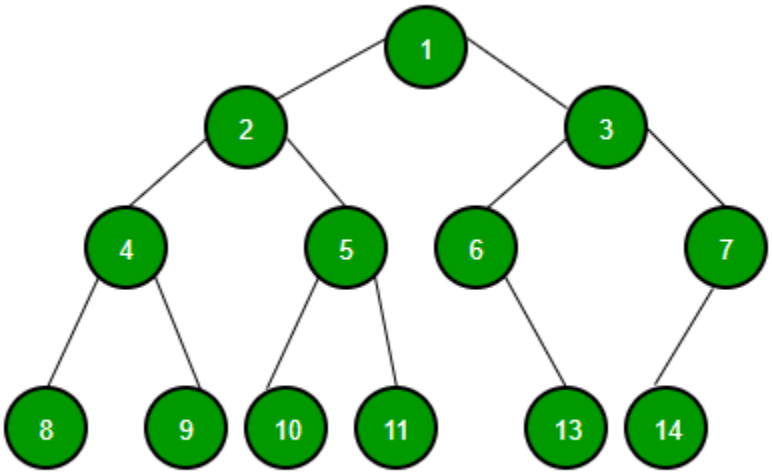
Assignment 6: Trees

Instructions:-

1. **You need to upload a pdf file for this assignment**
2. **Format:- Q1 code, the screenshot of Q1 output, Q2 code, Q2 screenshot of output, and so on in the sequence.**
3. **File Naming convention:- ID_Lab06.pdf**
    a. **Eg:- 202011002_Lab06.pdf**



1. Create a binary tree as shown in the above figure.

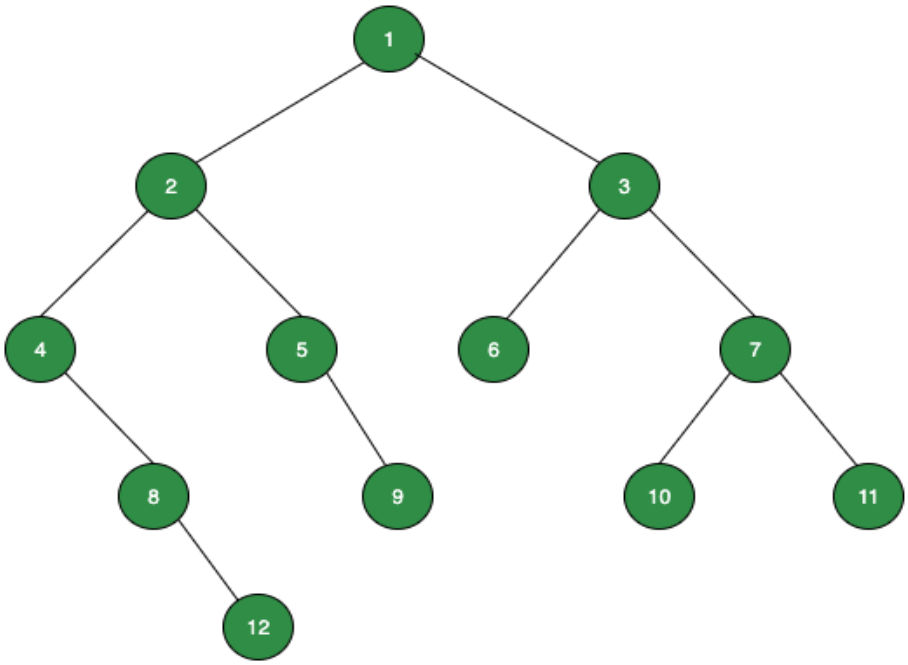
2. Print In-order traversal of the above tree
    a. Output: 8 4 9 2 10 5 11 1 6 13 3 14 7

3. Print Pre-order traversal of the above tree
    a. Output: 1 2 4 8 9 5 10 11 3 6 13 7 14

4. Print Post-order traversal of the above tree
    a. Output: 8 9 4 10 11 5 2 13 6 14 7 3 1

5. Sum of leaf nodes at each horizontal level in a binary tree
    a. You can use the Java Collection or C++ STL for this question.

Example: Consider the following tree



Output:
0
0
6
30
12
Explanation:
Level 1: No leaf node, so sum = 0
Level 2: No leaf node, so sum = 0
Level 3: One leaf node: 6, so sum = 6
Level 4: Three leaf nodes: 9, 10, 11, so sum = 30
Level 5: One leaf node: 12, so sum = 12