

**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 IV / Implementation Techniques / Query Processing Overview
Algorithms for Selection, Sorting and join operations

- Course Outcome:** CO4

- Topic Learning Outcome:** TLO 11

- Activity Chosen:** Team Assisted Learning

- Justification:**

Developing algorithm is an integral part across all various domains. Team Assisted Learning is the educational approach of using groups to enhance learning through working together. The prime objective of Team Assisted Learning is to make the students work as a team to solve problems, complete tasks, or learn new concepts and develop the algorithm for the estimation of query in select, sort, join operations. So, the topic is chosen as the group learning.

- Time Allotted for the Activity:** 40 Minutes

- Details of the Implementation:**

After completion of the unit / topics this activity can be planned as a team activity, in order to make the students understand the algorithms very clearly and to improve their level of understanding and gain more knowledge in logical problem solving. The students are provided with materials (like worksheet) with partial codes for algorithms and pseudo code. The task of the students is to fill the correct statements and complete the partially filled algorithms and pseudo codes. The course instructor will provide sufficient hints and correct syntax and will discuss all the doubts in the same class session and make them understand and complete the coding. The screenshots of the worksheet completed by the student's team is shown in Figure.1. The course instructor also provided the correct answers and explained how the algorithm gets executed and the pseudo code in the end of the session.

- 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

correlation	Knowledge and fundamentals in Query Processing	measuring the query cost and algorithms	develop the Select, Sort and Join algorithms	in identifying the algorithm and their cost to implement	ideas with other students in written and oral presentation	the contents gathered through self-learning
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Figure.1 – Screenshots of the student's Team Assisted Learning activity

- **Reflective Critique:**

- ❖ **Feedback of practice from students and other stakeholders:**
 - Student felt good, since they learn the concepts as a group.
 - They felt that through such learning, Students actively participate and this activity encouraged the students to share their knowledge with others.
- ❖ **Benefit of the practice:**
 - Students are actively participated in each group.
 - It helps the students are made to work in a team and share their ideas to others and also improve their communication skills.
 - It helps to focus attention and engage students in learning.
 - Through this activity the students can **deeply understand the algorithmic steps and pseudo code** and how to measure the query costs.
 - The **students are made to write the algorithm and pseudo code with their own understanding** mainly the operations like select, join which gave them complete understanding over the algorithm and pseudo code.
- ❖ **Challenges faced in implementation:**
 - Always the toppers only represent the concepts
 - Some of the students finding difficulties in expressing the ideas

References:

- <https://www.valamis.com/hub/collaborative-learning>
- <https://teaching.cornell.edu/teaching-resources/engaging-students/collaborativelearning>
- <https://www.evergreen.edu/sites/default/files/facultydevelopment/docs/WhatisCollaborativeLearning.pdf>