- 7. Write a C++ program to read two lists of names and then match the names in the two lists using Cosequential Match based on a single loop. Output the names common to both the lists.
- 8. Write a C++ program to read k Lists of names and merge them using k-way merge algorithm with k = 8.
- Write a C++ program to implement B-Tree for a given set of integers and its operations insert () and search (). Display the tree.
- Write a C++ program to implement B+ tree for a given set of integers and its operations insert (), and search (). Display the tree.
- 11. Write a C++ program to store and retrieve student data from file using hashing. Use any collision resolution technique.
- 12. Write a C++ program to reclaim the free space resulting from the deletion of records using linked lists.

Note: In the examination each student picks one question from the lot of all 12 questions.

## SOFTWARE TESTING LABORATORY

Subject Code: 10ISL68 I.A. Marks : 25 Hours/Week : 03 Exam Hours: 03 Total Hours : 42 Exam Marks: 50

- Design and develop a program in a language of your choice to solve the triangle problem 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. Derive test cases for your program based on decision-table approach, execute the test cases and discuss the results.
- 2. Design and develop a program in a language of your choice to solve the triangle problem 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 boundary-value analysis, execute the test cases and discuss the results.

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- 3. Design and develop a program in a language of your choice to solve the triangle problem 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 equivalence class partitioning, execute the test cases and discuss the results.
- Design, develop, code and run the program in any suitable language to solve the commission problem. Analyze it from the perspective of dataflow testing, derive different test cases, execute these test cases and discuss the test results.
- Design, develop, code and run the program in any suitable language
  to solve the commission problem. Analyze it from the perspective of
  boundary value testing, derive different test cases, execute these test
  cases and discuss the test results.
- Design, develop, code and run the program in any suitable language
  to solve the commission problem. Analyze it from the perspective of
  equivalence class testing, derive different test cases, execute these
  test cases and discuss the test results.
- Design, develop, code and run the program in any suitable language
  to solve the commission problem. Analyze it from the perspective of
  decision table-based testing, derive different test cases, execute
  these test cases and discuss the test results.
- Design, develop, code and run the program in any suitable language to implement the binary search algorithm. Determine the basis paths and using them derive different test cases, execute these test cases and discuss the test results.
- Design, develop, code and run the program in any suitable language to implement the quicksort algorithm. Determine the basis paths 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 absolute letter grading procedure, making suitable assumptions. Determine the basis paths and using them derive different test cases, execute these test cases and discuss the test results.
- 11. Design, develop, code and run the program in any suitable language to implement the NextDate function. Analyze it from the perspective of boundary value testing, derive different test cases, execute these test cases and discuss the test results.
- 12. Design, develop, code and run the program in any suitable language to implement the NextDate function. Analyze it from the perspective of equivalence class value testing, derive different test cases, execute these test cases and discuss the test results.

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