# DATA STRUCTURES LAB

# Lis of Experiments

1. Develop following sorting algorithms using arrays.
   1. Quick sort
   2. Merge Sort
2. Develop a program to process all single linked operations.
   1. Creation
   2. Insertion
   3. Deletion
   4. Display
3. Develop a program to process all double linked operations.
   1. Creation
   2. Insertion
   3. Deletion
   4. Display
4. Construct program to perform the following operation.
   1. Search an element in the list
   2. Display all the list values in reverse order.
5. Implement the following operation on single circular linked list.
   1. Create
   2. Insert
   3. Delete
   4. Display.
6. Implement stack operations using single linked list.
7. Construct an algorithm to convert infix expression to postfix expression.
8. Develop a program to perform operations on queue using arrays and linked list.
9. Construct binary search tree and display the tree data using all the three tree traversal techniques.
10. Develop a program to create, display functions for AVL tree Red black tree.
11. Construct a graph with four vertices and five edges then display the graph data using BFS and DFS algorithms.
12. Develop a program to find a pattern from a given string using Boyer Moore and Knuth Moris Pratt (KMP) algorithms.
13. Develop a program to sort list of elements using heap sort.