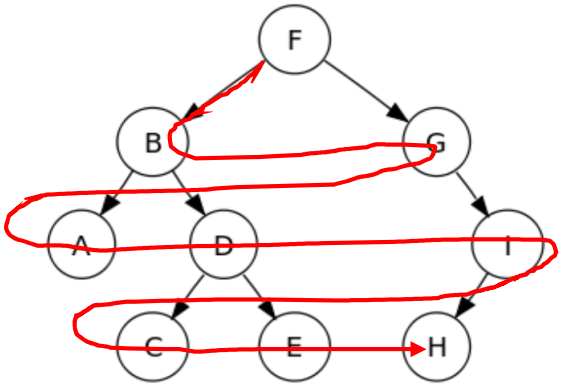
Lab 3

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)))) D 2	F B G A D I C E H F A
2	(A (B D (E F G)) (C)) F 4	A B C D E F G C
3	(8 (3 (13 () 7) ()) (10 (1 14 ()) (6 4 ())) 10 1	8 3 10 13 1 6 7 14 4 8 1 6