

PROJECT ASSIGNMENT 3 (PA3)

Due Date: **24/11/2024**

Total score: 70 points

Each team needs to perform required tasks to produce and submit the following documents.

a – Use-case specification – 2nd submission (15 points)

Add and detail more use-cases in the specification if there are remaining requirements. Additionally, based on the feedback from TA's, new information and/or changes to the requirements, revise the use-case model and use-case specifications that you did in the previous PA. The model and specifications should be more precise and complete (more details and use cases) than the previous ones.

Your team needs to log the changes made to the document using the Revision History section at the beginning of the document.

b – Define software architecture (20 points)

Your team is asked to draft the software architecture document, filling the required sections in the document using the template provided with this assignment. The document needs to provide and explain key components and the organization of these components to form the architecture. For this PA, the goal is to form an architecture following a certain style like MVC, n-tier, and microservices. How components are connected, which languages are used for each component are two questions that need to be answered in this PA.

c – Class diagrams (15 points)

Model class diagrams for key components to be written in OOP based on the architecture. Update Section 4.x of the Software Architecture document with diagrams and descriptions of key classes.

Class diagrams should include classes, their main attributes, operations and relationships among them. Try to detail the class diagram with all available information you have. You are not required to imagine unrealistic attributes, operations, and relationships that may not be needed in the future. Basically, go as far as you know.

d – DB design (15 points)

Based on the requirements documented, design ER models for the database of the application. The model should include entities, attributes, and relationships among the entities. Add the DB design in the SAD document under the DB component section of the architecture.

e – Weekly report (5 points)

Prepare weekly reports for the weeks starting from the last reported week until the time of submission. Fill out the template with all information required.

Submission Rules

You must copy all documents to the directory named **PA3-Group[GroupId]** and compress the whole directory to the zip/rar file named PA3-Group[GroupId].zip/.rar.

For example: **PA3-Group01.zip**

Grading Criteria

The assignment will be graded according to how well your team prepares the required documents using the information your team has at this time. Criteria include:

- English writing: easy to understand, few errors.
- Well formatted texts, diagrams, charts.
- Level of completeness of the documents, based on the information available at this time.
- Each use-case must have a main flow.
- Use-case diagrams must include key use-cases that match the functional requirements documented in the vision document.
- The software architecture must capture key components necessary for the system. It should be based on one well-known style.
- Class diagrams must include key classes, attributes, operations, and relationships.