BST - Operations

Saturday, February 26, 2022 11:25 AM

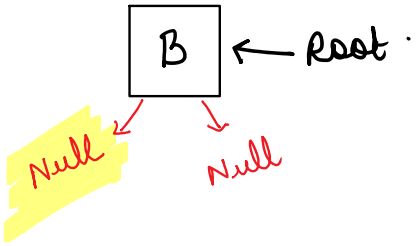
Insert a value into BST

Input order →

Input ⇒ B, A, D, C, E

↑ Order affects the structure

Step #1. First value is Assigned as the ROOT node



Step #2. Find the position where the Node has to be inserted

Recursion

a. Node = ROOT

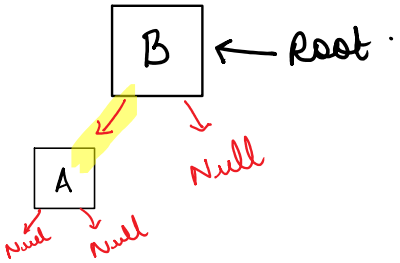
```
Visit(Node)
{
    If(Data(Node) < ValueToBeInserted)
    {
        // Value will be present in the right Side of the Current Node
        Visit(Node->rightChild)
    }
    else
    {
        // Value will be present in the left Side of the Current Node
        Visit(Node->leftChild)
    }
}
```

If Node visited is NULL , Then create a newNode , update the value and give the address of newNode to its parent Node.

A → A is smaller than B → present on left of B

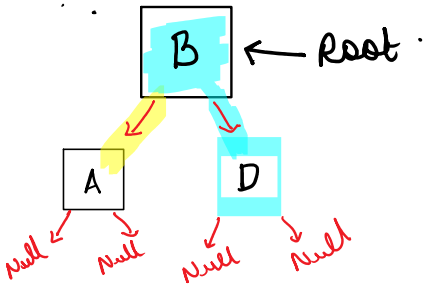
D → D is greater than B → present on right side of B

- Insert (A).



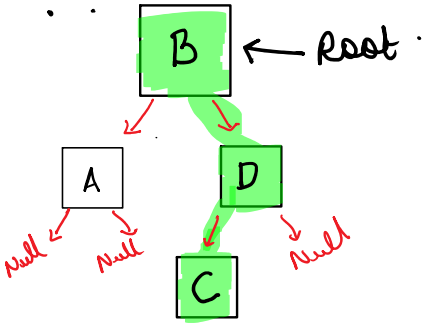
Value < Data(Node) → check left side

- Insert (D)



- Insert (C)

Value = C



- Insert (E)

Value = E