Dt: 15th June 2021

Assignments (Lab 9)

NB: This paragraph is common for all the questions. The programs should work for any value of N (as high it may be). What is the complexity of the algorithms? Please state the reason with a proper explanation [Write on a white paper and submit the scan copy with the assignment PDF file]. Each program should be run for at least TWO test cases. If you are assigning any memory through malloc() function, remember to free() up that memory at the end of the program.

1. Create a doubly Linked List (Two-way Linked List) from the Calander month names (January, February, March.....December). Convert this to it's corresponding balanced Binary Search Tree (BST). Perform the In-order traversal.

2. Create a Binary Search Tree (BST) from random N numbers. N should be taken as input from the user. Using the same N numbers, create the corresponding AVL tree. Show the height difference between both these trees (BST vs AVL).