OntarioTech
UNIVERSITY

SOFE 3980U
Software Quality
Winter 2021

Assignment-2: Static and Dynamic Analysis (10 points)

Problem:

a) One of the popular static analysis techniques is program slicing. Program slicing involves focusing on a particular subset of variables within a given program. You have to implement program slicing on your Assignment 1 implementation for at least five different variables or objects of the program.

b) One of the methods for dynamic analysis is instrumentation. Instrumentation adds measurement probes to the code to observe its execution. Instrumentation can be done on several levels. You have to implement an instrumentation technique (at any levels) on your Assignment 1 implementation and run the program to observe the execution time of at least five different parts of the program.

Deliverables:

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

- A folder containing all the code related to program slicing implementation and a folder containing all the code related to dynamic slicing implementation (50% marks)

- A report that contains the following: (1) explanation of the static analysis technique used with snapshots of the code how it is done with the results, (2) explanation of the dynamic analysis technique used with snapshots of the code how it is done with the results, and (3) Challenges and lessons learned (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: March 12 2021, 11.59PM