



IV Year-I Semester		T	P	C
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UML AND DESIGN PATTERNS LAB (RT4112L)				

Prerequisite Course:

Object Oriented Analysis and Design Lab

Course Outcomes:

Upon completion of the course, the student will be able to achieve the following outcomes.

Cos	Course Outcomes	POs
1	Identify and analyze domain classes	5
2	Identify and develop class diagram.	5
3	Develop CRUD matrix to represent relationships between use cases and problem domain classes	6
4	Develop sequence diagram and collaboration diagram for the case study.	7
5	Identify relationships between use cases and refine domain class model by showing all the associations among classes	8
6	Develop activity diagram, state chart diagram and deployment diagram.	7

Syllabus:

Week 1:

Familiarization with Rational Rose or Umbrello

For each case study:

Week 2, 3 & 4:

For each case study:

- a) Identify and analyze events
- b) Identify Use cases
- c) Develop event table
- d) Identify & analyze domain classes
- e) Represent use cases and a domain class diagram using Rational Rose
- f) Develop CRUD matrix to represent relationships between use cases and problem domain classes

Week 5 & 6:

For each case study:

- a) Develop Use case diagrams
- b) Develop elaborate Use case descriptions & scenarios
- c) Develop prototypes (without functionality)
- d) Develop system sequence diagrams

Week 7, 8, 9 & 10:

For each case study:

- a) Develop high-level sequence diagrams for each use case
- b) Identify MVC classes / objects for each use case

- c) Develop Detailed Sequence Diagrams / Communication diagrams for each use case showing interactions among all the three-layer objects
- d) Develop detailed design class model (use GRASP patterns for responsibility assignment)
- e) Develop three-layer package diagrams for each case study

Week 11 & 12:

For each case study:

- a) Develop Use case Packages
- b) Develop component diagrams
- c) Identify relationships between use cases and represent them
- d) Refine domain class model by showing all the associations among classes

Week 13 onwards:

For each case study:

- a) Develop sample diagrams for other UML diagrams - state chart diagrams, activity diagrams and deployment diagrams