Wednesday, 06 July 2016

Crux
Lecture -17

Data Structures -6
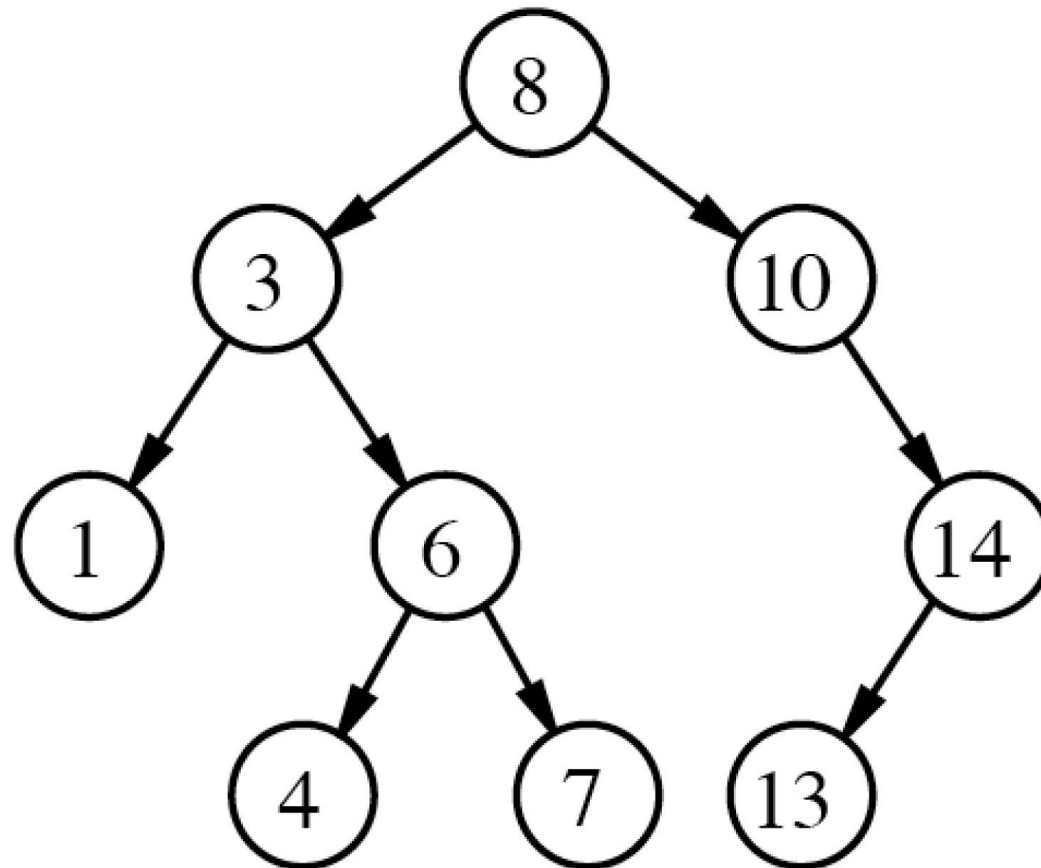
BST

Sumeet Malik

Binary Search Trees

CODING
BLOCKS

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 root

CODING
BLOCKS

Binary Search trees

Binary Search Trees

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

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Lets discuss few problems

1. Find successor of a given node
2. Print BST elements in range K1 and K2

Your Turn

1. Given a binary tree check if its BST
2. Convert a BST into sorted Linked List

CODING BLOCKS

Build a BST using a sorted array

CODING BLOCKS

Balanced/unbalanced Tree

Balanced Trees

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

CODING
BLOCKS

CRUX

Thank You!

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