program	LAB ONLINE LINK	https://classroom.google.com/j/NTMwNjU2MmM0OTU3MmNjQ2MjUwMjpsODM3deta	Ethem Alpaydin (2020) "Introduction to Machine Learning", MIT Press, Fourth Edition

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Faculty Signature

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Coordinator

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Head of the Department



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Dr. NARMADHA S.,
Year/Semester/Section : III/VI/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA612 & CORE PAPER 12 - MACHINE LEARNING

S.No	Date	Hours	Topics	Delivery Methods	Links	Book Refered
Unit 1						
1	06/12/23	2	Machine Learning Basics : Introduction to Machine Learning (ML)	CHALK AND TALK	https://www.google.com/search?q=introduction+machine+learning/	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 1, Pages 3-7
2	09/12/23	3	Machine Learning Basics : Introduction to Machine Learning (ML)	CHALK AND TALK	https://www.javatpoint.com/machine-learning	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 1, Pages 3-7
3	09/12/23	3	Machine Learning Basics : Introduction to Machine Learning (ML)	PPT	https://www.slideshare.net/Rajadharma77/machine-learning-ppt-140214180	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 1, Pages 3-7
4	09/12/23	3	Essential concepts of ML-Bigdata	CHALK AND TALK	http://www.javatpoint.com/what-is-big-data-and-machine-learning	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 1, Pages 3-10
5	09/12/23	4	Essential concepts of ML - Types of Learning	CHALK AND TALK	https://www.javatpoint.com/types-of-machine-learning	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 10-11
6	09/12/23	1	Essential concepts of ML	CHALK AND TALK	https://www.youtube.com/watch?v=7p4e3m3e0p0	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 10-12
7	12/12/23	3	Types of learning	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/01/types-of-machine-learning/	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 10-12
8	13/12/23	3	Essential concepts of ML - Types of Learning examples	CHALK AND TALK	https://www.javatpoint.com/types-of-machine-learning	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 10-11
9	14/12/23	3	Machine learning methods based on Time	CHALK AND TALK	https://www.youtube.com/watch?v=6G7Lz2m0g0	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 11-12
10	15/12/23	2	Dimensionality	CHALK AND TALK	https://www.javatpoint.com/dimensionality-reduction-techniques	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 12-13
11	15/12/23	4	Dimensionality Reduction	CHALK AND TALK	https://www.datacamp.com/blog/care-of-dimensionality-machine-learning	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 12-13
12	18/12/23	1	Dimensionality Examples	PPT	https://www.slideshare.net/rajadharma77/dimensionality-reduction	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 12-13
13	20/12/23	2	Linearity and Non linearity	CHALK AND TALK	https://www.youtube.com/watch?v=4G7Lz2m0g0	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 13-14
14	21/12/23	3	Linearity and Non linearity examples	VIDEOS	https://www.youtube.com/watch?v=4G7Lz2m0g0	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 14-15
15	22/12/23	3	Early trends in Machine learning	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/01/early-trends-in-machine-learning/	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 15-20
16	26/12/23	2	Early trends in Machine learning - Expert Systems	PPT	https://www.slideshare.net/rajadharma77/early-trends-in-machine-learning-28549141	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 15-20
17	26/12/23	4	Data Understanding Representation and visualization	CHALK AND TALK	https://book.springer.com/chapter/10.1007/978-3-319-24622-4_3	https://book.springer.com/chapter/10.1007/978-3-319-24622-4_3 , Chapter 1, Page 21-23
18	27/12/23	1	Representation and Visualization of the Data	CHALK AND TALK	https://book.springer.com/chapter/10.1007/978-3-319-24622-4_3	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 2, Pages 24-28
Unit 2						
19	02/01/24	3	Machine Learning Methods: Linear methods	CHALK AND TALK	https://www.khanacademy.com/topics/machine-learning/linear-models-in-machine-learning/	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 4, Pages 33-35
20	03/01/24	3	Machine Learning Methods: Linear methods	PPT	https://www.slideshare.net/rajadharma77/linear-models-in-machine-learning-91405893	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 4, Pages 36-38
21	04/01/24	2	Regression	CHALK AND TALK	https://www.javatpoint.com/regression-analysis-in-machine-learning	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 4, Pages 40-41
22	04/01/24	4	Regression Examples	PPT	https://www.slideshare.net/rajadharma77/regression-analysis-in-machine-learning-28666465	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 4, Pages 40-41
23	05/01/24	1	Classification	CHALK AND TALK	https://www.youtube.com/watch?v=4G7Lz2m0g0	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 4, Pages 40-41
24	09/01/24	2	classification : Types of Classification Tasks in Machine Learning	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/01/types-of-classification-tasks-in-machine-learning/	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 18, Pages 179-183
25	09/01/24	3	Perceptron and Neural networks	PPT	https://www.slideshare.net/rajadharma77/perceptron-neural-network	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 5, Pages 43-44
26	11/01/24	3	Multilayered Perceptron or Artificial Neural Network	PPT	https://www.slideshare.net/rajadharma77/multilayered-perceptron-neural-network	Chapter 5, Pages 44-45
27	12/01/24	2	Radial Basis Function Networks	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/01/radial-basis-function-types-advantages-and-use-cases/	Amotz V. Jodis, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 5, Pages 48-50
28	12/01/24	4	Decision trees	VIDEOS	https://www.youtube.com/watch?v=4G7Lz2m0g0	Chapter 6, Pages 53-58



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29	22/01/2024	2	Decision trees : CHAID Algorithm	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/05/implementation-of-decision-tree-using-chaid/	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 6, Pages 56-61
30	23/01/2024	1	Support vector machines	CHALK AND TALK	https://www.javatpoint.com/tutorial-machine-learning-svm-svm-machine-algorithm	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 7, Pages 65-71
31	24/01/2024	3	Theory of SVM	PPP	https://www.dukeolabs.net/maad/Chap28/support-vector-machines-svm-10355927	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 7, Pages 67-71
32	29/01/2024	1	Probabilistic models : Discriminative Models	CHALK AND TALK	https://www.geogebra.org/m/hbbhahz-models-in-machine-learning	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 8, Pages 74-78
33	29/01/2024	4	Probabilistic models : Generative Models	CHALK AND TALK	https://www.geogebra.org/m/hbbhahz-models-in-machine-learning	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 8, Pages 78-88
34	29/01/2024	3	Unsupervised learning	FLIPPED CLASS	https://www.dreamtode.com/tutorial-machine-learning	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 14, Pages 133-137
35	11/02/2024	2	Unsupervised learning : Self-Organizing Maps (SOM)	VIDEOS	https://www.dukeolabs.net/maad/Chap28/som-10355927	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 14, Pages 136-140
36	14/02/2024	1	Featureization	CHALK AND TALK	https://medium.com/@danyar1091/feature-engineering-1d3d6226641	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 15, Pages 143-158
Unit 3						
37	12/02/2024	3	Machine Learning in Practice: Ranking	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/06/ranking.html#DID=5510DATA_6F1F-4B0C-49EC-48FC62	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 20, Pages 195-196
38	09/02/2024	2	Ranking : Techniques Used in Ranking Systems	FLIPPED CLASS	https://www.javatpoint.com/tutorial-machine-learning-rb-application-ranking-236d	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 20, Pages 196-198
39	09/02/2024	4	Recommendation System	CHALK AND TALK	https://www.javatpoint.com/tutorial-recommendation-system-machine-learning	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 21, Pages 198-203
40	16/02/2024	1	Recommendation System : Amazon's Personal Shopping Experience	FLIPPED CLASS	https://www.agoodai.ai/blog/creating-amazon-recommendation-system	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 21, Pages 203-204
41	18/02/2024	2	Designing and Tuning model pipelines	CHALK AND TALK	https://www.javatpoint.com/tutorial-machine-learning-pipeline	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 22, Pages 210-215
42	08/02/2024	3	Designing and Tuning model pipelines : Data Preprocessing	CHALK AND TALK	https://www.javatpoint.com/tutorial-machine-learning-pipeline	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 22, Pages 215-219
43	12/02/2024	3	Performance measurement : Metrics Based on Numerical Error	CHALK AND TALK	https://www.dukeolabs.net/maad/Chap28/performance-metrics-in-machine-learning-part-1-classification-10355927	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 23, Pages 168-171
44	12/02/2024	4	Performance measurement : Metrics Based on Categorical Error	PPP	https://www.dukeolabs.net/maad/Chap28/performance-metrics-in-machine-learning-part-2-categorical-error-10355927	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 23, Pages 171-175
45	13/02/2024	1	Azure Machine Learning : Azure Machine Learning Studio	CHALK AND TALK	https://medium.com/@danyar1091/azure-machine-learning-studio-10355927	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 22, Pages 210-215
46	15/02/2024	2	Building ML Pipeline Using AML Studio	CHALK AND TALK	https://medium.com/@danyar1091/azure-machine-learning-studio-10355927	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 22, Pages 215-219
47	16/02/2024	3	Azure Machine Learning : Scoring and Performance metrics.	CHALK AND TALK	https://medium.com/@danyar1091/azure-machine-learning-studio-10355927	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 22, Pages 219-223
48	17/02/2024	2	Open-source Machine learning libraries	FLIPPED CLASS	https://www.analyticsvidhya.com/blog/2021/05/open-source-machine-learning-libraries/	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 23, Pages 223-228
49	19/02/2024	5	Open-source Machine learning libraries : Scikit Learn Library	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/05/open-source-machine-learning-libraries/	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 23, Pages 228-232
50	24/02/2024	2	Open-source Machine learning libraries – Model Tuning and Optimization	CHALK AND TALK	https://medium.com/@danyar1091/azure-machine-learning-studio-10355927	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 24, Pages 232-235
51	24/02/2024	4	Amazon's Machine Learning Tool Kit: Sage maker Introduction	PPP	https://www.analyticsvidhya.com/blog/2021/05/amazon-sage-maker-introduction/	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 24, Pages 235-236
52	21/02/2024	1	Setting up sagemaker	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/05/amazon-sage-maker-introduction/	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 24, Pages 236-238
53	21/02/2024	2	Uploading Data to S3 Storage	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/05/amazon-sage-maker-introduction/	Armen V. Iskhak, "Machine Learning and Artificial Intelligence", Springer, 2020, Chapter 24, Pages 238-240
54	26/02/2024	6	Writing the Machine Learning Pipeline Using Python	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2021/05/amazon-sage-maker-introduction/	Ar

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Faculty Signature _____

Coordinator

Head of the Department



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65	18/11/2024	1	Similarity based learning	CHALK AND TALK	https://www.datacamp.com/blog/what-is-similarity-learning	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019, Chapter 8, Page 213-229
66	12/11/2024	2	Similarity based learning : Normalization	CHALK AND TALK	https://www.analyticsvidhya.com/blog/2016/04/similarity-learning/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019, Chapter 8, Page 242-248
67	13/11/2024	3	Probability based learning	PPT	https://www.statista.com/chart/1000/what-is-probability-based-learning-in-machine-learning-for-predictive-data-analytics/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019, Chapter 8, Page 252-254
68	14/11/2024	5	Probability based learning : Continuous features : Probability Density functions	CHALK AND TALK	https://www.statista.com/chart/1000/what-is-probability-based-learning-in-machine-learning-for-predictive-data-analytics/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019, Chapter 8, Page 254-259
69	13/11/2024	2	Error based learning	VIDEOS	https://www.youtube.com/watch?v=QJG1E1H0U0	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019, Chapter 2, Page 177-178
70	13/11/2024	4	Error based learning : Multivariable Linear regression with gradient descent	VIDEOS	https://www.youtube.com/watch?v=QJG1E1H0U0	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019, Chapter 3, Page 182-183
71	14/11/2024	1	Evaluation	CHALK AND TALK	https://www.squidoo.com/primary/evaluation/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019, Chapter 8, Page 254-259
72	24/11/2024	2	The art of Machine learning to Predictive Data Analytics	CHALK AND TALK	https://www.statista.com/chart/1000/what-is-probability-based-learning-in-machine-learning-for-predictive-data-analytics/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019, Chapter 11, Page 338-350
Unit 5						
73	11/12/2024	3	Applications of Machine Learning Introduction	CHALK AND TALK	https://www.geekalgorithms.org/machine-learning-introduction/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019
74	22/12/2024	5	Applications of Machine Learning : Examples	CHALK AND TALK	https://www.geekalgorithms.org/machine-learning-introduction/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019
75	23/12/2024	2	Image Recognition	PPT	https://www.statista.com/chart/1000/what-is-probability-based-learning-in-machine-learning-for-predictive-data-analytics/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019
76	23/12/2024	4	Image Recognition : Scope and Applications	PPT	https://www.statista.com/chart/1000/what-is-probability-based-learning-in-machine-learning-for-predictive-data-analytics/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019
77	24/12/2024	1	Image Recognition : The process of image recognition systems	CHALK AND TALK	https://www.statista.com/chart/1000/what-is-probability-based-learning-in-machine-learning-for-predictive-data-analytics/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019
78	28/12/2024	2	Speech Recognition	PPT	https://www.geekalgorithms.org/machine-learning-introduction/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019
79	02/01/2025	5	Speech Recognition : Use cases	CHALK AND TALK	https://www.geekalgorithms.org/machine-learning-introduction/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019
80	03/01/2025	3	Speech Recognition	PLAYED CLASS	https://www.geekalgorithms.org/machine-learning-introduction/	John D Kulkarni, Brian Mac Natus, Aron D Aron, "Fundamentals of Machine Learning for Predictive Data Analytics", 2019
81	03/01/2025	4	Email spam and Malware Filtering	CHALK AND TALK	https://www.geekalgorithms.org/machine-learning-introduction/	
82	04/01/2025	1	Email spam and Malware Filtering - Filters available in market	CHALK AND TALK	https://www.geekalgorithms.org/machine-learning-introduction/	Armen V. Jivik, "Machine Learning and Artificial Intelligence", Springer, 2020
83	04/01/2025	2	Online fraud detection	PPT	https://www.geekalgorithms.org/machine-learning-introduction/	Armen V. Jivik, "Machine Learning and Artificial Intelligence", Springer, 2020
84	04/01/2025	3	Online fraud detection	CHALK AND TALK	https://www.geekalgorithms.org/machine-learning-introduction/	Armen V. Jivik, "Machine Learning and Artificial Intelligence", Springer, 2020
85	04/01/2025	3	Online fraud detection	CHALK AND TALK	https://www.geekalgorithms.org/machine-learning-introduction/	Armen V. Jivik, "Machine Learning and Artificial Intelligence", Springer, 2020
86	12/01/2025	2	Medical Diagnosis	CHALK AND TALK	https://www.geekalgorithms.org/machine-learning-introduction/	Armen V. Jivik, "Machine Learning and Artificial Intelligence", Springer, 2020
87	12/01/2025	4	Medical Diagnosis : Use cases	PLAYED CLASS	https://www.geekalgorithms.org/machine-learning-introduction/	Armen V. Jivik, "Machine Learning and Artificial Intelligence", Springer, 2020
88	14/01/2025		Medical Diagnosis	CHALK AND TALK	https://www.geekalgorithms.org/machine-learning-introduction/	Armen V. Jivik, "Machine Learning and Artificial Intelligence", Springer, 2020
89	14/01/2025		Medical diagnosis	VIDEOS	https://www.geekalgorithms.org/machine-learning-introduction/	Armen V. Jivik, "Machine Learning and Artificial Intelligence", Springer, 2020
90	15/01/2025		Summarization of Applications in Machine Learning	CHALK AND TALK	https://www.geekalgorithms.org/machine-learning-introduction/	Armen V. Jivik, "Machine Learning and Artificial Intelligence", Springer, 2020



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. VANITHA R,
Year/Semester/Section : III/VI/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA6E2 & MAJOR ELECTIVE PAPER 2 - INTERNET OF THINGS

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	04/12/2023	5	Fundamentals of IOT.: Introduction to IOT, Definition .	CHALK AND TALK, LINK	https://methodist.edu.in/web/uploads/files/DR%20jwe%20IOT.pdf	Internet of things :Vijay Madishetty, Arsheep Bahga
2	05/12/2023	1	Characteristics of IOT, IOT Architectures.	CHALK AND TALK, LINK	https://methodist.edu.in/web/uploads/files/DR%20jwe%20IOT.pdf	Internet of things :Vijay Madishetty, Arsheep Bahga
3	06/12/2023	1	Physical and Logical designs of IoT	CHALK AND TALK, LINK	https://www.gecksforged.com/internet-of-things-iot-enabling-technologies/	Internet of things :Vijay Madishetty, Arsheep Bahga
4	07/12/2023	3	Physical and logical designs of IOT: Difference between Physical and Logical designs	CHALK AND TALK, LINK	https://medium.com/@algopoint.ltd/introduction-to-iot-characteristics-physical-logical-design-iot-enabling-technologies-211c342671b4	Internet of things :Vijay Madishetty, Arsheep Bahga
5	11/12/2023	1	Enabling Technologies of IOT.	CHALK AND TALK, LINK	https://www.tutorialspoint.com/iot-enabled-technologies	Internet of things :Vijay Madishetty, Arsheep Bahga
6	12/12/2023	5	History of IOT	CHALK AND TALK, LINK	https://www.elevenfifty.org/blog/the-history-of-the-internet-of-things	Internet of things :Vijay Madishetty, Arsheep Bahga
7	13/12/2023	1	About the things in IOT	CHALK AND TALK, LINK	https://www.gecksforged.com/understanding-things-in-internet-of-things/	Internet of things :Vijay Madishetty, Arsheep Bahga
8	14/12/2023	1	The identifiers in IOT	CHALK AND TALK, LINK	https://www.zipitwireless.com/blog/what-are-iot-sensors-types-uses-and-examples	Internet of things :Vijay Madishetty, Arsheep Bahga
9	15/12/2023	3	Identifiers of IOT: Types of Identifiers	CHALK AND TALK, LINK	https://euagenda.eu/upload/publications/identifiers-in-internet-of-things-iot.pdf	Internet of things :Vijay Madishetty, Arsheep Bahga
10	19/12/2023	1	About the Internet in IOT.	CHALK AND TALK, LINK	https://cio-wiki.org/wiki/Internet_of_Things_(IoT)	Internet of things :Vijay Madishetty, Arsheep Bahga
11	20/12/2023	5	IOT Frameworks	CHALK AND TALK, LINK	https://www.deepscadev.com/en/blog/what-is-iot-framework/	Internet of things :Vijay Madishetty, Arsheep Bahga



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12	21/12/2023	1	IOT Frameworks : Salesforce IOT, Oracle IOT	CHALK AND TALK, LINK	https://www.deepseadev.com/en/blog/what-is-iot-framework/	Internet of things : Vijay Madishetty, Arsheep Baliga
13	22/12/2023	1	IOT and M2m	CHALK AND TALK, LINK	https://profile.iitita.ac.in/bibhas.ghoshal/IoT_2019/Lecture_Slides/Chapter-3.pdf	Internet of things and its applications: Springer
14	26/12/2023	3	IOT and M2m : Machine 2 machine working	CHALK AND TALK, LINK	https://profile.iitita.ac.in/bibhas.ghoshal/IoT_2019/Lecture_Slides/Chapter-3.pdf	Internet of things and its applications: Springer
15	02/01/2024	1	IOT and M2m: Difference between IOT and M2m	CHALK AND TALK, LINK	https://www.javatpoint.com/iot-vs-m2m	Internet of things and its applications: Springer
Unit 2						
16	03/01/2024	1	Sensor Networks : Definition and Introduction	CHALK AND TALK, LINK	https://profile.iitita.ac.in/bibhas.ghoshal/IoT_2019/Lecture_Slides/Chapter-3.pdf	Internet of things and its applications: Springer
17	04/01/2024	3	Types of sensors	CHALK AND TALK, LINK	https://www.electronicshub.org/different-types-sensors/	Internet of things and its applications: Springer
18	08/01/2024	1	Types of Actuators	CHALK AND TALK	https://tameson.com/pages/actuator	Internet of things and its applications: Springer
19	09/01/2024	5	Examples and working : Actuators	CHALK AND TALK, LINK	https://www.firgelliauto.com/en-in/blogs/actuators/examples-of-actuators-and-how-they-work	Internet of things and its applications: Springer
20	10/01/2024	1	Iot development boards	CHALK AND TALK, LINK	https://resources.pcb.cadence.com/blog/2022-an-introduction-to-iot-development-boards	Internet of things and its applications: Springer
21	11/01/2024	1	IOT Development boards: Arduino IDE and Board Types	CHALK AND TALK, LINK	https://www.javatpoint.com/arduino-boards	Internet of things and its applications: Springer
22	12/01/2024	3	Raspberri pi Development Kit	CHALK AND TALK, LINK	https://robocraze.com/blogs/post/raspberry-pi-in-iot	Internet of things and its applications: Springer
23	22/01/2024	5	RFID Principles and Components,	CHALK AND TALK, LINK	https://www.geeksforgeeks.org/introduction-of-radio-frequency-identification-rfid/	Internet of things and its applications: Springer
24	23/01/2024	1	Wireless Sensor Networks	CHALK AND TALK, LINK	https://www.geeksforgeeks.org/wireless-sensor-network-wsn/	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
25	24/01/2024	1	wireless sensor Networks: History and Context	CHALK AND TALK, LINK	https://www.geeksforgeeks.org/wireless-sensor-network-wsn/	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
26	27/01/2024	3	wireless sensor networks: The Nodes	CHALK AND TALK, LINK	https://jwcn-curaspjournals.springeropen.com/articles/10.1186/s13638-019-1615-x	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
27	30/01/2024	1	Wireless Network sensors: Connecting Nodes	CHALK AND TALK, LINK	https://jwcn-curaspjournals.springeropen.com/articles/10.1186/s13638-019-1615-x	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
28	31/01/2024	5	Networking Nodes:	CHALK AND TALK, LINK	https://en.wikipedia.org/wiki/Node_(networking)	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan



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29	01/02/2024	1	WSN And Iot.	CHALK AND TALK, LINK	https://btechwala.com/what-is-relation-between-wsn-and-iot-explain-with-examples/	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
30	02/02/2024	1	WSN and IOT: Difference between WSN and IOT	CHALK AND TALK, LINK	https://www.tutorialspoint.com/difference-between-wireless-sensor-networks-and-iot	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
Unit 3						
31	03/02/2024	1	Wireless Technologies for Iot	CHALK AND TALK, LINK	https://www.digikey.com/en/articles/wireless-technology-overview-for-iot	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
32	05/02/2024	3	Wpan Technologies for Iot	CHALK AND TALK, LINK	https://www.geeksforgeeks.org/wpan-technologies-for-iot-m2m/	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
33	07/02/2024	1	IEEE 802.15.4	CHALK AND TALK, LINK	https://en.wikipedia.org/wiki/IEEE_802.15.4	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
34	08/02/2024	5	Zigbee	CHALK AND TALK	https://www.geeksforgeeks.org/introduction-of-zigbee/	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
35	09/02/2024	1	Hart and NFC	CHALK AND TALK, LINK	https://dhananjaypawar.files.wordpress.com/2019/05/unit-3.pdf	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
36	12/02/2024	3	Z-Wave, ble, Backnet	CHALK AND TALK, LINK	https://dhananjaypawar.files.wordpress.com/2019/05/unit-3.pdf	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
37	14/02/2024	1	Modbus	CHALK AND TALK, LINK	https://dhananjaypawar.files.wordpress.com/2019/05/unit-3.pdf	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
38	15/02/2024	5	IP Based protocols for IOT IPV6	CHALK AND TALK, LINK	https://dhananjaypawar.files.wordpress.com/2019/05/unit-4-notes.pdf	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
39	16/02/2024	1	6lowpan	PDF, CHALK AND TALK, LINK	https://www.geeksforgeeks.org/what-is-6lowpan/	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
40	17/02/2024	5	RPL, REST	PDF, CHALK AND TALK, LINK	https://www.nabto.com/rest-api-iot-guide/	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
41	19/02/2024	1	Ampq	PDF, CHALK AND TALK, LINK	https://www.wallarm.com/what/what-is-amqp	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
42	20/02/2024	3	Coap	PDF, CHALK AND TALK, LINK	https://radiocrafts.com/technologies/coap-constrained-application-protocol/	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
43	22/02/2024	1	Mqtt	PDF, CHALK AND TALK, LINK	https://en.wikipedia.org/wiki/MQTT	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
44	23/02/2024	5	Edge Connectivity and protocols	PDF, CHALK AND TALK	https://ugcmoox.inflibnet.ac.in/assets/uploads/1/39/1017/cv/P34_M26200219070702021212.pdf	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan
45	26/02/2024	1	Edge Connectivity and protocols: Protocols in IOT	CHALK AND TALK, LINK	https://www.slideshare.net/DRREC/iot-protocolspptx	Wireless Sensor Networks From Theory to Applications : Ibrahim M. M. El Emery, S. Ramakrishnan



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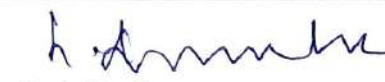


Unit 4

46	27/02/2024	1	Data Handling and Analytics: Introduction	CHALK AND TALK	https://hyjus.com/maths/data-handling/	Hand book on data Analysis: melissa Hardy and Alyan bryman
47	28/02/2024	3	Big Data, Types of Data	CHALK AND TALK, LINK	https://www.knowledgehut.com/blog/big-data/types-of-big-data#frequently-asked-questions-faqs%E2%80%AF	Hand book on data Analysis: melissa Hardy and Alyan bryman
48	01/03/2024	1	Characteristics of big data	CHALK AND TALK, LINK	https://www.analytixlabs.co.in/blog/characteristics-of-big-data/	Hand book on data Analysis: melissa Hardy and Alyan bryman
49	04/03/2024	5	Data Handling Technologies	PDF, CHALK AND TALK	https://dhananjaypawar.files.wordpress.com/2019/05/unit-5.pdf	Hand book on data Analysis: melissa Hardy and Alyan bryman
50	05/03/2024	1	Flow of data	CHALK AND TALK	https://theintactone.com/2023/01/22/analytics-flow-of-big-data-big-data-stack/	Hand book on data Analysis: melissa Hardy and Alyan bryman
51	06/03/2024	1	Data Acquisition	CHALK AND TALK, LINK	https://www.slideshare.net/sumetpatel21/data-acquisition-system-40835631	Hand book on data Analysis: melissa Hardy and Alyan bryman
52	07/03/2024	3	Data Storage	PDF, CHALK AND TALK	https://phoenixnap.com/kb/what-is-data-storage	Hand book on data Analysis: melissa Hardy and Alyan bryman
53	11/03/2024	1	Introduction to Hadoop	PDF, CHALK AND TALK	https://www.tutorialspoint.com/hadoop/hadoop_introduction.htm	Hand book on data Analysis: melissa Hardy and Alyan bryman
54	12/03/2024	5	Introduction to Data Analytics	CHALK AND TALK, LINK	https://files.eric.ed.gov/fulltext/ED536788.pdf	Hand book on data Analysis: melissa Hardy and Alyan bryman
55	13/03/2024	1	Types of data analytics	CHALK AND TALK, LINK	https://www.futurelearn.com/info/courses/introduction-to-data-science-for-business/0/steps/264318	Hand book on data Analysis: melissa Hardy and Alyan bryman
56	14/03/2024	1	Types of Data analytics: Predictive analysis	CHALK AND TALK	https://www.futurelearn.com/info/courses/introduction-to-data-science-for-business/0/steps/264318	Hand book on data Analysis: melissa Hardy and Alyan bryman
57	15/03/2024	3	Types of Data analytics: Prescriptive analytics	CHALK AND TALK	https://www.futurelearn.com/info/courses/introduction-to-data-science-for-business/0/steps/264318	Hand book on data Analysis: melissa Hardy and Alyan bryman
58	16/03/2024	1	local analytics	CHALK AND TALK	https://intellipaat.com/blog/tutorial/data-analytics-tutorial/int-data-analytics/	Hand book on data Analysis: melissa Hardy and Alyan bryman
59	19/03/2024	1	Cloud analysis and Application	CHALK AND TALK	https://www.thoughtspot.com/data-trends/cloud/cloud-analytics	Hand book on data Analysis: melissa Hardy and Alyan bryman
60	20/03/2024	5	Cloud analysis and application: Models and working	CHALK AND TALK	https://www.thoughtspot.com/data-trends/cloud/cloud-analytics	Hand book on data Analysis: melissa Hardy and Alyan bryman
Unit 5						
61	21/03/2024	1	Applications of IOT	CHALK AND TALK, LINK	https://sahpansa.in/blog/applications-of-iot/	Hand book on data Analysis: melissa Hardy and Alyan bryman


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62	22/03/2024	1	Home automations of IOT	CHALK AND TALK	https://www.geeksforgeeks.org/iot-home-automation/	Internet of things :Vijay Madishetty,Arsheep Bahga
63	25/03/2024	3	Smart cities	CHALK AND TALK	https://www.rishabhsoft.com/blog/iot-in-smart-cities-applications-benefits	Internet of things :Vijay Madishetty,Arsheep Bahga
64	27/03/2024	1	Energy, and Retail Management	CHALK AND TALK.LINK	https://safetyculture.com/topics/retail-management/	Internet of things :Vijay Madishetty,Arsheep Bahga
65	28/03/2024	5	Logistics,	CHALK AND TALK.LINK	https://builtin.com/logistics	Internet of things :Vijay Madishetty,Arsheep Bahga
66	30/03/2024	1	Agriculture in iot	CHALK AND TALK.LINK	https://vikaspedia.in/agriculture/iot-applications-in-agriculture/iot-in-agriculture	Internet of things :Vijay Madishetty,Arsheep Bahga
67	01/04/2024	1	Health and Life style in iot	CHALK AND TALK.LINK	https://www.finoit.com/blog/the-role-of-iot-in-health-care-space/	Internet of things :Vijay Madishetty,Arsheep Bahga
68	02/04/2024	1	Industrial IOT	CHALK AND TALK.LINK	https://en.wikipedia.org/wiki/Industrial_internet_of_things	Internet of things :Vijay Madishetty,Arsheep Bahga
69	03/04/2024	3	Legal Challenges,	CHALK AND TALK	https://blog.ipleaders.in/application-legal-challenges-internet-things/	Internet of things :Vijay Madishetty,Arsheep Bahga
70	05/04/2024	1	legal challenges of iot: deployment challenges in iot	CHALK AND TALK.LINK	https://www.geeksforgeeks.org/challenges-in-internet-of-things-iot/	Internet of things :Vijay Madishetty,Arsheep Bahga
71	06/04/2024	5	IOT Designs Ethics : Ethical analysis	CHALK AND TALK.LINK	https://medium.com/@am049/ethical-design-of-internet-of-things-iot-c77fcf660949	Internet of things :Vijay Madishetty,Arsheep Bahga
72	08/04/2024	1	IOT designs and ethics: ethical issues	CHALK AND TALK.LINK	https://medium.com/@am049/ethical-design-of-internet-of-things-iot-c77fcf660949	Internet of things :Vijay Madishetty,Arsheep Bahga
73	10/04/2024	1	IOT in Environmental protection	CHALK AND TALK.LINK	https://cabumtelecom.com/iot-environmental-monitoring/	Internet of things :Vijay Madishetty,Arsheep Bahga
74	12/04/2024	3	IOT in environmental protection::toxic gas detection ,energy monitoring	CHALK AND TALK.LINK	https://cabumtelecom.com/iot-environmental-monitoring/	Internet of things :Vijay Madishetty,Arsheep Bahga
75	15/04/2024	1	IOT in environmental protection: case study	CHALK AND TALK.LINK	https://cabumtelecom.com/iot-environmental-monitoring/	Internet of things :Vijay Madishetty,Arsheep Bahga



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LESSON PLAN

ACADEMIC YEAR : 2023-2024
Faculty Name : Mrs. PRAVEENA BALASUBRAMANIAN.,
Year/Semester/Section : III/VI/All
Degree & Branch : COMPUTER SCIENCE WITH DATA ANALYTICS
Subject Code & Name : 21UDA6S3 & SKILL BASED SUBJECT 3 - ETHICAL HACKING

S.No	Date	Hours	Topic(s)	Delivery Methods	Links	Book Referred
Unit 1						
1	05/12/2023	2	Introduction to Hacking – Importance of Security Elements of Security – Phases of an Attack	CHALK AND TALK	https://www.geeksforgeeks.org/introduction-to-hacking/	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
2	06/12/2023	3	Types of Hacker Attacks – Hacktivism	CHALK AND TALK	https://www.checkpoint.com/cyber-hub/threat-prevention/what-is-hacktivism/	EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
3	13/12/2023	2	Vulnerability Research – Introduction to Foot printing,	CHALK AND TALK	https://www.techtarget.com/searchsecurity/definition/footprinting	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
4	14/12/2023	3	Information Gathering Methodology – Foot printing Tools	CHALK AND TALK	https://www.tutorialspoint.com/ethical-hacking/tutorial/footprinting-techniques	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
5	21/12/2023	2	WHOIS Tools – DNS Information	CHALK AND TALK	https://www.whois.com/whois/	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
6	22/12/2023	3	Tools– Locating the Network Range – Meta Search Engines.	CHALK AND TALK	https://www.geeksforgeeks.org/what-is-meta-search-engine/	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
Unit 2						
7	02/01/2024	2	Scanning and Enumeration	CHALK AND TALK	https://resources.infosecinstitute.com/topics/penetration-testing/process-scanning-and-enumeration/	EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.

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8	03/01/2024	3	Introduction to Scanning	CHALK AND TALK	https://www.geeksforgeeks.org/what-are-scanning-attacks/	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
9	10/01/2024	2	Objectives – Scanning Methodology	CHALK AND TALK	https://www.greycampus.com/opencampus/ethical-hacking/scanning-methodology	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
10	11/01/2024	3	Tools – Introduction to Enumeration	CHALK AND TALK	https://www.tutorialspoint.com/ethical_hacking/ethical_hacking_enumeration.htm	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
11	23/01/2024	2	Enumeration Techniques	CHALK AND TALK	https://www.tutorialspoint.com/ethical_hacking/ethical_hacking_enumeration.htm	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
12	24/01/2024	3	Enumeration Procedure – Tools.	CHALK AND TALK	https://www.knowledgehut.com/blog/security/enumeration-in-ethical-hacking	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
Unit 3						
13	01/02/2024	2	System Hacking Introduction – Cracking Passwords	PPT, CHALK AND TALK	https://www.javatpoint.com/password-cracking-in-ethical-hacking	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
14	02/02/2024	3	Password Cracking Websites	CHALK AND TALK	https://stytch.com/blog/top-10-password-cracking-techniques/	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
15	09/02/2024	2	Password Guessing	CHALK AND TALK	https://www.ikosmos.com/authentication/password-guessing/	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
16	16/02/2024	2	Password Cracking Tools – Password Cracking Countermeasures	CHALK AND TALK	https://medium.com/@dancovic/introduction-to-password-cracking-countermeasures-6ceae6b6cdf7	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
17	19/02/2024	3	Escalating Privileges – Executing Applications	CHALK AND TALK	https://www.eccouncil.org/cybersecurity-exchange/penetration-testing/privilege-escalations-attacks/	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
18	26/02/2024	2	Key loggers and Spyware.	CHALK AND TALK	https://www.geeksforgeeks.org/ethical-hacking-keyloggers/	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
Unit 4						
19	27/02/2024	3	Programming For Security Professionals	CHALK AND TALK	https://www.knowledgehut.com/blog/security/programming-languages-for-ethical-hacking	Michael T. Simpson, Kent Beckman, James E. Corley, (2013) "Hands-On Ethical Hacking and Network Defense", Cengage Learning.

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20	05/03/2024	2	Programming Fundamentals – C language – HTML – Perl	CHALK AND TALK	https://www.geeksforgeeks.org/perl-programming-language/	Michael T. Simpson, Kent Beckman, James E. Corley, (2013) "Hands-On Ethical Hacking and Network Defense", Cengage Learning.
21	06/03/2024	3	Windows OS Vulnerabilities	CHALK AND TALK	https://www.slideshare.net/evanderburg/ethical-hacking-chapter-8-windows-vulnerabilities	Michael T. Simpson, Kent Beckman, James E. Corley, (2013) "Hands-On Ethical Hacking and Network Defense", Cengage Learning.
22	13/03/2024	2	Tools for Identifying Vulnerabilities	CHALK AND TALK	https://www.esecurityplanet.com/networks/vulnerability-scanning-tools/	Michael T. Simpson, Kent Beckman, James E. Corley, (2013) "Hands-On Ethical Hacking and Network Defense", Cengage Learning.
23	14/03/2024	3	Countermeasures – Linux OS Vulnerabilities	CHALK AND TALK	https://link.springer.com/chapter/10.1007/978-981-15-9343-7_9	Michael T. Simpson, Kent Beckman, James E. Corley, (2013) "Hands-On Ethical Hacking and Network Defense", Cengage Learning.
24	21/03/2024	2	Tools for identifying Vulnerabilities – Countermeasures.	CHALK AND TALK	https://www.splunk.com/en_us/blog/learn/vulnerability-scanning.html	Michael T. Simpson, Kent Beckman, James E. Corley, (2013) "Hands-On Ethical Hacking and Network Defense", Cengage Learning.
Unit 5						
25	22/03/2024	3	Penetration Testing : Introduction	CHALK AND TALK	https://www.tutorialspoint.com/penetration_testing/penetration_testing_introduction.htm	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
26	30/03/2024	3	Security Assessments	CHALK AND TALK	https://www.itgovernance.eu/blog/en/ethical-hacking-vs-penetration-testing-whats-the-difference	EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
27	01/04/2024	2	Types of Penetration Testing	CHALK AND TALK	https://www.redscan.com/news/types-of-pen-testing-white-box-black-box-and-everything-in-between/	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
28	02/04/2024	3	Phases of Penetration Testing – Tools	CHALK AND TALK	https://www.imperva.com/learn/application-security/penetration-testing/	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
29	08/04/2024	2	Choosing Different Types of Pen-Test Tools	CHALK AND TALK	https://www.hackerone.com/knowledge-center/7-pentesting-tools-you-must-know-about	EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.
30	10/04/2024	3	Penetration Testing Tools.	CHALK AND TALK	https://www.hackerone.com/knowledge-center/7-pentesting-tools-you-must-know-about	1. EC-Council, (2009) "Ethical Hacking and Countermeasures: Attack Phases", Cengage Learning.


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