

Government College of Engineering and Leather Technology

Design and Analysis of Algorithm Laboratory

LAB Assignment

2022

(Write down the Problem Statement, Algorithm, Code and Output for each program)

1. Implement a program in C to search an element from a sorted array using binary search.
2. Implement a program in C to sort an array using Quick Sort.
3. Implement a program in C to sort an array using Merge Sort.
4. Implement a program in C to find the maximum and minimum element from an array of integer using Divide and Conquer approach.
5. Implement a program in C to solve Knapsack problem using Greedy method.
6. Implement a program in C to solve 0/1 Knapsack problem.
7. Implement a program in C to solve the Job sequencing with deadline problem using Greedy method.
8. Implement a program in C to find the minimum cost spanning tree using Prim's algorithm.
9. Implement a program in C to find the minimum cost spanning tree using Krushkal's algorithm.
10. Implement a program in C to find the solutions of N-Queens problem using backtracking.
11. Implement a program in C to find the solutions of m-coloring problem using backtracking.
12. Implement a program in C to find the Hamiltonian cycle from a given graph using backtracking.
13. Implement a program in C to find the order of matrix chain multiplication with minimum cost using dynamic programming.
14. Implement a program in C to find the all pairs shortest path using Floyd's algorithm.
15. Implement a program in C to find single source shortest path using Bellman Ford algorithm.
16. Implement a program in C to find the BFS traversal sequence from a given graph.
17. Implement a program in C to find the DFS traversal from a given graph.
18. Implement a program in C to solve the 15-puzzle problem using Branch and Bound technique.