NEW HORIZON COLLEGE OF ENGINEERING

EVENT NAME: WORKSHOP ON "DOCKER AND KUBERNETES"

organized by

Department of MCA

DATE: 11-01-2025

VENUE: MCA Lab2

BRIEF DESCRIPTION OF THE EVENT:

The primary objective of the workshop was to provide participants with in-depth knowledge and practical skills in containerization and orchestration technologies using Docker and Kubernetes. The session aimed to equip attendees with the ability to efficiently manage, deploy, and scale containerized applications, forming a strong foundation in modern DevOps workflows.

1. **Introduction to Docker:**

The workshop covered the fundamentals of containerization and its importance in modern application development, emphasizing the creation and management of Docker containers for seamless deployment. Participants learned to write Docker files for building custom images and use Docker Compose to efficiently manage multi-container environments. Additionally, the session provided an introduction to Kubernetes, including a detailed explanation of its architecture and key components such as Pods, Nodes, Deployments, Services, and Namespaces. Attendees also gained hands-on experience in setting up and configuring Kubernetes clusters, orchestrating containerized applications, and ensuring scalability and reliability.

2. **Participant Engagement**

The workshop was highly interactive, with participants actively engaging in hands-on exercises and real-world scenarios. The practical nature of the session allowed attendees to directly apply the concepts, enhancing their learning experience. Questions and challenges raised during the session were addressed by the resource person, ensuring a clear understanding of the topics covered.

3. **Key Takeaways**

- Comprehensive understanding of containerization with Docker and orchestration with Kubernetes.
- Practical skills in building, deploying, and managing containerized applications.

- Insights into advanced Kubernetes features like Helm charts, networking, and persistent storage.
- Familiarity with troubleshooting and scaling applications in a Kubernetes environment.

4. **Feedback and Outcome**

Participants found the workshop highly valuable, particularly appreciating the hands-on lab sessions that bridged the gap between theory and practical implementation. Many expressed confidences in applying the concepts learned to real-world DevOps projects.

ACTIVITIES CONDUCTED:

1. **Hands-On Lab Sessions**
   - Building a simple microservices application with Docker.
   - Deploying the application on a Kubernetes cluster.
   - Scaling, monitoring, and troubleshooting Kubernetes workloads.

2. **Q&A and Real-World Use Cases**
   - Insights into Docker and Kubernetes usage at Oracle Cerner.
   - Industry best practices and tips for effective container management.
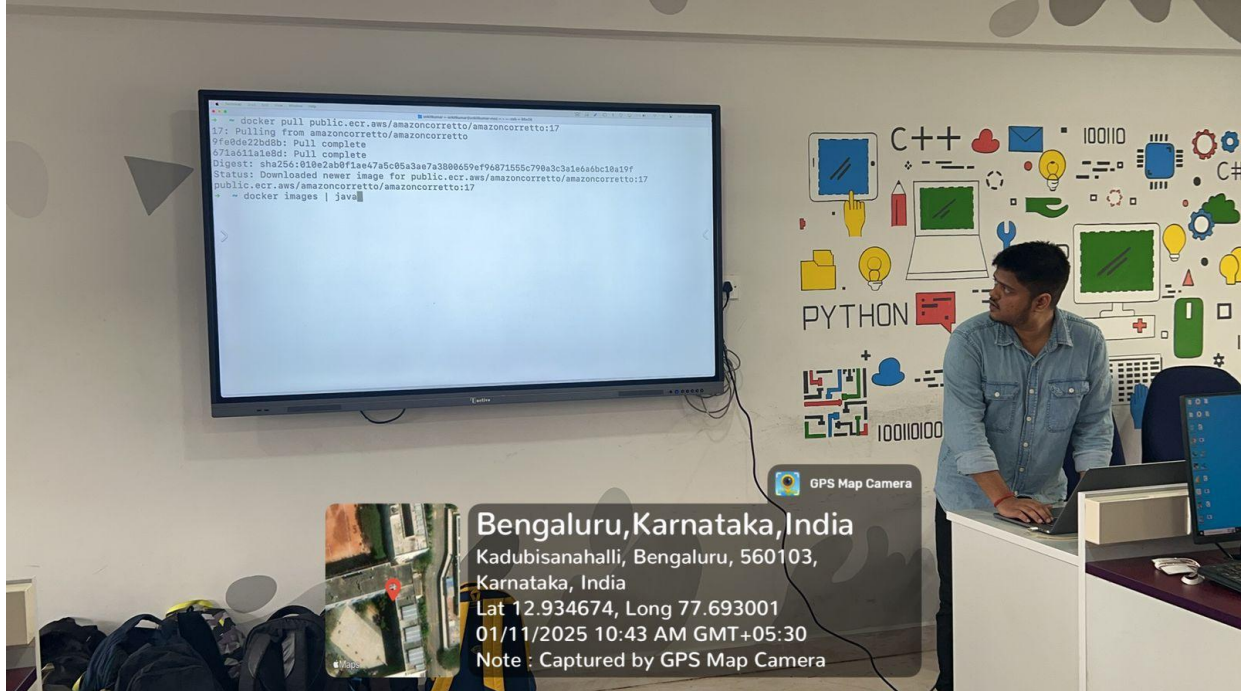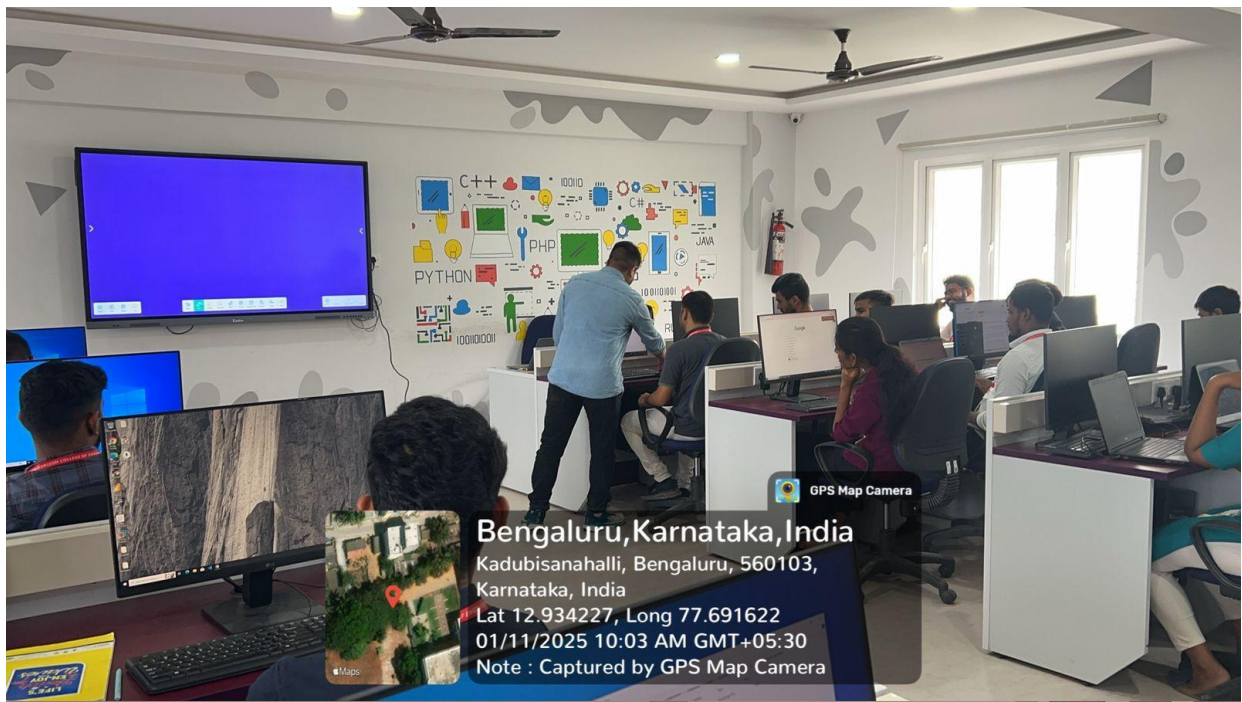
NO. OF PARTICIPANTS: 124

WINNERS (if any, for activities conducted): N/A

GUEST DETAILS: Mr Ankit Kumar

Software Engineer

Oracle Cerner, Bangalore

PHOTOGRAPHS OF THE EVENT:

Bengaluru,Karnataka,India
Kadubisanahalli, Bengaluru, 560103,
Karnataka, India
Lat 12.934227, Long 77.691622
01/11/2025 10:03 AM GMT+05:30
Note : Captured by GPS Map Camera

Bengaluru,Karnataka,India
Kadubisanahalli, Bengaluru, 560103,
Karnataka, India
Lat 12.934674, Long 77.693001
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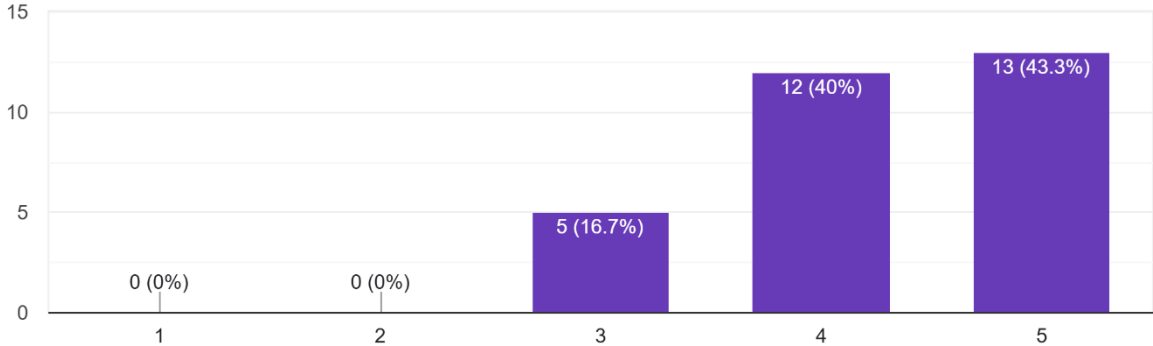
POSTER:

FEEDBACK FROM STUDENTS

Quality of the training content
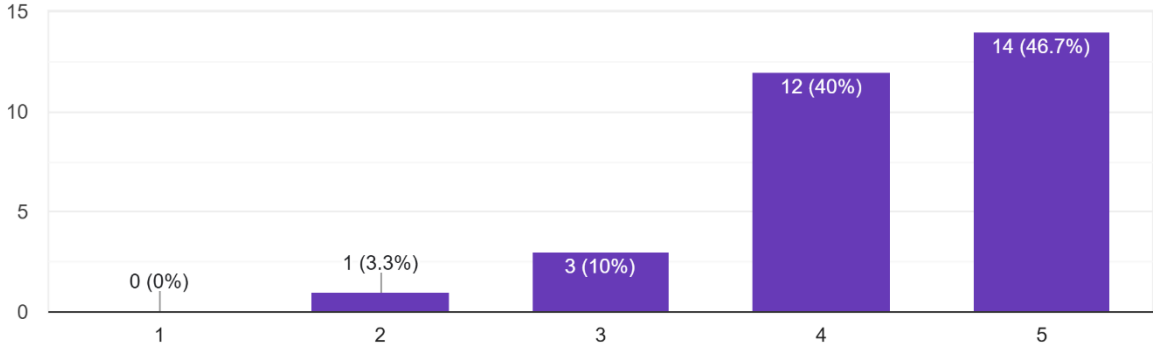30 responses
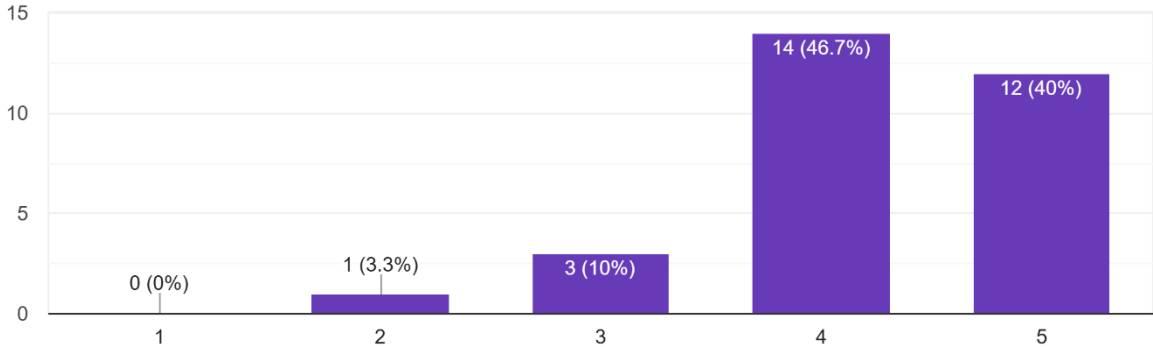
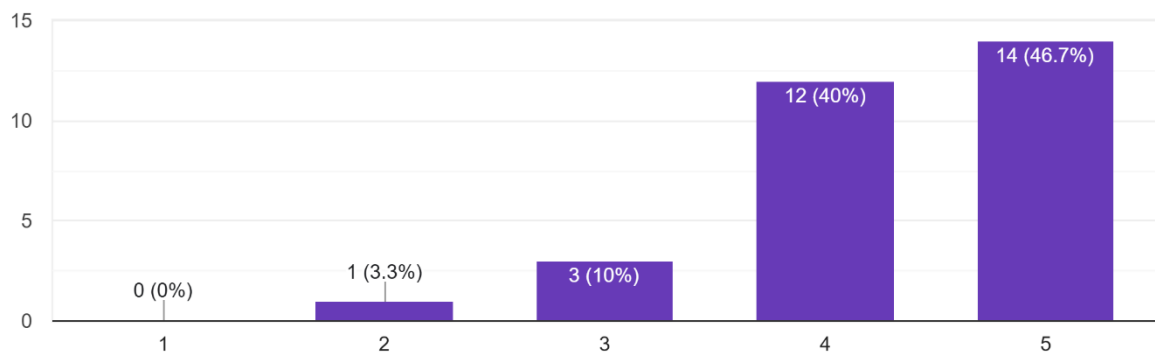## Clarity of the presentation.
30 responses

Effectiveness of the examples depicted during the session.
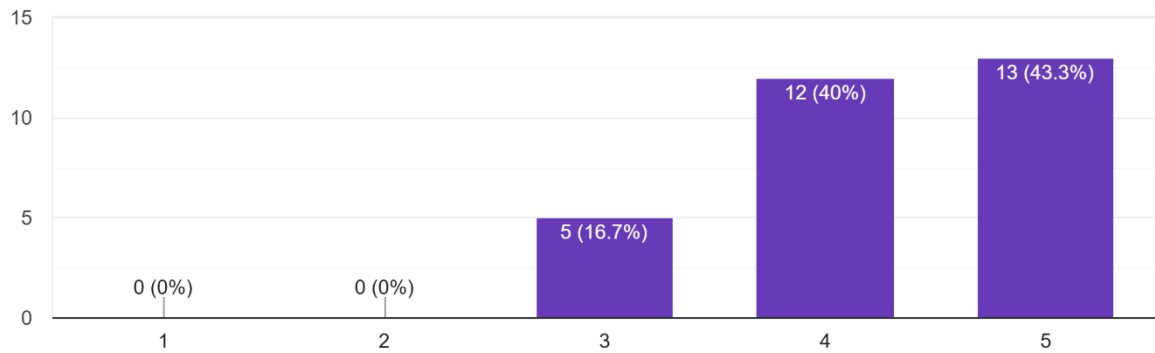30 responses

Level of achievements of topics in learning Backend Development.

30 responses

Rate the relevance of the topic to future study and work.

30 responses

FACULTY COORDINATOR   **HOD-MCA**

Dr M T Vasumathi   **Dr V.Asha**