Data Structures, 2016
Lab Assignment #6

1. Create a ***binary tree*** of characters. Write a program to traverse the nodes of binary tree in *level order* and *depth order* traversals. In depth order traversals, implement inorder, preorder and postorder traversal methods. Analyze the time complexities.

2. Create an ADT ***BST (Binary Search Tree)*** of integers. The ADT ***BST*** is specified by the following operations:
   a) Create a BST.
   b) Find the left, right and parent of a given node.
   c) Search a node.
   d) Insert a node
   e) Delete a node.
   f) Find the maximum and minimum number in BST.
   g) Traverse the nodes.

Implement this ADT ***BST*** using the data structure "Linked List" with dynamic memory allocation. Write a menu driven program for users to operate on ***BST.*** Analyse the time complexities.

3. Create and implement the ***Priority Queue*** ADT and its operations using heap binary tree. Implement ***heap sort*** algorithm also.