PROJECT REPORT DESCRIPTION

You will use an iterative software development process (UP) for this project. We have discussed this process in class. You will do two iterations of analysis, design, and implementation for this project (only first iteration is required, the second iteration is optional).

Teams are expected to develop their respective modules based on the Unified Process Systems Development Life Cycle concepts (Inception, Elaboration and Construction which includes the business modeling, requirement definition, analysis, design and implementation activities, but excludes Transition).

Planning for each iteration is needed. Planning means that the team (1) identify activities to be completed during this iteration (2) identify team member(s) responsible for those activities and (3) establish deadlines for completion of those activities. Be certain to allocate enough time in establishing deadlines so that the person(s) having primary responsibility for an activity can complete a draft version that can be checked by at least one other group member. It is also a good idea to allow yourselves several days before the delivery date for final packaging of the material to be submitted. The deliverables are due on dates specified below.

A team member should identify his/her contributions for each task mentioned below. You should meet with your team members and discuss before you submit your team deliverables. It is NOT ACCEPTABLE to work on these deliverables individually and then combine them later without discussing it with your team members.

The rough timeline for various deliverable are as follows:

First Iteration (due Nov 14th):

1. Create a vision to summary your project
2. Choose four use Cases (each use case should include those different scenarios), provide full-dressed descriptions. Each scenario should discuss a different use of your system.
3. Draw use Case Diagram to include actors and those use cases your team discovers during the first iteration.
4. Put other non-functional requirements in supplementary specification document
5. Create a document for glossary which includes those terms and descriptions used in your project
6. Create domain model by studying those use cases you describe in this iteration. You should use noun phase approach (noun extraction). The domain model should include
   a. Conceptual classes, attributes, and associations for all actors from your use case submission.
   b. Multiplicity of associations should be specified
7. Draw System Sequence diagrams and operation contracts for each use case (you describe in this iteration)

<ol type="a" start="1">
Separate system sequence diagrams for each use case scenario (ideally for each system operation)
Primary and secondary actors should be shown wherever necessary.
Correspondence between the use case scenario and system sequence diagrams should be made explicit. For example, one can label the system sequence diagram as "Main Success Scenario", where "Main Success Scenario" is a use case scenario.

<ol start="8">
Develop the design models for this iteration of the project including both static Design Class Diagrams and dynamic Interaction Diagrams (Sequence Diagrams). For Sequence diagram, there should be
<ol type="a">
There should be at least one Sequence Diagram for each use case (normally more)
One final DCD.
Apply design patterns where possible

Implement those functions described by those use cases you choose for this iteration.

Second Iteration (<u>optional</u>):

Revise the vision as necessary
Choose the rest use cases (each use case should include those different scenarios), to provide full-dressed descriptions. Each scenario should discuss a different use of your system.
Revise the use case diagram to include those use cases which have not been discovered during the first iteration.
Add additional non-functional requirements in supplementary specification document as necessary
Add those new terms you found during this iteration into glossary
Modify/revise the domain model and add new domain concepts to the model as needed
Draw System Sequence diagrams and operation contracts for each use case (you describe in this iteration)
Modify/revise the design models for this iteration of the project including both static Design Class Diagrams and dynamic Interaction Diagrams (Sequence Diagrams). You need to draw the sequence diagrams for those use cases you found in this iteration.
Implement those functions described by those use cases you choose for this iteration and complete the implementation for this project.

<u>Your project report should be structured in the following fashion:</u>

Project Title

Project Group Member Name, Project Group Member Name … (Student ID)

Part 1: Iteration 1

Vision
Use Case Modelling
<ol type="a">
Use case diagrams

   b. Use case description
   c. System Sequence Diagrams
   d. Operation Contracts
3. Domain Modelling
4. Class Modelling and Dynamic Modelling
   a. Class diagram
   b. Sequence diagrams
5. Implementation

Part 2: Iteration 2 (optional)

1. Vision
2. Use Case Modelling
   a. Use case diagrams
   b. Use case description
   c. System Sequence Diagrams
   d. Operation Contracts
3. Domain Modelling
4. Class Modelling and Dynamic Modelling
   a. Class diagram
   b. Sequence diagrams
5. Implementation

Appendix 1: Supplementary Specification
Appendix 2: Glossary
Appendix 3: Annotated screen shots of your working system.

Grading

1. Vision
2. Use Case Modelling (40%)
   a. Use case diagrams
   b. Use case description
   c. System Sequence Diagrams
   d. Operation Contracts
3. Domain Modelling (10%)
4. Class Modelling and Dynamic Modelling (30%)
   a. Class diagram
   b. Sequence diagrams
5. Implementation (20%)

Submission
The final report must be professionally prepared and organized, containing all the earlier deliverables as well as supplementary materials, if available. Email me your report by due date.