Software Testing and Quality Assurance
Second Semester 2024/2025
Homework Assignment # 2
Deadline: 05 April 2025

1. Go to the source code and Download it:
   https://anonymous.4open.science/r/Junit5-HW-50D4/
2. Import the project
3. You Need to do the following tasks
   1. Write test classes for each class in the **main.najah.code**:
      ○ Calculator
      ○ Product
      ○ UserService
      ○ RecipeBook

   2. Each test class should:
      ○ Test both valid and invalid input
      ○ Use @DisplayName to make tests descriptive
      ○ Include at least one parameterized test
      ○ Include a timeout test
      ○ Try to use multiple assertions
   3. Create a test **suite** using @Suite that runs all test classes together.
   4. For CalculatorTest, demonstrate ordered test execution using @Order.
   5. **Lifecycle Hooks**
      ○ Use `@BeforeAll`, `@AfterAll`, `@BeforeEach`, and `@AfterEach` in at least one test class and print simple debug messages (e.g., "setup complete").
   6. Include one intentionally failing test and **disable** it with @Disabled, with a note on how to fix it.
   7. Use EclEmma (or equivalent) to measure your **test coverage**. Try to get above ~85% for each class.
   8. Enable parallel execution in JUnit 5 and apply `@Execution(ExecutionMode.CONCURRENT)` in one test class.

Finally: Create a branch on GitHub and commit your your answer. And send me the link (using the Moodle).
Don't try to submit anything after the deadline