Week-9

1. Write a menu driven program to perform the following on a doubly linked list
   a) Insert an element at the rear end of the list
   b) Delete an element from the rear end of the list
   c) Insert an element at a given position of the list
   d) Delete an element from a given position of the list
   e) Insert an element after another element
   f) Insert an element before another element
   g) Print the list

2. Write a program to add two polynomials using doubly linked list.

Additional Questions

1. Write a program to perform insertion and deletion operation in circular doubly linked list.

Week-10

1. Write user defined functions to perform the following operations on binary trees:
   a) create a binary tree
   b) In order traversal (recursive)
   c) Post order traversal (recursive)
   d) Preorder traversal (recursive)
   e) Count the number of leaf nodes in a binary tree

2. Write a program to perform the following:
   a) Print the parent of the given element
   b) Print the depth of a tree
   c) Print the ancestors of a given node

3. Write a program to construct and search for a given element in a binary search tree.

Additional Questions:

1). Write a program to implement level order traversal on binary search tree
2). Write a program to insert and delete an element in a binary search tree.
3). Write a program to search for a given element using Depth first search traversal.

Week-11

1. Linear Search and Binary searching
2. Sorting: Bubble, Quick, Selection & Insertion
3. Represent the graph using adjacency list and adjacency matrix
4. Heapsort and mergesort

Additional Questions:

1). Write a program to perform BFS and DFS in a given Graph
2). Write a program to construct expression tree from the given expression. (infix, prefix, postfix)