

SOFTWARE TESTING AND QUALITY METRICS LAB

Course code: 18IS7DLSTL

L: P: T: S: 0: 2: 1: 0

Exam Hours: 03

Credits: 02

CIE Marks: 50

SEE Marks: 50

Prog.	Program Description
1. 1.6	Design and develop a program in a language of your choice to solve the <u>triangle problem</u> defined as follows: Accept three integers which are supposed to be the three sides of a triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Assume that the upper limit for the size of any side is 10. Derive test cases for your program based on <u>boundary-value analysis</u> , execute the test cases and discuss the results.
2. 2.4	Design, develop, code and run the program in any suitable language to implement the <u>NextDate function</u> . Analyze it from the perspective of <u>boundary value testing</u> , derive different test cases, execute these test cases and discuss the test results.
3. 3.2	Design, develop, code and run the program in any suitable language to solve the <u>commission problem</u> . Analyze it from the perspective of <u>boundary-value analysis</u> , derive different test cases, execute these test cases and discuss the test results.
4.	Design, develop, code and run the program in any suitable language to implement the <u>NextDate function</u> . Analyze it from the perspective of <u>equivalence class testing</u> , derive different test cases, execute these test cases and discuss the test results.
5.	Design, develop, code and run the program in any suitable language to solve the <u>commission problem</u> . Analyze it from the perspective of <u>equivalence class testing</u> , derive different test cases, execute these test cases and discuss the test results.
6. ✓	Design and develop a program in a language of your choice to solve the <u>triangle problem</u> defined as follows: Accept three integers which are supposed to be the three sides of triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Derive test cases for your program based on <u>decision-table approach</u> , execute the test cases and discuss the results.
7. ✓	Design, develop, code and run the program in any suitable language to solve the <u>commission problem</u> . Analyze it from the perspective of <u>decision table-based testing</u> , derive different test cases, execute these test cases and discuss the test results.
8.	Design, develop, code and run the program in any suitable language to solve the <u>commission problem</u> . Analyze it from the perspective of <u>dataflow testing</u> , derive different test cases, execute these test cases and discuss the test results.
9. ✓	Design, develop, code and run the program in any suitable language to implement the <u>binary search algorithm</u> . Determine the <u>basis paths</u> and using them derive different test cases, execute these test cases and discuss the test results.
10. ✓	Design, develop, code and run the program in any suitable language to implement an <u>absolute letter grading procedure</u> , making suitable assumptions. Determine the <u>basis paths</u> and using them derive different test cases, execute these test cases and discuss the test results.