

NAME OF THE LABORATORY: DATA STRUCTURES

PREREQUISITES

1. Course on “Programming for problem solving”.

OBJECTIVES:

1. It covers various concepts of C programming language
2. It introduces searching and sorting algorithms
3. It provides an understanding of data structures such as stacks and queues.

LIST OF EXPERIMENTS:

1. Write a program that uses functions to perform the following operations on singly linked list.: i) Creation ii) Insertion iii) Deletion iv) Traversal
2. Write a program that uses functions to perform the following operations on doubly linked list.: i) Creation ii) Insertion iii) Deletion iv) Traversal
3. Write a program that uses functions to perform the following operations on circular linked list.: i) Creation ii) Insertion iii) Deletion iv) Traversal
4. Write a program that implement stack (its operations) using i) Arrays ii) Pointers
5. Write a program that implement Queue (its operations) using i) Arrays ii) Pointers
6. Write a program that implements the following sorting methods to sort a given list of integers in ascending order i) Bubble sort ii) Selection sort iii) Insertion sort
7. Write a program that use both recursive and non recursive functions to perform the following searching operations for a Key value in a given list of integers: i) Linear search ii) Binary search
8. Write a program to implement the tree traversal methods.
9. Write a program to implement the graph traversal methods.