Quiz

It's quiz time! Test yourself by solving these questions about binary trees.

1 What is the total number of edges from a particular node to its deepest descendant in a tree?

- A) The depth of that particular node
- B) The height of that particular node
- C) The depth of the tree
- D) The height of the tree

2 Fill in the blank: A binary tree in which every node has either 0 or 2 children is called _____.

- A) a binary search tree
- B) a complete binary tree

C) a full binary tree

D) a balanced binary tree

3 The Level Order Traversal is a type of depth-first traversal.

A) True

B) False

4 What is the output of the following code?

```
tree = BinaryTree(12)
tree.root.left = Node(32)
tree.root.right = Node(37)
tree.root.left.left = Node(24)
tree.root.left.right = Node(5)
tree.root.right.left = Node(100)
tree.root.right.right = Node(75)

print(tree.print_tree("postorder"))
```

A) 5-12-24-32-37-75-100

B) 12-32-24-5-37-100-75-

C) 24-5-100-75-32-37-12-

D) 24-5-32-100-75-37-12-

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What is the time complexity of the depth-first traversals of a tree containing n nodes?

A) $O(n)$

B) $O(logn)$

C) $O(nlogn)$

D) $O(n^2)$

CHECK ANSWERS