Prince Mohammad Bin Fahd University
College of Computer Engineering and Science

Software Testing and Quality Assurance
Fall 2025
Course Project / 20 grades

The goal of the project is to implement and document complete testing scenarios based on white-box and black-box techniques. The project is a team work of **four** students.

Instructions:

- Download the TestingProject package from the blackboard.
- The package has three java classes for student grade evaluation.
- Implement **THREE** testing classes for each class using Junit. The testing classes should cover **ALL** methods in the three classes,
- Design and implement a driver (main method) to run/test the **calculateLetterGrade** method in class GradeCalculator using:
    - Equivalence partitioning black-box testing
    - Boundary value analysis black-box testing

The **deliverables** are:

1. A report that includes:
    a. The testing plan based on IEEE 829 standard
        - Objectives
        - Test items
        - Features to be Tested
        - Features not to be Tested
        - Approach
        - Item Pass/Fail Criteria
        - Test Deliverables
        - Testing Tasks
        - Environmental Needs

    - Responsibilities
    - Schedule
  b. Statement/code coverage report using JaCoCo tool.
  c. The Black-box testing cases.
  d. The output of the junit executions.
  e. The output of the driver execution.

2. The source code for all testing classes and the driver (.java files)

3. A presentation that summarizes your work (.ppt)

Notes

- Submit all deliverables in one compressed file (.zip)
- A ten minutes presentation is required from each team
- Deadline: 1-12-2025

Evaluation:

- The test pan and the structure of the technical report: 5 pts.
- Test cases, code and statement coverage report: 10 pts.
- Presentation and run: 5 pts.