

## SSVV 2024-2025

### Take-Home-B Exam Subject

400 XP (350XP implementation&testing&docs +50XP survey questions about the tasks)

**Maximum 5 students per team.**

#### Turn in:

- **In the day of the final exam, at 8.am**
  - **On Teams, under Exam-Take-Home-B assignment, submit (as a zip)**
    - (50XP) Document with your designed Test cases
    - (75XP) Java project with Version A and the testing classes (JUnit tests)
    - (100XP) Java project with Version B (after the bugs fix)
    - (75XP) Document with regression testing strategy and justification.
    - `One file containing information about the tasks (state the name of the team members)
    - (50XP) Questionnaire on the performed activities:  
<https://forms.gle/467LYB99WW3HCu8BA>
- Important:** Each student in the teams will complete the questionnaire.

### Take Home B - assignment

You are given a first version of a small Java program - **Version A** (the original implementation). Your task is to simulate a **regression testing process** and evaluate how a change in the software affects the existing behavior.

#### Task 1) **Design test cases, execute them (and find bugs)**

Design and implement test cases

- Create a test suite for Version A (before the change) using unit tests (JUnit) - the tests may or may not identify bugs.
- Record what test design techniques you used (black-box, white-box)

Find the bug and fix it

- Analyze the given program, find bugs, and fix them (create Version B of the code).
- Reflect on what parts of the behavior might be affected.

#### Task 2) **Run the test cases on both Versions (A and B)**

- Execute your test suite on both Version A and Version B.
- Evaluate whether the change introduces bugs or breaks existing functionality.

#### Task 3) **Perform regression test selection**

- Decide which tests from your original suite need to be re-executed.
- Justify your **regression test selection strategy**:
  - Why did you select those specific tests?