

Laboratory Manual



Department of Computer Sciences and Applications.

BCA

First Year

Semester - II

Lab Course based on Data Structure (DS) Using C++

Course Code: XCA211

2022-



Guidelines

Laboratory rules

1. Attendance is required for all lab classes. Students who do not attend lab will not receive credit.
2. Ensure that you are aware of the test and its procedure before each lab class. **You will NOT be allowed to attend the class if you are not prepared!**
3. Personal safety is top priority. Do not use equipment that is not assigned to you.
4. All accidents must be reported to your instructor or laboratory supervisor.
5. The surroundings near the equipment must be cleaned before leaving each lab class.
6. Ensure that outputs are checked and marked by your TA for each lab period.
7. Bags & eatables are not allowed in the lab.



STUDENT'S DETAILS

Name of Student

Academic

Programme

Class/ Roll

PRN No.



Certificate

This is to certify that

Mr. / Miss _____

Roll No _____ PRN No. _____

of class _____ has satisfactorily / unsatisfactorily
completed the Lab Course _____ in the school
during the academic year _____.

Course Teacher

Head of Department

Dean Academics

Table of contents

Instruction: Draw Flow-Chart and write algorithms wherever is needed in the program.				
Sr. No.	Title of Experiment	Page No	Date	Remark
Group A				
1	Write a program to implement linear search to find an item in the list.			
2	Write a program to implement binary search to find an element in an ordered list.			
3	Write a program to sort given elements using a bubble sort algorithm.			
4	Write a program to sort given elements using a insertion sort algorithm.			
5	Write a program to sort given elements using a merge sort algorithm.			
6	Write a program to sort given elements using a quick sort algorithm.			
7	Write a program to implement various set operations on a given set of elements.			
Group B				
8	Write a program to implement a stack and perform various operations like push, pop, display.			
9	Write a program to implement a queue and perform various operations on the queue.			
10	Write a program to implement a linked list and perform various operations on the linked list.			
11	Write a program to Convert a Decimal Number to Binary Number using Stacks.			
12	Write a program of STACK implementation using Linked List.			
Group C				
13	Write a program to construct a binary tree, and perform different traversal operations on the same.			
14	Write recursive programs to implement factorial, Fibonacci series or Tower of Hanoi.			
15	Implement Prim's and Kruskal Algorithm.			

