# DATA STRUCTURES LAB

# Lis of Experiments

|  |  |  |
| --- | --- | --- |
| **SNO** | **Date of Execution** | **Experiment Description** |
| 1 |  | Develop following sorting algorithms using arrays.  Quick sort  Merge Sort |
| 2 |  | Develop a program to process all single linked operations.  Creation  Insertion  Deletion  Display |
| 3 |  | Develop a program to process all double linked operations.  Creation  Insertion  Deletion  Display |
| 4 | 31/10/2023 | Construct program to perform the following operation.  Search an element in the list  Display all the list values in reverse order. |
| 5 | 31/10/2023 | Implement the following operation on single circular linked list.  Create  Insert  Delete  Display. |
| 6 | 7/11/2023 | 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. |