

**DEPARTMENT
OF
COMPUTER SCIENCE AND ENGINEERING**

RECORD

FOR

**ANALYSIS AND DESIGN OF ALGORITHMS
LABORATORY**

BCSL404

NAME:

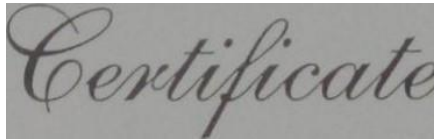
USN:

STUDENT'S SIGNATURE

COURSE COORDINATOR SIGNATURE

SRI VENKATESHWARA COLLEGE OF ENGINEERING

(Affiliated to VTU, Belgaum & Approved by AICTE. New Delhi)
An ISO 9001 :2008 Certified Institution
Vidyanagar, Bengaluru International Airport Road. Bengaluru - 562 157



This is to certify that Mr./Miss.....bearing
USN.....has satisfactorily completed the course of Experiments
in **Analysis And Design Of Algorithms Laboratory – BCSL404** as prescribed by
the Visvesvaraya Technological University at the college during Academic Year:
2023-24.

Date

Signature of Course Teacher

Signature of Head of the Department

[Dr. HEMA M S]

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1.		Design and implement C/C++ Program to find Minimum Cost Spanning Tree of a given connected undirected graph using Kruskal's algorithm	
2.		Design and implement C/C++ Program to find Minimum Cost Spanning Tree of a given connected undirected graph using Prim's algorithm	
3.		a. Design and implement C/C++ Program to solve All-Pairs Shortest Paths problem using Floyd's algorithm. b. Design and implement C/C++ Program to find the transitive closure using Warshal's algorithm.	
4.		Design and implement C/C++ Program to find shortest paths from a given vertex in a weighted connected graph to other vertices using Dijkstra's algorithm.	
5.		Design and implement C/C++ Program to obtain the Topological ordering of vertices in a given digraph	
6.		Design and implement C/C++ Program to solve 0/1 Knapsack problem using Dynamic Programming method	
7.		Design and implement C/C++ Program to solve discrete Knapsack and continuous Knapsack problems using greedy approximation method	
8.		Design and implement C/C++ Program to find a subset of a given set $S = \{s_1, s_2, \dots, s_n\}$ of n positive integers whose sum is equal to a given positive integer d .	
9.		Design and implement C/C++ Program to sort a given set of n integer elements using Selection Sort method and compute its time complexity. Run the program for varied values of $n > 5000$ and record the time taken to sort. Plot a graph of the time taken versus n . The elements can be read from a file or can be generated using the random number generator.	
10.		Design and implement C/C++ Program to sort a given set of n integer elements using Quick Sort method and compute its time complexity. Run the program for varied values of $n > 5000$ and record the time taken to sort. Plot a graph of the time taken versus n . The elements can be read from a file or can be generated using the random number generator.	

11.		Design and implement C/C++ Program to sort a given set of n integer elements using Merge Sort method and compute its time complexity. Run the program for varied values of n>5000, and record the time taken to sort. Plot a graph of the time taken versus n. The elements can be read from a file or can be generated using the random number generator	
12.		Design and implement C/C++ Program for N Queen's problem using Backtracking.	