

# **PANIMALAR INSTITUTE OF TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**Academic Year: 2019 - 2020 (Odd Semester)**

## **INNOVATIVE PRACTICES**

**Degree, Semester & Branch : III Semester B.E. CSE**

**Course Code & Title : CS8392 Object Oriented Programming**

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**Active Learning Strategy : Think – Pair – Share (TPS)**

**Topic : Extending Interfaces**

**Date: 14.08.2019**

### **Think – Pair – Share (TPS)**

Collaborative, 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].

### **Benefit of TPS**

- Students are actively engaged.
- Students learn from each other.
- Makes class interactive.
- Builds a friendly, yet academic atmosphere.
- Includes all the students in the teaching-learning process.

### **Objectives**

- Students should be able to demonstrate conceptual understanding.
- Students should be able to analyse the pros and cons of different ways of coding.

### **How we implemented Think – Pair – Share**

#### **Think:**

The instructors posed a question to compare and predict the output of two sets of codes. The students worked individually on the task.



**Pair:**

The students were asked to check their neighbour's solution and work with their neighbour to solve for the given problem. The students worked with their neighbours to complete the task.



**Share:**

The students from each group presented their solution and participated in the discussion.

**Outcomes:**

The students were able to demonstrate conceptual understanding and analyse the pros and cons of different ways of coding. Apart from engaging student actively in learning, this activity helps in attaining the following program outcomes that are not attained in the regular curricular activities.

**PO9: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10: Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

Course Outcomes/ Program Outcomes	PO1	PO2	PO3
CO3: The students will be able to develop Java programs with the concepts inheritance and interfaces.	3	3	3