SSVV 2022-2023
C-Take Home Exam Subject
500 XP (150XP implementation + 300XP testing +50XP survey questions about the tasks)
Maximum 3 students per team.
Turn in:

- **In the day of the final exam, at 8.am**
- **On Teams, under Exam_TakeHome_C submit**
  - **Java project implementation**
  - **Java project testing (with JUnit tests for BBT, WBT, integration)**
  - **One file containing:**
    - **Black-box testing – test design**
    - **White-box testing – test design**
    - **Integration testing – test design**
  - **One file containing information about the tasks (state the name of the team members)**

Take Home C - assignment
Statement problem: An array of feelings are provided in different order: sad (-1), neutral (0), happy (1). Insert into the array happy feelings such that each *sad* feeling is between two happy feelings.

Example: Given array: [-1,-1,0,0,1,1,-1,1,0,-1,1,0,1,1,-1, 0,1,1]
New array: [1,-1,1,-1,1,0,0,1,1,-1,1,0,1,-1,1,0,1,1,-1,1,0,1,1]

Implement the following methods

1) FindSadFeeling = finding first sad position starting at position i given.
2) CheckNeighbours = check neighbours of a given position i given (if value on position i is -1 and has no happy feelings as neighbours)
3) InsertHappyFeelings before and after a given i position (value on position i is -1)
4) Solve the Statement problem using the implemented methods above, i.e. implementing the method BeHappy (as input the array given and as output the array changed).

Task 1) 150 XP - Implementation of the above mentioned methods.
Task 2) 300 XP - Testing

a) Black-box testing for the FindSadFeelings method (document on test case design using equivalence classes and boundary value analysis and JUnit implementation).
b) White-box testing for the CheckNeighbours method (document on test case design using paths coverage, decision/condition coverage, loop coverage) and JUnit implementation).
c) Integration testing for the BeHappy method (select the integration testing strategy and provide JUnit implementation + document on the integration strategy and the design test cases).

Task 3) 50 XP - Reflect on learning

Describe how did you solve the assignment as a team.

Description: What happened? When and where? Who else was involved? What did you do? What did other people do? What was the outcome?

Feelings: What were you feeling during the situation? What do you think other people were feeling about the situation? How do you feel about the situation now?

Evaluation: What went well? What didn't go well? What positive or negative things did you (or other people) contribute to the situation?

Analysis: Why did (or didn't) things go well? What theories or research can help you better understand the situation?

Conclusions: What did you learn from this situation? If this situation happened again, what would you do differently?

Action Plan: What skills do you need to develop to handle a situation like this better? How will you develop the skills you need?