

# 150703: Design and Analysis of Algorithm

## Lab Manual

Sr. No	Description
01	Perform following sorting operation and measure the execution time for sufficient large input: <ul style="list-style-type: none"><li>- Selection Sort</li><li>- Bubble Sort</li><li>- Insertion Sort</li></ul>
02	Perform following sorting operation and measure the execution time for sufficient large input: <ul style="list-style-type: none"><li>- Merge Sort</li><li>- Quick Sort</li><li>- Heap Sort</li></ul>
03	Implement Binary Search Tree
04	Solve Given Problems using Greedy Strategy: <ul style="list-style-type: none"><li>- Make a change problem</li><li>- Activity Selection Problem</li><li>- 0/1 Knapsack Problem</li><li>- Job Scheduling Problem</li></ul>
05	Solve Given Problems using Greedy Strategy: <ul style="list-style-type: none"><li>- TSP Problem using Nearest Neighborhood Algorithm</li><li>- MST using Prim's Algorithm</li><li>- MST using Krushkal's Algorithm</li></ul>
06	Solve Given Problems Using Dynamic Programming: <ul style="list-style-type: none"><li>- Make a change problem</li><li>- 0/1 Knapsack Problem</li></ul>
07	Solve Given Problems Using Dynamic Programming: <ul style="list-style-type: none"><li>- Matrix Chain Multiplication</li></ul>
08	Solve Given Problems Using Dynamic Programming: <ul style="list-style-type: none"><li>- Longest Common Subsequence (LCS)</li><li>- Shortest Common Supper sequence (SCS)</li></ul>
09	Solve Given Problems Using Dynamic Programming: <ul style="list-style-type: none"><li>- String Editing</li></ul>
10	Solve following problems using Backtracking <ul style="list-style-type: none"><li>- 4-Queen Problem</li><li>- 8-Queen Problem</li></ul>