



**DEPARTMENT OF COMPUTER SCIENCE (AIDED)**

Hands on Training Programme on “MongoDB & NoSQL: Advanced Concepts and Practices”

Supported by

**DBT STAR COLLEGE SCHEME**

**REPORT**

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Name of The Event</b>           | Hands on Training Programme on “MongoDB & NoSQL: Advanced Concepts and Practices ”                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Date</b>                        | 01.09.2025                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Time</b>                        | 2:00 PM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Venue of The Programme</b>      | C-34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Resource Person</b>             | Dr.J.Lekha,<br>Associate Professor, School of Sciences, Christ University,<br>India                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Objectives of the Programme</b> | <ul style="list-style-type: none"><li>• To provide a comprehensive understanding of NoSQL databases, focusing on their advantages over traditional RDBMS.</li><li>• To explore the internal architecture and design principles of MongoDB, including its storage engine, query processing, and indexing strategies.</li><li>• To train participants on various types of indexing techniques and performance optimization strategies in MongoDB.</li></ul>                                                            |
| <b>Outcome of the Programme</b>    | <ul style="list-style-type: none"><li>• Participants will be able to explain the differences between NoSQL and SQL databases and when to use each.</li><li>• Participants will understand MongoDB’s internal workings, including collections, documents, and BSON format.</li><li>• Students learned how to build a strong professional profile on platform which are essential for job seeking.</li><li>• Awareness of database security practices, user role management, and backup/recovery procedures.</li></ul> |

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| <b>Number of Beneficiaries with class</b><br><br><b>(Both students and faculty)</b> | III B.Sc Computer Science - 43<br>Faculties: 4<br>Dr.A.Kavitha<br>Dr.S.Radharani<br>Mrs.S.Vishalini<br>Mrs.Ansu Elsa Koshy<br>Total No of Beneficiaries: 48 |
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## Report in Detail:

The programme began with a warm welcome address delivered by Mrs. S.Vishalini, who extended greetings to all the participants and also underscored the importance of such training sessions in bridging the gap between theoretical learning and practical industry requirements.

Following the welcome, the session was led by Dr.J.Lekha who delivered an insightful training programme focused on “MongoDB & NoSQL: Advanced Concepts and Practices”.

The main objectives of the programme were to familiarize participants with advanced concepts in NoSQL database systems, focusing on the MongoDB platform. The training aimed to help learners understand the architecture of MongoDB, perform advanced CRUD operations, develop efficient data models, and master indexing, aggregation, replication, and sharding techniques.

As a result of the training, participants gained conceptual clarity on various types of NoSQL databases and understood the differences between relational and non-relational data models. They became proficient in designing and querying MongoDB databases, applying optimized schema designs, and managing database performance through indexing and aggregation pipelines.

The feedback received from the participants was overwhelmingly positive. Many appreciated the interactive and practical approach of the sessions, the clarity of instruction provided by the trainer, and the relevance of the topics to current industry practices.

The programme concluded with a vote of thanks delivered by Mrs. Ansu Elsa Koshy, who expressed deep gratitude to the resource person for sharing their expertise and time.



**KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS)**  
Re-accredited by NAAC with A<sup>+</sup> Grade - 4<sup>th</sup> cycle, College of Excellence – UGC  
**52<sup>nd</sup> Rank among Colleges in NIRF 2024**  
Coimbatore - 641 029, Tamil Nadu, India



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### Photos



