Department of Computer Science and Engineering

Academic Year: 2025 - 2026 (Odd Semester)

Degree, Semester & Branch: V Semester B.E. CSE

Course Code & Title: CS3551 & Distributed Computing

Faculty member (s): Mrs. P. Devisri, AP/CSE

Innovative Practice Description Unit

Topic: Unit V / Storage Service, Application Service

Course Outcome: CO 5

Topic Learning Outcome: 5b

Activity Chosen: Learning by Teaching

Justification:

Storage services and application services are essential components in cloud computing and play a major role in modern software architecture. As students stepped into the role of teachers, they explained concepts, clarified doubts, and discussed real-time use cases with their peers. This peer-led approach strengthened their understanding and exposed the class to various perspectives, enabling deeper learning. Such collaborative knowledge-sharing encouraged active participation and improved conceptual clarity on how cloud services support real-world applications.

Time Allotted for the Activity: 35 minutes

Details of the Implementation:

- Before the class began, the teacher asked students who were interested in teaching the topics of storage services and application services in cloud platforms. A few students volunteered eagerly.
- Based on their interest, MohanGanesh and Aadharsh were assigned topics related to Cloud Storage Services and Cloud Application Services respectively.
- Students received their topics one-day prior, giving them ample time to prepare content, collect examples, and plan their teaching methods.
- During the class session, the students delivered presentations on their assigned topics.
- To keep the session interactive and engaging:
- Mohanganesh demonstrated real-time use cases of storage services, such as how startups store user data using object storage, how photos/videos are stored in buckets, and how backup services help during system failures. She also explained concepts like block storage, file storage, redundancy, and scalability.
- Aadharsh used visual PPT diagrams to explain application services such as App Engine, Lambda, Function-as-a-Service, and how developers deploy applications without managing servers. She included workflow diagrams showing request-handling, autoscaling, and deployment pipelines.
- Short example scenarios—like deploying an e-commerce website or handling peak traffic—were used to help students relate theory to real industry practices.
- Students were encouraged to ask questions at the end of each presentation. The peer discussions helped them clarify doubts and understand the practical significance of storage and application services in real-time cloud architectures.

CO – PO / PSO mapping:

CO	PO1	PO2	PO10	PSO1
CO 5	2	2	1	1

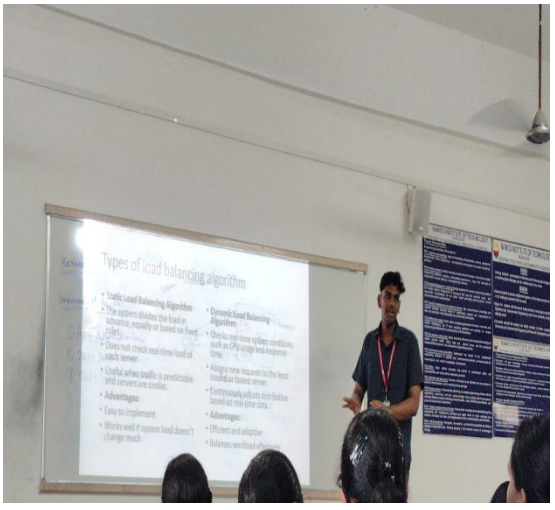
(1 – Low 2 – Moderate 3 High)

PO / PSO mapped:

Innovative practice	**PO1**	**PO2**	**PO10**	**PSO1**
	2	2	1	1
Justification for correlation	Students understood the fundamental concepts of cloud storage services and application services.	Students analyzed how storage and application services work using engineering sciences and cloud architecture principles..	Students communicated effectively about complex engineering concepts such as autoscaling, storage redundancy, and serverless deployment.	Students will be able to apply their knowledge of cloud services in real software development and cloud-based project implementation.

Images / Screenshot of the practice:

Mohanganesh



Aadharsh

Reflective Critique:

❖ ***Feedback of practice from students and other stakeholders:***

- Students listened to the sessions with keen interest and felt the concepts were made easy to understand through relatable examples.
- The peer-teaching approach helped students remember cloud concepts such as **storage buckets, redundancy, autoscaling, and serverless architecture** more effectively.
- Students expressed that becoming a "teacher" increased their confidence, especially in explaining technical topics like storage tiers and application deployment.

- They also shared that this method helped in improving communication skills—particularly in explaining technical workflows, visual diagrams, and system processes clearly.

❖ ***Benefit of the practice:***

- Students actively engaging in teaching cloud services gained a deeper understanding of **how storage and application services function in real-world cloud environments**.
- Active involvement helped them retain major concepts better than passive listening.
- The activity enhanced their communication skills, especially their ability to simplify complex cloud concepts.
- Students spent time on self-learning and explored additional cloud service examples beyond the syllabus.
- The activity encouraged students to confidently share their knowledge and relate cloud concepts to practical software engineering scenarios.

❖ ***Challenges faced in implementation:***

- Motivating shy or hesitant students to participate in presentations remained challenging due to fear of public speaking.
- Peer-teaching required additional planning time compared to traditional lecture-based teaching. Preparing diagrams, examples, and interactive explanations needed more coordination.

References:

1. https://effectiviology.com/protege-effect-learn-by-teaching
2. https://www.researchgate.net/publication/351905566_Impact_of_Seminars_on_Student_S oft_Skills_Development
3. https://www.ritrjpm.ac.in/images/computer-science/2022-023/4_Collaborative_Coding_DBMS_KVS.pdf