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

DEPARTMENT OF COMPUTER SCIENCE (AIDED)
Supported by
DBT STAR COLLEGE SCHEME
REPORT

Name of The Event	**Hands On Training Programme on"DevOps and Docker"**
Date	20.01.2025
Time	10.00AM-1.00PM
Venue of The Programme	Lab VI
Objectives of the Programme	• To foster seamless collaboration between development and operations teams, enabling faster delivery of high-quality software by automating processes and ensuring continuous integration and delivery. • To provide a lightweight and consistent platform for developing, shipping, and running applications using containerization, ensuring portability across different environments while optimizing resource utilization.
Outcome of the Programme	• Organizations achieve faster software delivery cycles, improved system reliability, and enhanced collaboration between development and operations teams, leading to increased customer satisfaction and business agility. • Teams gain the ability to build, deploy, and scale applications consistently across various environments, reducing compatibility issues, improving resource efficiency, and streamlining application management.

Number of Beneficiaries with class **(Both students and faculty)**	III B.Sc Computer Science - 40 II B.Sc Computer Science - 14 Faculties : 3 Dr.A.Kavitha Dr.M.Jagadeeswari Mrs.S.Vishalini Total No of Beneficiaries : 57

Report in Detail:

The Session was started by Dr.M.Jagadeeswari by addressing the gathering and brief introduction of the resource person. The resource persons M.Harish Goutham, Cloud Architect, Oracle, Bengaluru and B.Karthick Prakash, CEO , Heycloud Innovations, Coimbatore.

DevOps and Docker have emerged as pivotal technologies in modern software development and IT operations, driving efficiency, scalability, and collaboration. DevOps represents a cultural and technical movement aimed at unifying development and operations teams to deliver software faster, with improved quality and reliability. Docker, a platform for containerization, complements DevOps by enabling developers to package applications with their dependencies into portable containers. Together, DevOps and Docker have transformed the way software is developed, tested, and deployed, making them essential components of contemporary IT strategies.

DevOps is a set of practices and principles that bridge the gap between software development and IT operations. It emphasizes automation, continuous integration, continuous delivery, and collaboration. The primary goal of DevOps is to streamline the software development lifecycle, ensuring that code moves seamlessly from development to production.

The DevOps workflow is characterized by a series of interconnected stages: planning, development, building, testing, releasing, and monitoring. Each stage is supported by various tools and processes that ensure efficiency and reliability. By fostering a culture of shared responsibility, DevOps minimizes silos between teams and reduces the time required to deliver new features or updates.

Docker is a platform that enables developers to build, ship, and run applications in lightweight, portable containers. These containers encapsulate an application and its dependencies, ensuring that it runs consistently across different environments. Docker's ability to isolate applications from their underlying infrastructure has made it a cornerstone of modern software development.

The Docker ecosystem includes several key components, such as Docker Engine, Docker Compose, and Docker Hub. Docker Engine serves as the runtime for containers, while Docker Compose simplifies the management of multi-container applications. Docker Hub provides a centralized repository for sharing and storing container images. These features make Docker an invaluable tool for DevOps teams, as it integrates seamlessly with continuous integration and deployment pipelines.

The adoption of DevOps and Docker offers numerous benefits to organizations. DevOps accelerates the software development lifecycle, reducing the time-to-market for new features and updates. It fosters a culture of collaboration and shared responsibility, leading to higher-quality software and fewer deployment failures.

Docker, on the other hand, simplifies application deployment and enhances portability. Its containerization approach ensures that applications run reliably across different environments, from a developer's laptop to production servers. Docker's lightweight nature also improves resource utilization, enabling organizations to do more with less.

DevOps and Docker have fundamentally changed the landscape of software development and IT operations. By fostering collaboration, automating workflows, and leveraging containerization, these technologies enable organizations to deliver software faster, with greater reliability and scalability. While challenges exist, the benefits far outweigh the drawbacks, making DevOps and Docker indispensable for any organization aiming to remain competitive in today's fast-paced digital environment.

Finally Mrs.S.Vishalini proposed vote of thanks for the resource persons, Faculty members and Students and Lab technicians.

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Name of the Event : Hands on Training Programme on " DevOps and Docker "

Date: 20.01.2025 **Venue:** C-34

Photos