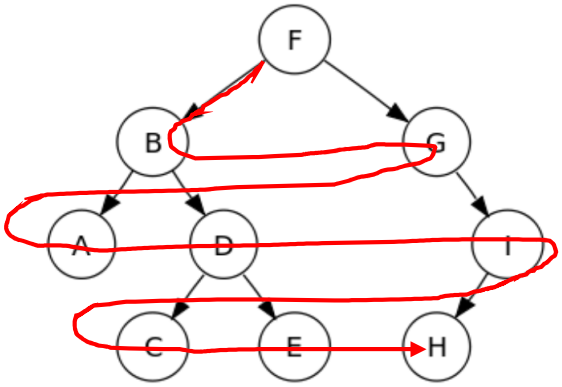
# Lab 3

## Problem Description:

Write a program that takes a binary tree as an input, followed by a node name, and an integer distance k. The program should print level order traversal for a given binary tree followed by node(s) at distance k on the same line. The node(s) should be printed in the level order traversal.




**Level Order**
Level order traversal (or breadth first traversal) of the input tree on the left is
F B G A D I C E H

**Nodes at distance k**
Nodes at distance 2 from node D, are A and F; In level order traversal, they should be ordered F, A

**Final Output**
F B G A D I C E H F A

## Input:

First line of the input is a list containing tree nodes that you put in parentheses. The next line is the node name, and the last line is an integer distance k which will not exceed the size of the given tree.

## Output:

Print level order traversal for the input tree and also print node(s) at distance k from a given node name.

| SR | Input | Output |
|---|---|---|
| 1 | (F (B (A) (D (C) (E))) (G () (I (H))))<br>D<br>2 | F B G A D I C E H F A |
| 2 | (A (B (D) (E (F) (G))) (C))<br>F<br>4 | A B C D E F G C |
| 3 | (8 (3 (13 () 7) ()) (10 (1 14 ()) (6 4 ())))<br>10<br>1 | 8 3 10 13 1 6 7 14 4 8 1 6 |