



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 / CSE

Innovative Practice Description

- Unit / Topic:** Unit V / Advanced Topics / SQL Injection

- Course Outcome:** CO5

- Topic Learning Outcome:** TLO 13

- Activity Chosen:** Think-Pair-Share

- Justification:**

- Active learning strategy, in which students work on a problem posed by instructor, first individually (Think), then in pairs (Pair) or groups, and finally together with the entire class (Share).
- **T (Think):** Teacher asks a specific question about the topic. Students "think" about what they know or have learned, and come up with their own individual answer to the question. [Takes 1-3 Minutes].
- **P (Pair):** Teacher asks another question, related to the previous one that is suitable to deepen the students' understanding of the topic. Each student is paired with another student. They share their thinking with each other and proceed with the task. [Takes 5-10 Minutes].
- **S (Share):** Students share their thinking (or solution) with the entire class. Teacher moderates the discussion and highlights important points. [Takes 10-20 minutes].

- Time Allotted for the Activity:** 40 Minutes

- Details of the Implementation:**

- Think-Pair-Share innovative practice conducted for II year CSE students, after explanation of the concept of SQL Injection attacks.
- First, I asked the students to think about the real time implementation of the SQL Injection attacks. The students searched few webpages and identified the different types and ways of performing the SQL injections.
- Then I make them as a pair and share their thinking with their partners.
- Finally, I asked any two or three pairs to explain the concept to whole class for further discussion. Mr. Deepak Lingaraj, II year CSE shared their ideas and knowledge of SQL Injection attacks and how to write SQL queries to perform the injection attacks to all students as shown in figure-1.

- CO – PO / PSO mapping:**

CO	PO1	PO2	PO3	PO8	PO9	PO10	PO12	PSO1
CO1	3	3	3	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	Able to	Functional	Communicate/	Ability to

correlation	Knowledge and fundamentals in SQL Injection attacks	the need of SQL Injection attacks	design and develop SQL Injection attacks	individually in identifying when to use SQL Injection attacks	share the ideas with other students in written and oral presentation	reproduce the contents gathered through self-learning
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- **Images / Screenshot of the practice:**



Figure-1 Mr.Deepak Lingaraj, II year CSE shared their ideas and knowledge of SQL Injection attacks

- **Reflective Critique:**

- ❖ **Feedback of practice from students and other stakeholders:**
 - Working as a pair, they can share their knowledge with them and come up with better understanding about the topic.
 - Different types of reasoning/justification based questions are discussed in the class room, so students come to know how to answer/draw diagrams whenever new real time system is asked in the question.
- ❖ **Benefit of the practice:**
 - Students are actively engaged and students learn from each other.
 - Makes class interactive and builds a friendly, yet academic atmosphere.
 - Includes all the students in the teaching-learning process.
- ❖ **Challenges faced in implementation:**
 - Students felt very difficult in this activity and could not complete in time whenever new real time system asked in the question.
 - Students are hesitating to speak in front of all.

References:

- ❖ <http://www.et.iitb.ac.in/TeachingResources.html>
- ❖ <https://www.readingrockets.org/strategies/think-pair-share>
- ❖ <https://www.wgu.edu/heyteach/article/how-think-pair-share-activity-can-improve-your-classroom-discussions1704.html>
- ❖ <https://serc.carleton.edu/introgeo/interactive/tpshare.html>