COSC2436 hw5: AVL tree

1. Introduction

In this homework, you are going to manipulate an AVL tree. There will be three functions that you have to design: Insert, Remove, and print.

2. Input files

- This file cannot be empty.
- You can safely consider that all the inputs are positive integers in the correct format.
- While reading the input, \n and \r should be removed before processing the string.
- Each line is going to include a command
- Insert(n) will add n to the AVL
- Remove(n) will remove n from the AVL.
- There shouldn't be a duplicated number in the tree; you should not insert a number if it already exists.

3. Output:

Print each level of a tree from top to bottom; numbers will be separated by " "

For instance: after inserting 4,3,2,5,6

3

2 5

4 6

4. Requirements

Homework is individual. Your homework will be automatically screened for code plagiarism against code from other students and code from external sources. Code that is copied from another student (for instance, renaming variables, changing for and while loops, changing indentation, etc. will be treated as copy) will be detected and result in a" 0" in this homework. The limit is 50% similarity.

5. Turn in your homework

Homework 5 needs to be turned in to our Linux server; follow the link here https://rizk.netlify.app/courses/cosc2430/2_resources/

Make sure to create a folder under your root directory, name it "hw5" (case sensitive), and copy all your .cpp and .h file to this folder, "ArgumentManager.h" need to be included as well.

PS: This document may have typos; if you think something is illogical, please email TAs for confirmation.