SE322: Software Intensive Systems Engineering	**Semester Project**
Semester 2 5785	**Due: 11 June 2025**
Lecturer: Michael J. May	**Kinneret College**

Iteration 2 and Second Design Review

This is the second design iteration for the semester project. We'll fill in more parts of the project documents and plan more of the software's behavior. At the end of the iteration, there will be a design review in which you'll get feedback on your work so far.

1 What to do: Documents

In this iteration you'll begin working on the *Software Architecture Document (SAD)* and the implementation for the project. You will also update and edit the requirements list and the *Software Requirement Specification (SRS)*.

1.1 Requirements

Update the requirements table. Fill in the following columns of the template:

1. Header information: Project name, Student names
2. Requirement ID #
3. Requirement text
4. Source (user story, derived)
5. Functional category (FR)
6. Non-Functional category (NFR)
7. *new* System Use Case (SUC) Trackback for use cases already written

1.2 SAD

Complete the following sections of the SAD:

1. Header information (project name, authors, sources)
2. Section 1: System Physical Architecture
   (a) Deployment Diagram. Fill in all hardware nodes with names and appropriate stereotypes. Connect the nodes appropriately with lines that include multiplicity, the protocol type, and the media type. The diagram must reflect the entire system. Create the diagram with Enterprise Architect.
   (b) Nodes table. Fill in each hardware node's name (HWCI - Hardware Configuration Item), description, and requirements trackback.
   (c) Devices table. Fill in each device's name, description, and requirements trackback.
   (d) Components breakdown. The diagram must reflect the entire system and show which components are contained (manifest) within which modules (CSCI (Computer Science Configuration Item)). Create the diagram with Enterprise Architect.
3. Section 2: System Logical Architecture

(a) Component Diagram. Show each component from the previous components breakdown. Include all provided and required interfaces and short descriptions for each interface. Create the diagrams with Enterprise Architect.

(b) Component and interface detail tables. Include component names, roles, and all interface details (type, name, detail).

(c) Composite diagrams. Show each physical node with its software components and ports, including delegation arrows. Create the diagrams with Enterprise Architect.

(d) Database diagrams. Give database schemas for each database or data storage component in the logical architecture.

4. Section 3: Sequence diagrams. Fill in 5 sequence diagrams for the 5 System Use Cases you completed in the SRS in the previous iteration.

1.3 SRS

Update the sections of the SRS you wrote for the first iteration with changes as per feedback from the first design review.

1.4 Code Skeleton

You will need to code the logic for one complete component of the project and connect it to the GUI screens that you designed in the previous iteration. Select one component from the component diagram and create a code skeleton for it. The skeleton must include:

- Classes that support the data and operations of the component
- Public methods that offer the services of the component to others

Write the code in Java.

2 What to submit by 11 June 2025

Submit all of the following documents via Moodle:

1. User story. Highlight any changes from the previous submission.
2. Requirements file (XLSX) based on the temple provided and filled in as per the instructions above. If anything changed since the previous submission, highlight the changes.
3. SRS document (DOCX) with sections 1, 2, 3, 4, and 5 fixed as needed.
4. SAD document (DOCX) with sections 1, 2, and 3 filled in as above.
5. Code skeleton.
6. Slides to be presented at the design review (see next section).

3 Design Review

On 12 June 2025, each team will be given a chance to present their work to the whole class during the class lecture slot. Each team will have 20 minutes to present the following:

1. 1 cover slide with the name of the project and the names of the students on the team.
2. The deployment diagram

3. The component breakdown
4. The component diagrams
5. The composite diagram
6. 1 of the sequence diagrams.

To make the presentations move more smoothly and remain interesting, practice the presentation before class to ensure it can be completed within 20 minutes. When presenting in class, explain what is written on the slides, do not just recite the words off the slide.

3.1 Feedback and Evaluation

Each team will receive oral feedback during the design review and written feedback with a design review grade.

Grades for the submitted work will be assigned as follows:

- User story: 5%
- Requirements: 5%
- SAD:
    1. System physical architecture
        (a) Header info: 5%
        (b) Deployment diagram: 15%
        (c) Nodes and Devices tables: 5%
        (d) Components breakdown: 10%
    2. System logical architecture
        (a) Component diagram: 15%
        (b) Component and interface detail tables: 5%
        (c) Composite diagrams: 10%
        (d) Database diagrams: 5%
    3. Sequence diagrams (5): 15%
    4. Code skeleton: 5%

