RAMCO INSTITUTE OF TECHNOLOGY

Department of Computer Science and Engineering
Academic Year: 2019 - 2020 (Odd Semester)

Degree, Semester & Branch **:** V Semester B.E (Common to ECE, EEE, MECH)
Course(Subject) Code & Title **:** OIT551 Database Management Systems
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Innovative Practice: Learning by doing
Topic: Normalizations of relational tables

Learning by Doing is an educational approach to problem-based learning

Objectives:

- **O1:** Analyze the problem statement and discuss with the team members to identify the dependencies in the relational tables.
- **O2:** Implement the normalization steps and enhance self-confidence to solve it.

Justification for choosing this topic:

Normalization is a database design technique which organizes tables in a manner that reduces redundancy and dependency of data. Enterprise resource planning mainly relies and focuses on implementing a normalized relational table. The prime objective of Learning buy doing is to enhance the problem solving and creative thinking of the students.

Activity Description:

In the previous class all the functional dependencies and the normalization steps to eliminate the dependencies are discussed. A real time problem statement was given to the students. In the class, the steps in normalization were revised once again and the students were supposed to solve the given problem with their teammates. Students were asked to interact and share their ideas in normalizing the relational table. Finally at the end of the session answers were explained and discussed.

Outcome of the Session:

- Students spent their time in self-learning.
- Students actively participate and interacted with every member in the team.
- This activity encouraged the students to share their knowledge with others.
- Students were able to connect ideas through discussion.

Relevance Mapping - This activity helps in attaining the following Objectives – PO mapping:

Course Outcome / Programme Outcome	PO1	PO2	PO3	PO4	PO9	PO10	PO12
O1 - Analyze the problem statement and discuss with the team members to identify the dependencies in the relational tables.	3	3	1	1	2	2	1
O2 - Implement the normalization steps and enhance self-confidence to solve it	2	2	2	-	1	1	2

Reflection Critique

- Students learned a few things individually that **leads to self-learning**. They also actively involved in this session rather than it being a one-way communication.
- I felt slow learners were not comfortable in solving because of their individual (slow) learning background. However, they understood the concepts through the interaction within the team.
- Students enjoyed in **solving the problem as a team** and effectively competed with other team members and there was a **healthy competition** within the teams.

References:

1. https://opentextbc.ca/teachinginadigitalage/chapter/4-4-models-for-teaching-by-doing/ - **3.6.3.2 Problem-based learning**
2. https://www.ritrjpm.ac.in/images/computer-science/Learning-by-doing(TOC).pdf

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