Software Integration, Validation and Verification
Second Midterm

The midterm must be turned in by Friday, May 3 as an answer to this assignment. It is to be done individually. If you have doubts, please contact any of the course instructors, we will be happy to assist.

1. Symbolic Execution is a technique created in 1975 for:
a) Executing program tests
b) Automatically generating tests
c) Compiling RUST programs

2. Symbolic Execution suffers from:
a) Path Explosion
b) Object Explosion
c) Test Explosion

3. Lazy Initialization helps Symbolic Execution by:
a) Allowing to symbolically execute object oriented programs
b) Reducing path explosion
c) Avoiding object explosion

4 .Consider the correct version of the program Inverse from the First Midterm Makeup. The path condition for the path that does not enter the while loop is:
a) `x0.length != y0.length`
b) `x0.length == y0.length && 0 < x0.length`
c) `x0.length == y0.length && !(0 < x0.length)`

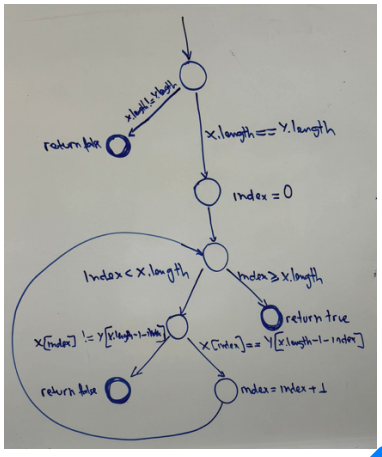
5. The BLISS technique is based on:
a) SMT solving
b) Theorem proving
c) SAT solving

6. If a testing criterion TC1 subsumes a testing criterion TC2, then
a) TC1 has better chances of detecting faults than TC2
b) TC2 has better chances of detecting faults than TC1
c) Subsumption is unrelated to fault detection

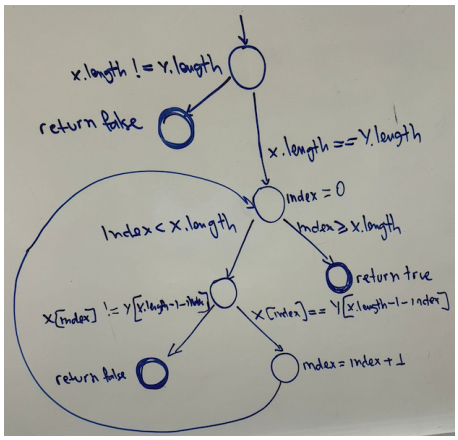
7. The “Subsumes” relation, defined as {<TC1, TC2> : TC1 and TC2 are testing criteria and TC1 subsumes TC2} is
a) An equivalence relation.
b) A partial ordering relation
c) A total ordering relation

8. The test generation tool EvoSuite uses:
a) A dynamic programming algorithm
b) A greedy algorithm
c) An evolutive algorithm

9. Which of the following control flow graphs corresponds to the correct version of the Inverse method from the midterm?
a)



b)



c)