



# Binary Search Tree : Insertion

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You are given a pointer to the root of a binary search tree and a value to be inserted into the tree. Insert this value into its appropriate position in the binary search tree and return the root of the updated binary tree. You just have to complete the function.

## Input Format

You are given a function,

```
node * insert (node * root ,int value) {  
    }  
}
```

node is defined as :

```
struct node  
{  
    int data;  
    node * left;  
    node * right;  
}node;
```

## Constraints

- No. of nodes in the tree  $\leq 500$

## Output Format

Return the root of the binary search tree after inserting the value into the tree.

## Sample Input

```
      4  
     /\   
    2  7  
   /\    
  1  3
```

The value to be inserted is 6.

## Sample Output

```
      4  
     /\   
    2  7  
   /\  /\   
  1  3 6
```

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Python 2



```
1 """
2 Node is defined as
3 self.left (the left child of the node)
4 self.right (the right child of the node)
5 self.data (the value of the node)"""
6
7 def insert(r,val):
8     if r==None:
9         r=Node(val)
10        return r
11    elif val>r.data:
12        r.right=insert(r.right,val)
13        return r
14    else:
15        r.left=insert(r.left,val)
16        return r
17
18
```

Line: 16 Col: 17

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Testcase 0

**Congratulations, you passed the sample test case.**Click the **Submit Code** button to run your code against all the test cases.**Input (stdin)**

```
5
4 2 3 1 7
6
```

**Your Output (stdout)**

Right Answer!

**Expected Output**

Right Answer!

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