

Saturday, 26 March  
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# Crux

## Lecture -18

Data Structures - 6

BST

Nidhi Agarwal



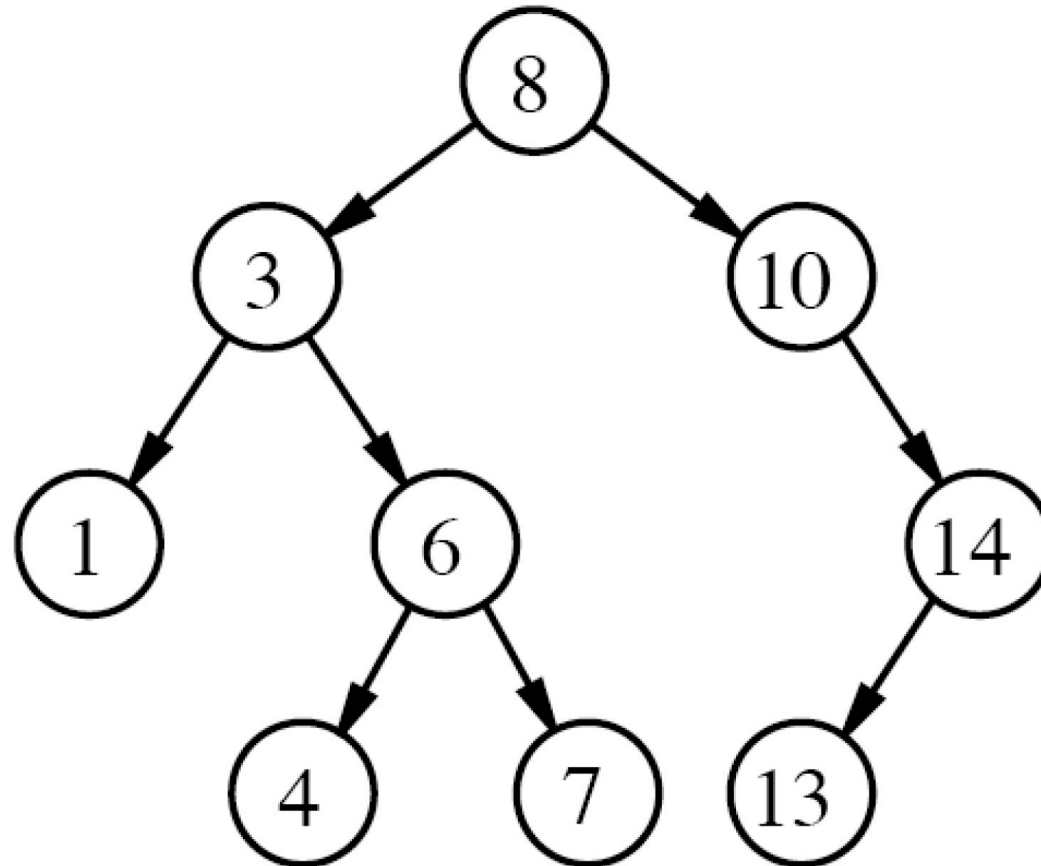
# Assignment ?

# Binary Search Trees

# BST Properties

- Every Node in left subtree has value less than root
- 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();  
    boolean isEmpty();  
    Node findElement(Object element);  
    // update methods  
    void addElement(Object element);  
    void removeElement(Object element) throws  
        BSTEmptyException;  
}
```



## Lets discuss few problems

- Find node in BST
- Print BST elements in range K1 and K2

## Your Turn

- Given a binary tree check if its BST
- Convert a BST into sorted Linked List



# Build a BST using a sorted array

# Balanced/unbalanced Tree

# Balanced Trees

- AVL Tree
- Red Black Trees
- 2-4 Trees



Thank You !! 😊

Nidhi Agarwal

[nidhi@codingblocks.com](mailto:nidhi@codingblocks.com)