

Week 3

16/5/2024

Increasing order Search Tree

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```
struct treenode* inoreasingBST(struct treenode*  
                                root) {
```

```
    if (root == NULL) return NULL;
```

```
    struct treenode* head = NULL;
```

```
    struct treenode* prev = NULL;
```

```
    inorder(root, &head, &prev);
```

```
    return head;
```

```
}
```

```
void inorder(struct* node, struct treenode** head,
```

```
            struct treenode** prev) {
```

```
    if (node == NULL) return;
```

```
    inorder(node->left, head, prev);
```

```
    if (*prev == NULL) {
```

```
        *head = node;
```

```
    } else {
```

```
        (*prev)->right = node;
```

```
        node->left = NULL;
```

```
}
```

```
*prev = node;
```

```
inorder(node->right, head, prev);
```

```
}
```

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Out Put :-

Case 1 :-

root = [5, 3, 6, 2, 4, null, 8, 1, null, null, null, 7, 9]

Out Put :-

[1, null, 2, null, 3, null, 4, null, 5, null, 6, null, 7, null, 8, null, 9]

Case 2

root = [5, 1, 7]

Out Put :-

[1, null, 5, null, 7]

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