IV Year I Semester

Code: 17CS712

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UML LAB

OBJECTIVES:
1. Construct UML diagrams for static view and dynamic view of the system.
2. Generate creational patterns by applicable patterns for given context.
3. Create refined model for given Scenario using structural patterns.
4. Construct behavioral patterns for given applications.

Week 1: Familiarization with Rational Rose or Umbrello For each case study:

2, 3 & 4: For each case study:
- Identify and analyze events
- Identify Use cases
- Develop event table
- Identify & analyze domain classes
- Represent use cases and a domain class diagram using Rational Rose
- Develop CRUD matrix to represent relationships between use cases and problem domain classes

Week 5 & 6: For each case study:
- Develop Use case diagrams
- Develop elaborate Use case descriptions & scenarios
- Develop prototypes (without functionality)
- Develop system sequence diagrams

Week 7, 8, 9 & 10: For each case study:
- Develop high-level sequence diagrams for each use case
- Identify MVC classes / objects for each use case
- Develop Detailed Sequence Diagrams / Communication diagrams for each use case showing interactions among all the three-layer objects
- Develop detailed design class model (use GRASP patterns for responsibility assignment)
- Develop three-layer package diagrams for each case study

Week 11 & 12: For each case study:
- Develop Use case Packages
- Develop component diagrams
- Identify relationships between use cases and represent them
- Refine domain class model by showing all the associations among classes •

Week 13 onwards: For each case study:
- Develop sample diagrams for other UML diagrams - state chart diagrams, activity diagrams and deployment diagrams

OUTCOMES:
- Understand the Case studies and design the Model.
- Understand how design patterns solve design problems.
- Develop design solutions using creational patterns.
- Construct design solutions by using structural and behavioral patterns