BSc (Hons) in Computer Science
BSc (Hons) in Computer Systems Engineering
Year 2

Group Assignment
SE2012 – Object Oriented Design and Analysis   **Semester 2, 2024**

Release Date: 20/08/2024

General Instructions:

1. This assignment carries **25% out of final marks**.
2. This assignment must be done in groups of 4 members. Students must use the same grouping use for the other Y2S1 modules.
3. Late submissions will be penalized.
4. The submission file should be a PDF document.
5. The assignment deadline and link will be published on the course website.

Each group should do the following.

1. Identify a **real-world client** matching for the given topic. (E.g. If the topic is 'Hotel Management System', identify a suitable client from the hotel industry).
   a. Topic : **Any Inventory Management, Employee Management or Resource Management System with scope for the below criteria**
   b. **Submit the project details**.
      i. Topic
      ii. Client details
      iii. Each members scope
         1. Each member must have equal scope to complete which **cover all the aspects of development**.
         2. This should include Front-end and back-end both.
         3. **No member** should focus only on one aspect of development. (that is Front-end or back-end)
2. **Gather requirements from the client.**
   a. Write a project overview.
   b. Identify all functional requirements for the system.
   c. Identify all non-functional requirements for the system.
   d. Identify at least 4 main functions (one for each member). All the functions should be approximately equal in scope and contain a considerable amount of work.

e. Gather all details related to each function.

f. Develop the UML Use-case diagram for the system.

g. Write the Use-case scenarios for 4 main use-cases. (one for each member)

h. Develop Activity diagrams for the identified use-cases.

i. Develop a UML Class diagram.

j. Compile a report according to the given template.

3. **Implement the solution using Java Spring Boot as a Spring Web Application**

a. Develop the UI for the front end Web application

b. Backend (with Restful API and Spring MVC)

c. A basic tutorial could be found here [Tutorial: Create your first Spring application | IntelliJ IDEA Documentation (jetbrains.com)](#)

Submission Requirements

- Students must use the GitHub Teams Repository assigned to them for coding. Individual contributions will be assessed based on the github commits and activities.
- **Project Details (30th August 2024)**
- **Group Report**. (to be submitted by the **10th week** to Turnitin)
- **Viva** and the **code submission**(Gradescope). (last week of the semester)

Grading Criteria

Report Template(10%)

Section	Description	Marks
Cover page		5 marks
Table of contents		
List of figures		
List of tables		
Introduction	Client details, Project Scope, Overview	5 marks
Functional Requirements		10 marks
Non-functional Requirements		10 marks

Use case diagram		15 marks
Use case scenarios (4)	One per student Minimum	15 marks
Activity diagrams (4)	One per student Minimum	20 marks
Class diagram		15 marks
Appendix	Evidence of client meetings or related documents	5 marks

Product(15%)

Criteria	Description	Marks
OOC and Design Patterns	Individual Mark	30
Best Practices	Individual Mark	15
Testing	Individual Mark	10
Deployment		10
Presentation Skills	Individual Mark	10
Demo	Individual Mark	25