

Mini-Project: (15 hours)

The students have to form a team of 4 members and choose a problem. They need to prepare UML Diagrams for the same and use Architecture and Design Principles and Patterns to develop a solution for the chosen problem. And implement the same using java /C++(Usage of the framework is appreciated).

(i) Mini Project Evaluation Policy:

- 1: Presentation of the project will be team-based.
- 2: Each student will be evaluated individually.

(ii) Marks Distribution:

Analysis and Design Models	2 marks
Use of MVC Architecture Pattern	2 mark
Use of Design Principles and Patterns (at least 1each per team member)	3 marks
Presentation/ Demo/ Explaining the code	3 marks
Total	10 marks

Note: * - 4 Design patterns and 4 design principles in total for the project for a 4 member team

(iii) Complexity of the project:

- A typical team size of 4 members would be required to implement at least 4 major features/use cases and 4 minor features/use cases (1 of each type per team member).
- There should be equal participation of each student in a team.

(iv) Important Aspects to be followed:

- The implementation should be done using any JAVA technologies that must include an MVC framework (like Java Spring Framework) along with optional Frontend frameworks like Java Swing or JavaFX. However, only Desktop and Web applications are accepted. **Mobile applications are not accepted.**
- Each student should own a use case completely and implement it (that is, avoid situations where a team member will own only UI, another will own Backend etc.)
- The implemented use cases should be merged into a single application. The data related to the project should be persisted in any database of your choice.

(v) Submission: - Report document (PDF) containing

- Title page with course details, project title, and team member details - PESU template to be used.
- Problem statement (synopsis etc.)
- Models (Use Case and Class Models)
- Architecture Patterns, Design Principles and Design Patterns used along with a short description which elaborates how that is applied to your problem domain.
- Github link to the Codebase (Repository should be public and accessible to all)
- Individual contributions of the team members
- Screenshots with input values populated and output shown (Use white background screens)