

## DSA Lab Cycle 3

1	Create a Binary tree using arrays and print the level order traversal and height of the tree. Implement as a menu driven program.
2	Implement a Binary search tree using linked list and its traversal operations as a menu driven program.
3	Implement a Binary search tree and perform the operations insert, delete, sort, and print the no of leaf nodes as a menu driven program.
4	Implement Priority Queues using heap as a menu driven program.. Create a minheap and delete the ith indexed element. Also find the k <sup>th</sup> smallest element in min-heap.
5	Implement insertion sort algorithm.
6	Implement selection sort algorithm.
7	Implement quick sort algorithm.
8	Implement merge sort algorithm.
9	Implement heap sort algorithm.
10	Implement a graph data structure that can represent users in a social network as nodes and friendships as edges. Each user should have a unique identifier.
11	Count simple paths for a given graph G has simple path from source S to destination D? Assume the graph is represented using the adjacency matrix.
12	Implement the graph traversal algorithm BFS.
13	Implement the graph traversal algorithm DFS.
14	Implement hashtable using chaining method.
15	Implement hashtable using linear probing method.