

CS 201 DATA STRUCTURES
ASSIGNMENT 5
SECTION A&B
Fall 2017

DUE: Nov 17, 2017

NOTE: Late submissions will not be accepted

TO SUBMIT: Documented and well written structured code in C++ on slate. Undocumented code will be assigned a zero.

PROBLEM 1

Implement the class template AVLTree with following member functions (These functions must be iterative). You can assume that AVLTree will only store the unique data items

bool Insert(T d) //insert d in AVL, return true if d is inserted in the BST and returns false if d is already present.

AVLnode * Search(T d)//return the address of AVLnode if search is successful and nullptr otherwise.

bool Remove(T d)// delete the data item d and return true. Return false if d is not present in AVLTree

constructor of AVLTree

destructor of AVLTree

You can also implement other utility functions like getHeight() in the class AVLTree

Implement the driver function to test all functions of AVLTree

VERY IMPORTANT

- Academic integrity is expected of all the students. Plagiarism or cheating in any assessment will result in negative marking or an **F** grade in the course, and possibly more severe penalties.