

DATA STRUCTURES

UG1

[DEADLINE MAY 20, 2020: 11.59 PM]

ASSIGNMENTS

CODE: assign_tree

INSTRUCTIONS:

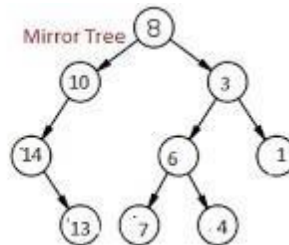
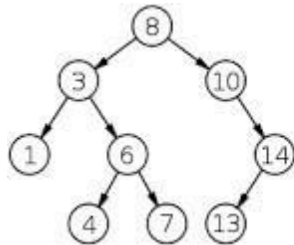
[Total Marks: 10]

- Read all assignments and each problem has to be answered in the same c file.
- Create a .c file following the file name convention: `abc-assign_tree.c`
Where `abc` is your roll number and `assign_tree` is the assignment code

PROBLEMS:

1) [Marks: 3.5 marks]

Construct a mirror tree for the following binary tree



Use linked list implementation

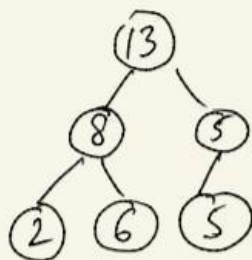
2) [Marks: 3.5 marks]

Write a function for the following property in a binary tree

Property: The node value is equal to the sum of values of left and right child If the value is correct, print 1 else 0.

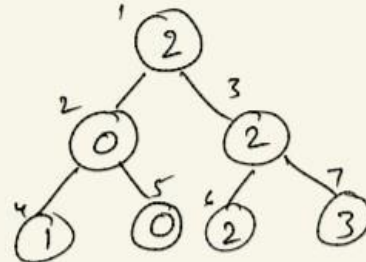
Enter the two given examples and check for them.

i)



Here each node is sum of left and right child

ii)



Here node 2 and 3 violates the condition

3) [Marks: 3 marks]

WAP to create a level-order tree for the given input and do the following operations:

- 1) List Preorder, Inorder, Postorder traversal and draw the level-order tree for each
- 2) Find the level of any given node
- 3) Insertion, deletion of any given element

For example, the level-order tree of given input array of elements 1, 2,

3, 4, 5 is

