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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year 2023 – 2024 (Odd Semester)

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

Course Code & Title: CS3551 & Distributed Computing

Name of the Faculty member : J.Umadevi,AP/CSE

Innovative Practice Description

Unit / Topic: Unit IV / Check pointing and rollback recovery

Course Outcome: CO 4

Activity Chosen: Flipped class room

Date of the Activity : 02-11-2023

Justification

A flipped classroom is an instructional strategy and a type of blended learning, which aims to increase student engagement and learning by having pupils complete readings at home and work on live problem-solving during class time. To understand the how to implement check pointing and rollback recovery, a video link was shared. Students are showing keen interest in watching this video. It helps students in making concepts more interesting and motivating them to learn more about a specific topic.

Time Allotted for the Activity: 40 Minutes

Details of the Implementation:

Flipping the classroom is an inverting the classroom approach to teaching. In this approach, the traditional in-class teaching is "flipped" to better meet the needs of individual learners. Students gain control of the learning process through studying course material outside of class, using readings, pre-recorded video lectures. It helps the faculty/lecturer to redefine in-class activities and include homework problems and keep the students engaged in the content.

Identify and Share: Related materials are identified and I shared relevant references/materials/notes of Check pointing and rollback recovery to the students and given as self-learning. https://www.youtube.com/watch?v=YMvgYJj7yMM was shared to the students before 10 days.

Evaluate: I have prepared few questions related to the content shared and ask those questions in the class session and make the students to write/present in class. The students explained the self-explored concepts on check pointing and recovery. This active learning strategy is chosen to help students comprehend the basic concepts like as deadlock avoidance and it will teach them about the impracticality of deadlock prevention implementation in distributed systems.

CO	PO 1	PO 2	PO 3	PO 4	PO 8	PO 10	PO 12	PSO 1	PSO 2
CO4	3	2	1	1	2	2	2	3	3

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Fig : The students explained the self-exploredconcepts on check pointing and recovery.

Reflective Critique:

- ***Feedback of practice from students***
  - Students felt that this activity is very useful and got good idea about the snapshot algorithm
- **Benefit of the practice:**
  - Most of the students explained the step by step procedure of snapshot algorithm in correct way of their own example.
  - Students' interaction with their peer members and the class during the activity was good and effective.
- ***Challenges faced in implementation:***
  - Due to time limitation, only few students were made to do the presentation in front of the class by random call.

References:

- https://www.kent.edu/ctl/think-pair-share
- Kshemkalyani, Ajay D., and Mukesh Singhal. Distributed computing: principles, algorithms, and systems. Cambridge University Press, 2011.
- Mukesh Singhal and Niranjan G. Shivaratri. Advanced concepts in operating systems. McGraw-Hill, Inc., 1994.
- https://www.youtube.com/watch?v=YMvgYJj7yMM

Signature of Faculty Member **HOD**