Paper Code(s): CIC-255	L	P	C
Paper: Data Structures Lab	-	2	1

1. Implement sparse matrix using array. Description of program:
   a. Read a 2D array from the user.
   b. Store it in the sparse matrix form, use array of structures.
   c. Print the final array.
2. Create a linked list with nodes having information about a student and perform
   a. Insert a new node at specified position.
   b. Delete of a node with the roll number of student specified.
   c. Reversal of that linked list.
3. Create doubly linked list with nodes having information about an employee and perform Insertion at front of doubly linked list and perform deletion at end of that doubly linked list.
4. Create circular linked list having information about a college and perform Insertion at front perform Deletion at end.
5. Implement two stacks in a using single array.
6. Create a stack and perform Push, Pop, Peek and Traverse operations on the stack using Linked list.
7. Create a Linear Queue using Linked List and implement different operations such as Insert, Delete, and Display the queue elements.
8. Implement Experiment-2 using liked list.
9. Create a Binary Tree and perform Tree traversals (Preorder, Postorder, Inorder) using the concept of recursion.
10. Implement insertion, deletion and traversals (inorder, preorder and postorder) on binary search tree with the information in the tree about the details of an automobile (type, company, year of make).
11. Implement Selection Sort, Bubble Sort, Insertion sort, Merge sort, Quick sort, and Heap Sort using array as a data structure.
12. Perform Linear Search and Binary Search on an array. Description of programs:
    a. Read an array of type integer.
    b. Input element from user for searching.
    c. Search the element by passing the array to a function and then returning the position of the element from the function else return -1 if the element is not found.
    d. Display the position where the element has been found.
13. Implement the searching using hashing method.
14. Create a graph and perform DFS and BFS traversals.