C++

LAUNCHPAD

CODING BLOCKS

Lecture-18

Data Structures

- Binary Search Trees

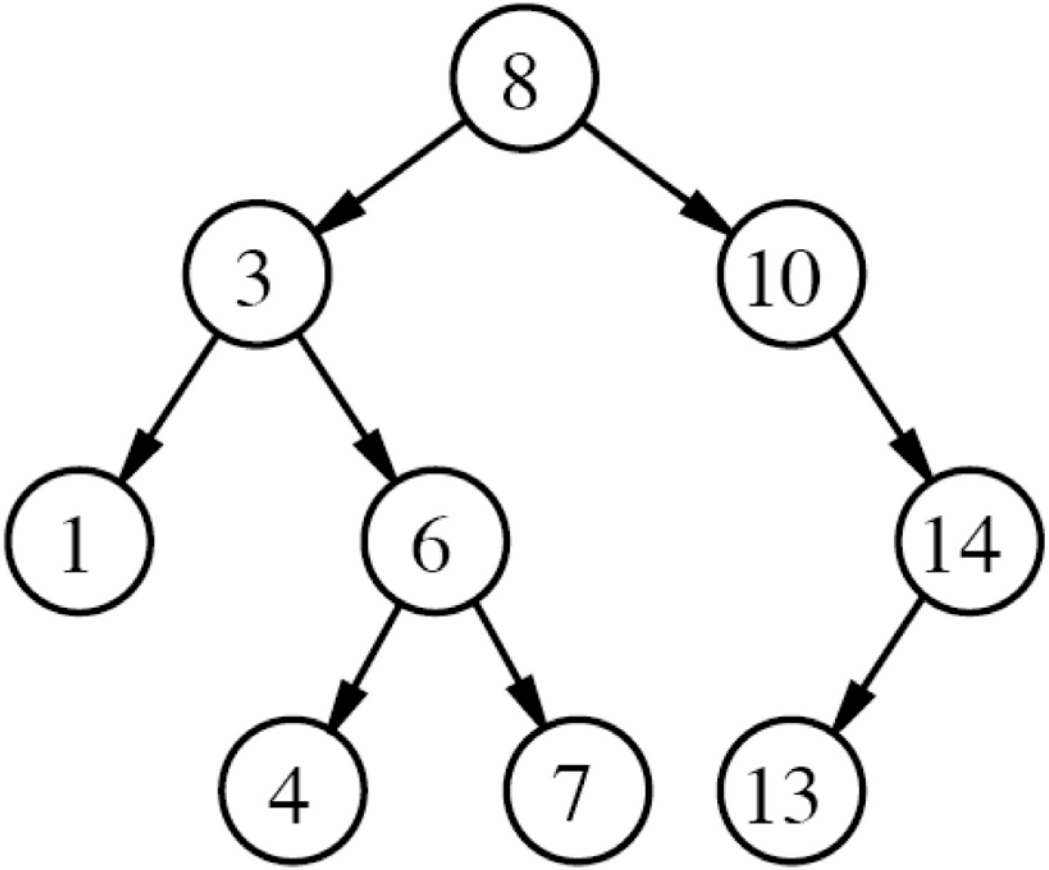
Prateek Narang

Binary Search Trees

BST Properties

1. Every Node in left subtree has value less than or equal to root
2. Every Node in right subtree has value greater than or equal to root

Binary Search trees



Binary Search Trees

```
class BinarySearchTree{
    // accessor methods
    int size();
    bool isEmpty();
    bool findElement(int element);
    // update methods
    void addElement(int element);
    void removeElement(int element) throws
    BSTEmptyException;
    }
```

Lets discuss few problems

1. Print BST elements in range K1 and K2
2. Search & Adding element in BST

Your Turn

1. Convert a BST into sorted Linked List
2. Given a binary tree check if its BST
3. Check if a Binary Tree is Balanced

Build a BST using a sorted array

Balanced/unbalanced Tree

Balanced Trees

1. AVL Tree
2. Red Black Trees
3. 2-4 Trees

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Thank You!

Prateek Narang