Department of Computer Science and Engineering

Academic Year 2020 – 2021 (Even Semester)

Degree, Semester & Branch: IV Semester B.E Computer Science and Engineering

Course Code & Title: CS8494 - Software Engineering

Name of the Faculty member (s): Mrs. N Sweety Surya, AP/CSE

Innovative Practice Description

- **Unit / Topic: Unit I /** Software Process and Agile Development
- **Course Outcome:** CO1
- **Activity Chosen:** Design-Thinking Process
- **Justification:**
  - Software process modeling is the process for representing a software process in a simpler manner. Each model depicts a process from a unique perspective. Software processes vary depending on the needs of a certain group or project in every organization. This exercise helps students gain a thorough understanding of various process models for different applications and express their thoughts to their classmates for specific applications. Students think about a process model for their given, which helps them enhance their creative thinking and oral communication abilities.

Time Allotted for the Activity:

Procedure of the Implementation:

- The design thinking process is a set of structured strategies that identify challenges, gather information, generate potential solutions, refine ideas, and test solutions.
- Collaborative, active learning strategy in which students work on a different application problem posed by the instructor, first thinking independently, then forming groups as Customer, Project Manager, Development, Testing and Maintenance team then finally working together to interact with one another on their given problem.
- Once interaction is finished between the groups, finally the development team is asked to interact with the customer team and then the developer team interacts with their own team about the process.

Details of the Implementation

- Teacher gave a different application problem to the different teams about the various process models. Students think about what they know or have learned in software process model, and come up with their own idea to the problem. [Takes 1-3 Minutes].
- The teacher asks them to select the process model based on their problem and form a group Customer, Project Manager, Development, Testing and Maintenance team to discuss the problem. Then different teams interact with each other about their problems to deepen understanding of the process model. The Customer team is interacting with the developer's teams, and the developer teams collect the detailed requirements from the customers during their interaction. Then, the developer's team discussed the problem with their own team. They share their thoughts with each other and proceed with the task. [Takes 5-7 Minutes].
- Students share their solution with the entire class. Teacher moderates the discussion and highlights important points. [Takes 05-10 minutes].

- **CO – PO / PSO mapping:**

CO	PO1	PO2	PO3	PO4	PO8	PO10	PO11	PO12
CO1	3	3	3	1	1	1	1	2

(1 – Low 2 – Moderate 3 – High)

- **Reflective Critique:**
  - ***Feedback of practice from students and other stakeholders:***
  - Most of the students actively participated and enjoyed. Students were given a solution with various formats.
  - Bright students enjoyed with peer learning.

- ***Benefit of the practice:*** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)
  - 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.
- ***Challenges faced in implementation:***
  - Students were not aware of Design-Thinking Process even though made an announcement and posted the content of Design-Thinking Process in the course canvas.
  - Slow learners were not interested to participate in practice.
  - Noise level of the class room goes up and a transition was needed to get back on the topic.
  - It was hard to keep every student on task.