Python IV – Lesson 30

Date: Jan 4, 2022

Agenda

- ► Leetcode 111
- ► CCC questions (2012 J5, 2015 J4)
- ► DFS

Proverbs 11:8

- "The righteous person is rescued from trouble, and it falls on the wicked instead."

CCC questions

Introduction:

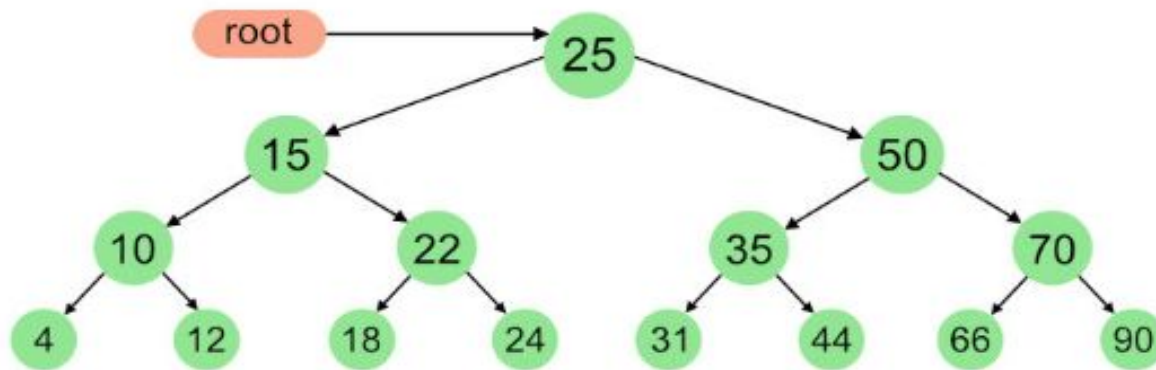https://cemc.uwaterloo.ca/contests/computing/details.html

Past contests:

https://www.cemc.uwaterloo.ca/contests/past_contests.html

DFS

Depth First Search

We will be using recursion to keep track of all the previous (parent) nodes while traversing.
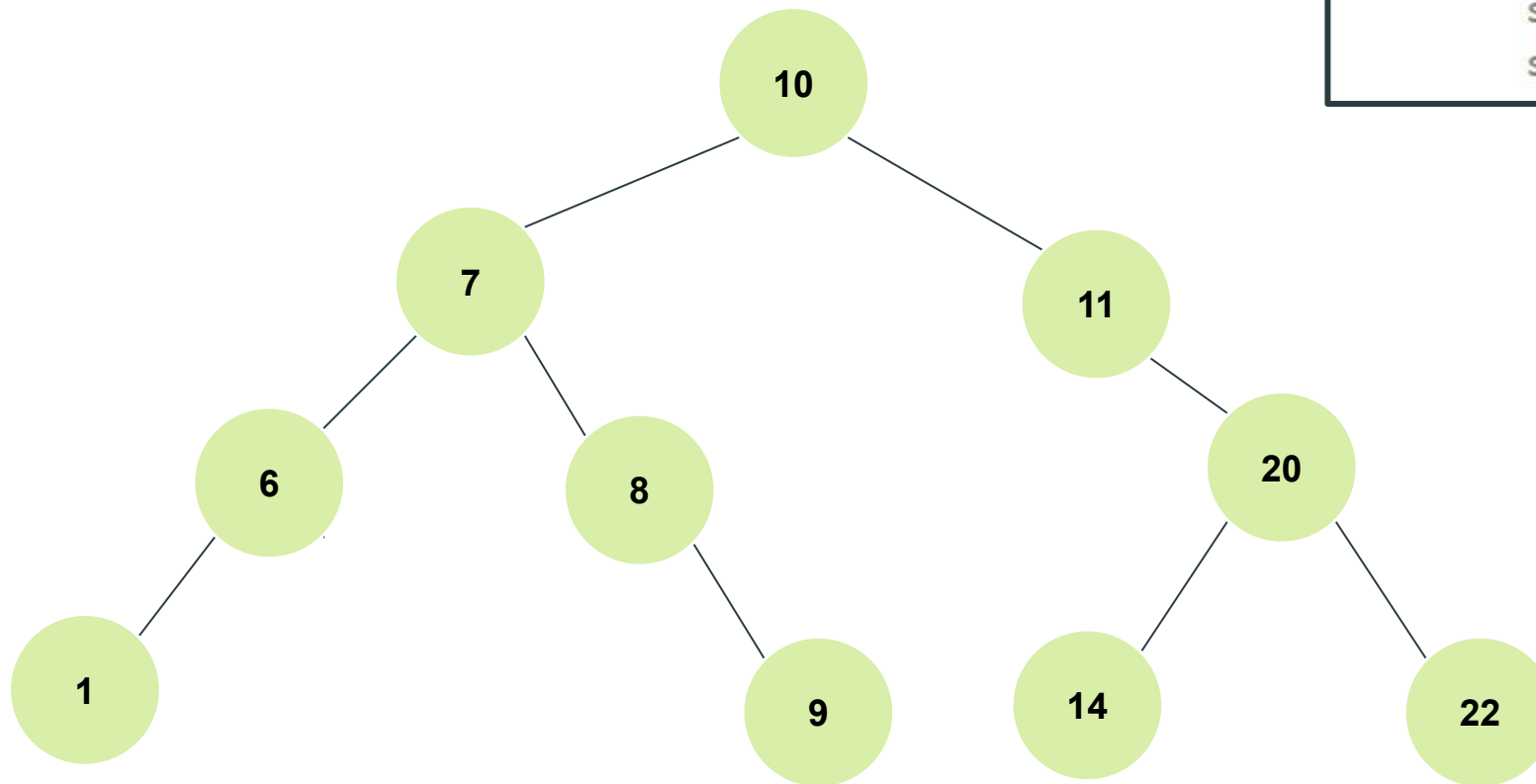

InOrder(root) visits nodes in the following order:
4, 10, 12, 15, 18, 22, 24, 25, 31, 35, 44, 50, 66, 70, 90

```python
class Node:
    def __init__(self, key):
        self.left = None
        self.right = None
        self.val = key
```

1. Traverse the left subtree, i.e., call Inorder(left->subtree)

2. Visit the root.

3. Traverse the right subtree, i.e., call Inorder(right->subtree)

DFS

Depth First Search

```python
class Node:
    def __init__(self, key):
        self.left = None
        self.right = None
        self.val = key
```