

LE - 6

Planting more trees!

Introduction:

This exercise is a hands-on component for the concepts acquired in the lecture on trees. This introduces you to the Abstraction concept and how a data structure and its operations can be created according to the requirements.

Consecutive Parent-Child numbers

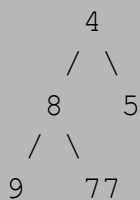
You are given a binary tree with a root node. You have to find out the number of parent-child relationships which are consecutive numbers in the tree such that $parent = child - 1$. Write your implementation for the given `consecutiveNodes(root)` function.

Input: the root node of the binary tree.

Output: return a single integer value representing the number of such parent-child relationships.

Example:

Input:



Output: 2

Explanation: There are only 2 pairs of parent-child which are consecutive numbers. The pairs are (4, 5) and (8, 9)

Reverse Level Order Traversal

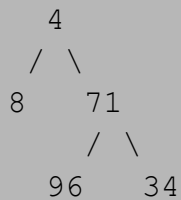
Given the root of a Binary tree, return the Reverse Level Order Traversal of the tree i.e., starting from bottommost level, traverse from left to right nodes and move up till you reach the root. Write your implementation of the given `reverseLevelOrder(root)` function.

Input: the root of the binary tree.

Output: return a **list** with the node values as per the reverse level order traversal.

Example:

Input:



Output: [96, 34, 8, 71, 4]

Explanation:

Level 3 -> 96, 34

Level 2 -> 8, 71

Level 1 -> 4

The overall reverse level order traversal is [96, 34, 8, 71, 4]

Rubric:

Your code will be tested with provided test cases.

Location of the code:

The code would be provided at

<https://colab.research.google.com/drive/1hqkMj1IfczwZuGbjZjH-VUPonFpoX6H3?usp=sharing>

What to do when done:

Once you have completed the exercise, you should upload it to the codePost. Please ensure the following while submitting:

- Once satisfied with your code, you should download the file as a python script (.py file),
- by going to **File > Download > Download .py**
- The name of the file should be LE6.py
- Upload the python script file to codePost under the LE-6 assignment.
- You can run the test cases on your script up to a limit of 50 times.
- Once satisfied with the test runs, complete your submission.