Introduction to Software Engineering

PROJECT ASSIGNMENT 5 (PA5)

Date to present: **8:00, 3/01/2025. Online via Zoom.**

Total score: 120 points

This is a project assignment which will be submitted by each team.

You have the following documents to be done and submitted.

a – Implementation

The team is required to implement key features of the application before performing testing activities required below. The working software is graded in the presentation requirement below.

b – Design test cases, test execution and report (30 points)

Design test case. In PA4, you are required to write test plan and test cases, and many test cases have not been executed yet. In this PA5, your team needs to write more test cases to cover all use-cases that are already implemented. You can reuse the test cases that have already written in PA4. Each use-case needs to have at least 3 test cases.

Test execution. Your team is required to run or execute all test cases written. Fill the test case document (test cases template) with actual information, including Actual Result, Status (Passed/Failed), Tester (who performs testing), and Tested Date.

Test report. Generate a test report listing all defects found (test report template). There should be at least one defect found for each failed test case. In the test summary report sheet, you should include the number of use cases tested, number of test cases, number of passed test cases, and number of failed test cases.

c – Automated testing (10 points)

Each team is required to perform automated tests for at least two use-cases with at least two scenarios for each use-case. You are required to use a test automation tool to write test scripts to execute **two test cases (two scenarios)** automatically.

If your application is a Web-based or Mobile app, download and use Katalon Studio ([www.katalon.com)](www.katalon.com) to generate test scripts and test the scenario. (If your application is desktop-based, download and use either TestComplete or Ranorex to generate and execute test scripts). You can use their recording feature to capture test steps on your application.

To report this activity, you need to prepare one document listing details of each test case, including test case name, test scripts, and test result (Passed or Failed).

This activity is also considered in grading for the presentation (see below).

d – Weekly report (5 points)

Prepare weekly reports for the last weeks of the project leading to the presentation date. Fill out the template with all information required. We expect that the weekly report includes the fine-grained divided tasks with responsibilities.

e – Project presentation (80 points)

Each team is required to present its project work in a **15-minute** presentation and up to **10 minutes** for Q&A. The main goal is to *sell* each team's work to the teaching staff and peers. With a few exceptions (permitted by the instructor), everyone is required to deliver at least 2-minute talk as a part of the team's presentation.

The content includes:

- Problem statement, product position statement (from the Vision document), users/market.
- Project management: team structure and responsibilities of team members.
- Software requirements: use-case model, non-functional requirements.
- Analysis and design: architecture and technologies used.
- Software testing: test environments, test plan, test results, and automated testing.
- Demo: demo a key scenario of the software.

As the presentation will be delivered up to **15 minutes**, you are advised to prepare about 15-20 slides.

Presentation grading. The presentation is graded using three components: **content (30%), delivery (30%), and demo (40%)**. The first component checks whether the presentation has all elements provided above and whether they are correct, logical and comprehensive (e.g., whether the problem statement is clearly stated). The delivery requirement checks how well the group delivers the presentation. It is based on the organization, transition, English, clarity, and persuasiveness of the presentation. And the demo will check how much the team has done and whether the software is actually working.

Submission

All you students must copy all documents to the directory named PA5-Group[Group ID] and compressed the whole directory to file PA5-Group[GroupId].zip/.rar
For example: PA5-Group01.zip
Due date for submission: 4/01/2025

General Grading Criteria

The assignment will be graded according to how well each team member and your team prepare the required documents using the limited information your team has at this time. Criteria include:
- English writing: easy to understand, clear, few errors
- Well formatted texts, diagrams, charts

- The test plan reflects the requirements and the overall project plan.
- Clear sets of test cases with detailed steps and necessary information included.
- Runnable test scripts.