



## Department of Computer Science and Engineering

### Academic Year 2024 – 2025 (Even Semester)

**Degree, Semester & Branch** : IV Semester B.E CSE- 'A'

**Course Code & Title** : CS3492 & Database Management Systems

**Name of the Faculty member** : Mr. K.Vignesh Saravanan, AP-III / CSE

#### Innovative Practice Description

- **Unit / Topic:** Unit III / Transactions / Deadlock Handling

- **Course Outcome:** CO3

- **Topic Learning Outcome:** TLO 8

- **Activity Chosen:** Flipped Classroom

- **Justification:**

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.

- **Time Allotted for the Activity:** 40 Minutes

- **Details of the Implementation:**

- **Plan:** Basics of Deadlock are already learnt in the subject operating systems and few topics related to DBMS is given as self-learning through self-exploration.

- **Identify and Share:** Related materials are identified and I posted relevant references/materials/notes of deadlock mechanisms to the students and given as self-learning. The Figure.1 shows the activities / discussion as a team on the self-exploration topics.

- **Evaluate:**

- I have prepared few questions related to the content shared and ask those questions in next class session and make the students to write/present in class. The Figure.1 images shows the student Asma and Deepalakshmi explaining the self-explored concepts on deadlocks.

- Make the students to find out the answer by their own by learning.

- **CO – PO / PSO mapping:**

CO	PO1	PO2	PO3	PO7	PO8	PO9	PO10	PO12	PSO1
CO1	3	3	3	1	1	1	1	2	3

(1 – Low

2 – Moderate

3 – High)

- **PO / PSO mapped:**

Innovative practice	PO1	PO2	PO3	PO9	PO10	PO12
	2	2	3	3	3	2
Justification for	Apply basic	Identify the need of	Able to design and	Functional individually	Communicate / share the	Ability to reproduce

<b>correlation</b>	Knowledge and fundamentals in Transactions and deadlocks	deadlock prevention and detection	develop the mechanism for the deadlock prevention & avoidance	in identifying the protocols for deadlock prevention and avoidance	ideas with other students in written and oral presentation	the contents gathered through self-learning
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- **Images / Screenshot of the practice:**



**Figure.1 – Screenshots of the student's activities in the Flipped classroom innovative practice**

- **Reflective Critique:**

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

- Student felt good, since they can study at their own pace/time.
    - They felt that through such learning, they can explore more.

- ❖ **Benefit of the practice:**

- More one-to-one time between teacher and student.
    - More collaboration time for students.
    - Students learn at their own pace.
    - Practical issues like missing class due to illness – become less problematic.
    - It encourages students to come to class prepared.

- ❖ **Challenges faced in implementation:**

- Relies on student preparation – few students did not come prepared.
    - The depth of the subject can be dictated by the student themselves or the group the student is working with.
    - The time and effort required from a teacher's perspective initially when creating the flipped class material is higher than for a traditional class.

**References:**

- ❖ <https://www.teachthought.com/learning/the-definition-of-the-flipped-classroom/#:~:text=A%20flipped%20classroom%20is%20a,the%20students%20independently%20at%20home.>
- ❖ [https://en.wikipedia.org/wiki/Flipped\\_classroom](https://en.wikipedia.org/wiki/Flipped_classroom)
- ❖ <https://omerad.msu.edu/teaching/teaching-skills-strategies/27-teaching/162-what-why-and-how-to-implement-a-flipped-classroom-model>