NEW HORIZON COLLEGE OF ENGINEERING

Workshop
on
Docker and Kubernetes

Organized by
The Department of MCA

Date: 31-05-2025

Venue: MCA Lab

Brief Description of the Event

The workshop, "Docker and Kubernetes," offered a hands-on learning experience designed to equip MCA students with foundational and practical knowledge of modern DevOps practices. The session focused on how to containerize applications using Docker and deploy, manage, and scale them efficiently using Kubernetes.

Topics Emphasized

- **Introduction to Docker**

  The session began with a conceptual overview of Docker, explaining containers, images, and the benefits of containerization over traditional virtualization. Participants were introduced to Docker Architecture, installation, and core components like Docker Engine and Docker Hub.
- **Hands-on with Docker**

  Creating and Managing Containers: Students learned how to write Dockerfiles, build images, run containers, and use commands like docker ps, docker exec, and docker logs.

  Networking and Volumes: The session covered container networking models and data persistence using Docker volumes.

  Docker Compose: Participants used docker-compose to define and run multi-container applications.

- **Introduction to Kubernetes**
  A theoretical introduction to Kubernetes covered core components such as Pods, Nodes, ReplicaSets, Deployments, and Services. The discussion included the significance of orchestration in managing containerized

applications at scale.

- **Hands-on with Kubernetes**

  ▪ **Setting up a Local Cluster**: Students explored Minikube or Kubernetes on Docker Desktop for local testing.
  ▪ **Deploying Applications**: Participants learned to create YAML manifests for deployments and services.
  ▪ **Scaling and Updating**: The workshop demonstrated how to scale pods and roll out updates with zero downtime.
  ▪ **Monitoring and Logs**: Basic tools and commands like kubectl get, kubectl describe, and kubectl logs were explored to monitor cluster activity.

Outcomes: By the end of the session, students were able to

- Understand the architecture and workflow of Docker and Kubernetes.
- Containerize a simple application and manage it using Docker.

Activities Conducted

- **Case Study and Practical Application:** To reinforce the concepts learned, the workshop concluded with a real-world case study that showcased how Docker and Kubernetes are used in industry settings for scalable application deployment.
- **Q&A and Discussion:** The workshop concluded with an interactive **Q&A and discussion session**, allowing participants to clarify doubts, share insights, and explore advanced use cases.
- **Clarifying Concepts**: Students asked questions related to container lifecycle management, differences between Docker Swarm and Kubernetes, and real-world deployment practices.

Number of Participants: 48

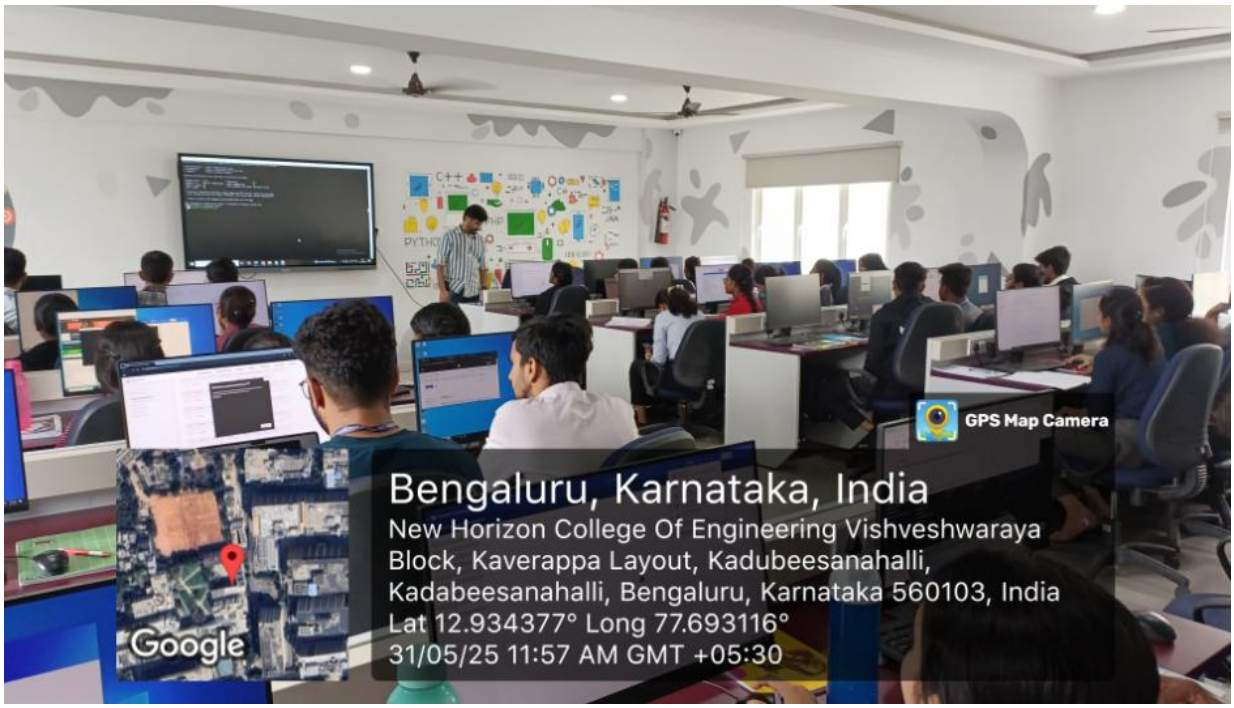
Winners: (if any, for activities conducted): NA

Guest Details (Name, Designation, Organisation, Location) :

Mr. Aravind Mohanraj

Cloud and DevOps Engineer, ANZ, Bengaluru

Photographs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New Horizon College Of Engineering Vishveshwaraya Block, Kaverappa Layout, Kadubeesanahalli, Kadabeesanahalli, Bengaluru, Karnataka 560103, India
Lat 12.934377° Long 77.693116°
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Docker and Kubernetes
GPS Map Camera
Bengaluru, Karnataka, India
New Horizon College Of Engineering Vishveshwaraya Block, Kaverappa Layout, Kadubeesanahalli, Kadabeesanahalli, Bengaluru, Karnataka 560103, India
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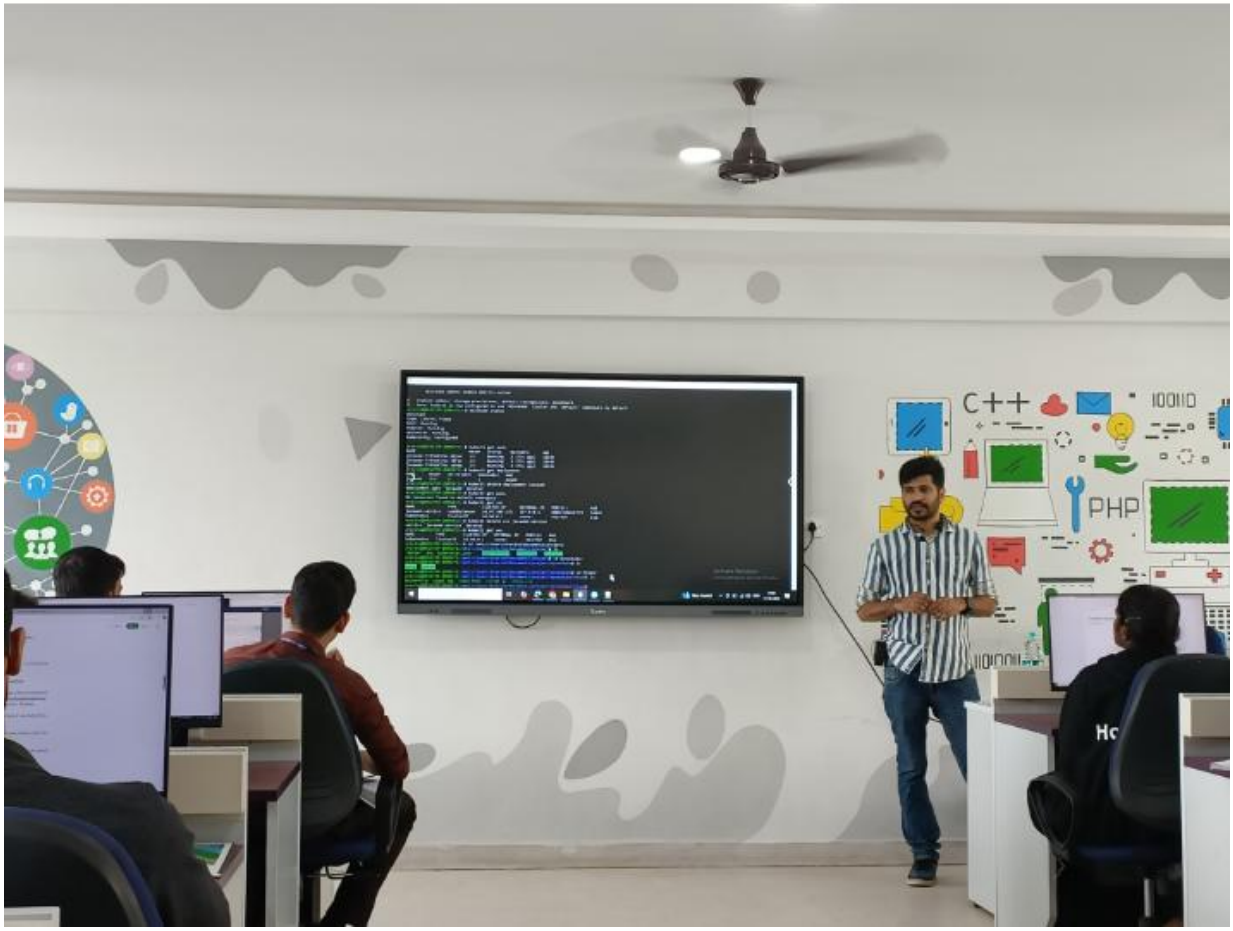
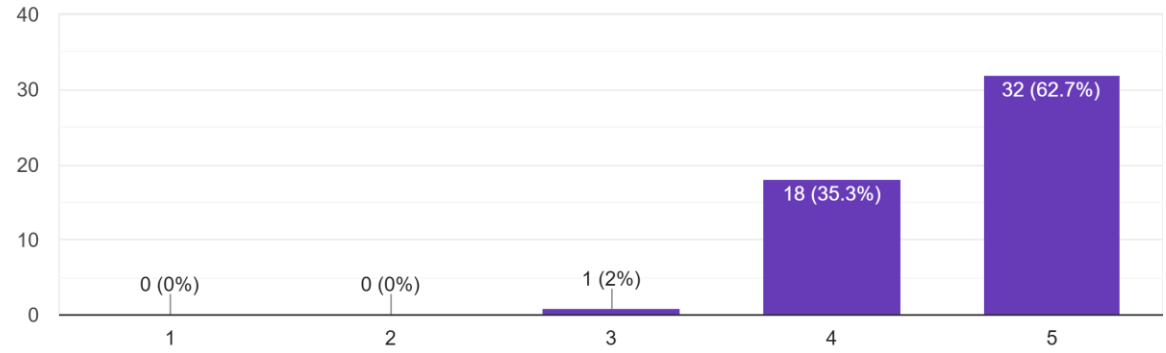

C++
PHP

C++
PHP
JAVA

Feedback

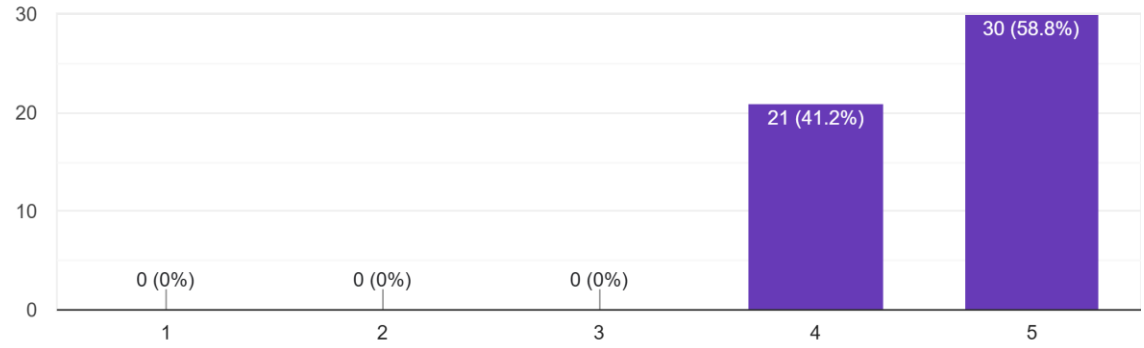
Quality of the training content

51 responses



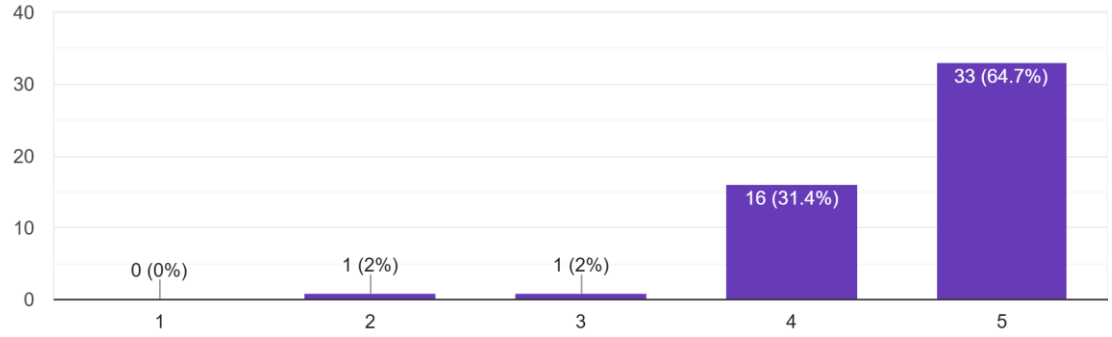
Clarity of the presentation.

51 responses



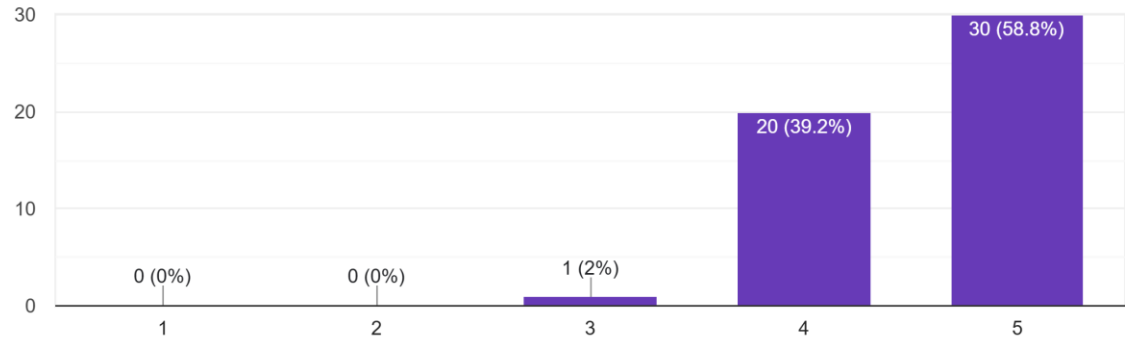
Effectiveness of the examples depicted during the session.

51 responses



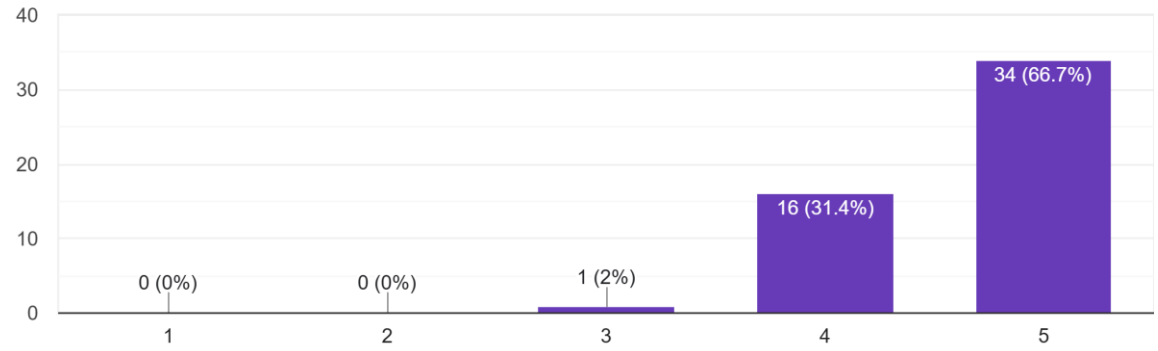
Level of achievements of topics in learning Backend Development.

51 responses



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

51 responses



FACULTY COORDINATOR

Dr. ARPANA PRASAD

HOD-MCA

Dr. ASHA V

Head of the Department
Department of Master of Computer Applic
NEW HORIZON COLLEGE OF ENGINEERING
Ring Road, Bellandur Post, Bengaluru - 560 103

Attendance

WORKSHOP- DOCKER & KUBERNETES

DATED: 31-05-2025

NEW HORIZON
COLLEGE OF ENGINEERING
New Horizon Knowledge Park, Ring Road, Marathalli
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

DEPARTMENT OF MCA

ATTENDANCE SHEET OF PARTICIPANTS

WORKSHOP- DOCKER & KUBERNETES WORKSHOP

AY 2024-25

RESOURCE PERSON: Mr. Aravind Mohanraj
Cloud and DevOps Engineer, ANZ, BENGALURU

DATE: 31-05-2025

TIME: 10:00 am to 1:00 pm

PARTICIPANTS: STUDENTS SEM I

VENUE: MCA LAB-3

SERIAL NO	USN NO	NAME	SIGNATURES
1	1NH24MC045	Divya.N.Shivanigi	Divya
2	1NH24MC077	MONICA B	Monica.B
3	1NH24MC059	KARISHMA SINGH	Singh
4	1NH24MC031	Bharavi Shukla	Bharavi.
5	1NH24MC005	Adheeksha P	[illegible]
6	1NH24MC033	Brindu Reddy C	Brindu Reddy C
7	1NH24MC019	Anugunti Sandhya	A-Sandhya
8	1NH24MC043	Disha Dey	Disha
9	1NH24MC020	Arpita Kumari	Arpita
10	1NH24MC041	Deekshitha.R.A	Deekshitha.RA
11	1NH24MC044	Dishanth Patel	Dishanth
12	1NH24MC049	Harsha.Y.	Harsha
13	1NH24MC035	Chethan D.T	[illegible]

WORKSHOP- DOCKER & KUBERNETES

DATED: 31-05-2025

14	Amruth Kumar TJ	1NH24MC015	[signature]
15	Koyalakuntla Harshitha	1NH24MC061	K.Harshitha
16	Nikitha .P	1NH24MC090	[signature]
17	Lekhana .G	1NH24MC063	[signature]
18.	Piyush	1NH24MC096	Piyush
19.	Preetham KM	1NH24MC102	Preethy
20	Preetham B.S	1NH24MC101	Preetha
21	Bajwal .N	1NH24MC099	[signature]
22	Nitish Kumar	1NH24MC094	[signature]
23	Ashish Padukone	1NH24MC022	[signature]
24	Balveer Sing	1NH24MC026	[signature]
25	Akash	1NH24MC041	[signature]
26	Puneeth Kumar	1NH24MC103	Puneeth
27	Ranjita .S Nigale	1NH24MC106	R.Nigale.
28	Nakshita .Tandel	1NH24MC080	N.Tandel
29	Ankita .P	1NH24MC018	Ankita
30	Naorui Ramana Reddy	1NH24MC083	[signature] Kamana Reddy
31	Narendra Singh Dora	1NH24MC082	[signature]
32	Lavanya KL	1NH2MC062	Lavanya KL
33	R.Manogna	1NH24MC104	R.Manogna
34	Nikhitha GS	1NH24MC089	[signature]
35	Poarvi R	1NH24MC097	[signature]
36	Nazmin. B	1N24MC085	[signature]

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EVENT COORDINATOR

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HOD MCA

WORKSHOP- DOCKER & KUBERNETES

DATED: 31-05-2025

37	Sahil Rajesh	1NH24MC112	Sahil
38	Ranjitha	1NH24MC107	Ranjitha
39	Madhushree GR	1NH24MC069	Madhu
40	Meghana.R	1NH24MC075	Meghana.R
41	Bamidi Vanshitha	1NH24MC027	Vansh
42	Kavya G M	1NH24MC056	Kavya
43	Keerthana.G.R	1NH24MC057	Keerthana
44	K.M. Shreyas	1NH24MC052	Shreyas
45	Jayanth Nair	1NH24MC051	Jayanth
46	Abhinav Reddy	1NH24MC001	Abhinav
47	Rishab Roy	1NH24MC109	Rishab
48	Soorthak Kehri	1NH24MC111	Soorthak

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