SOFE 3980U
Software Quality
Winter 2021

Assignment-1: Choosing the right software process to build good-quality software, and ensuring quality using test automation (10 points)

Problem:

a) You have to develop a very simple gaming software in just 1 week. If you want, you may take some code (with proper reference to the source from where it is taken) from an existing game implementation to extend/improve the functionalities. To develop a good-quality software, you would like to follow a particular software engineering process or more than one process (waterfall, incremental, agile etc.) and choose an appropriate programming language. The goal is to release a good-quality software in 1 week. (6 points)

b) To validate that your software is a good-quality software, you have to write automated tests for the software that you have developed. You can either implement the automated testing framework by your own or use any existing available tool. For example, in Java you may use separate Java class test files which can be compiled and run automatically using the Windows command-line scripting or Linux shell scripting. Alternatively, you may use any existing tool which can be integrated with your software. For example, in Java you may use JUnit. (4 points)

Bonus: If you develop the automated testing framework/tool by your own and it will be able to log/save the results and display them in a graphical format, you will get a bonus of 3 points.

Deliverables:

All of the following items should be packaged in a zip folder.

- Working software code and test programs/tool code (including executables if any) (50% marks)

- A report explaining the reasons behind choosing a particular software process, description of functionalities of the software and its code, challenges faced during test automation and documenting detail instructions with snapshots how to use your software and test automation framework (with some sample test run) (50% marks)

Please submit the zip folder in Canvas.

Notes: Assignments have to be completed individually. So, please avoid any sort of plagiarism. Please submit your assignment deliverables to Canvas.

Deadline: February 11, 2021 11.59PM