

## 1- Searching for minimum value:-

left data right

Null	4	Null
------	---	------

	4	Null
--	---	------

Null	2	Null
------	---	------

	4	
--	---	--

Null	2	Null
------	---	------

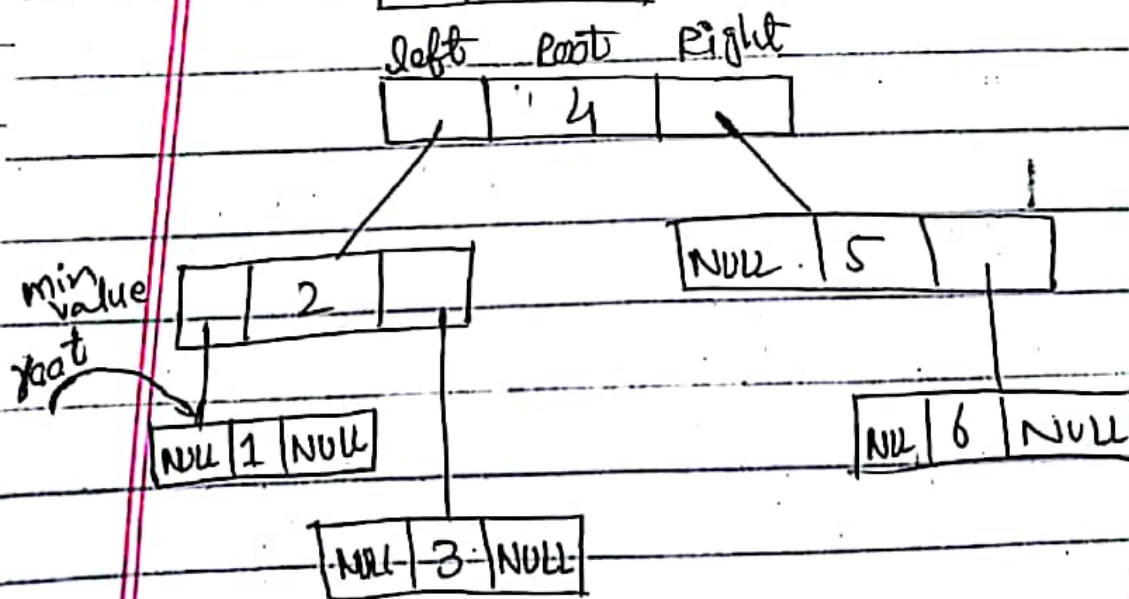
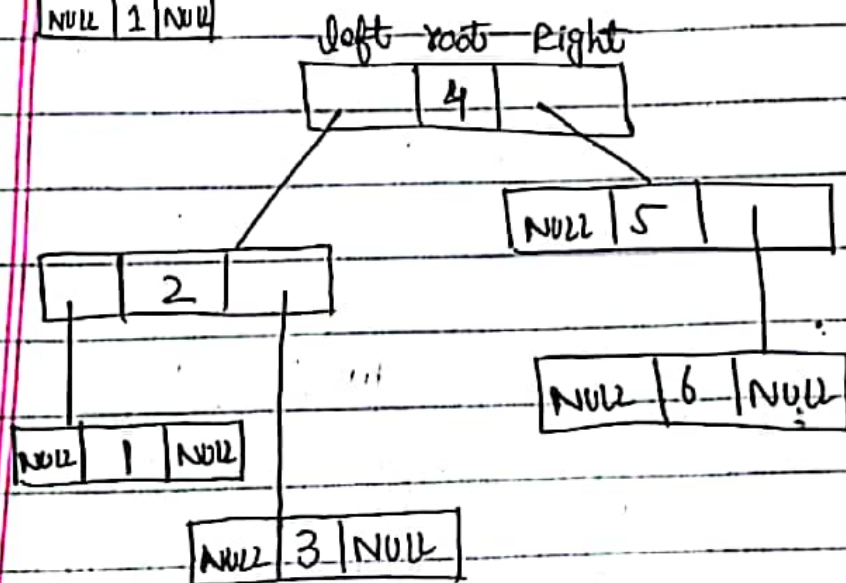
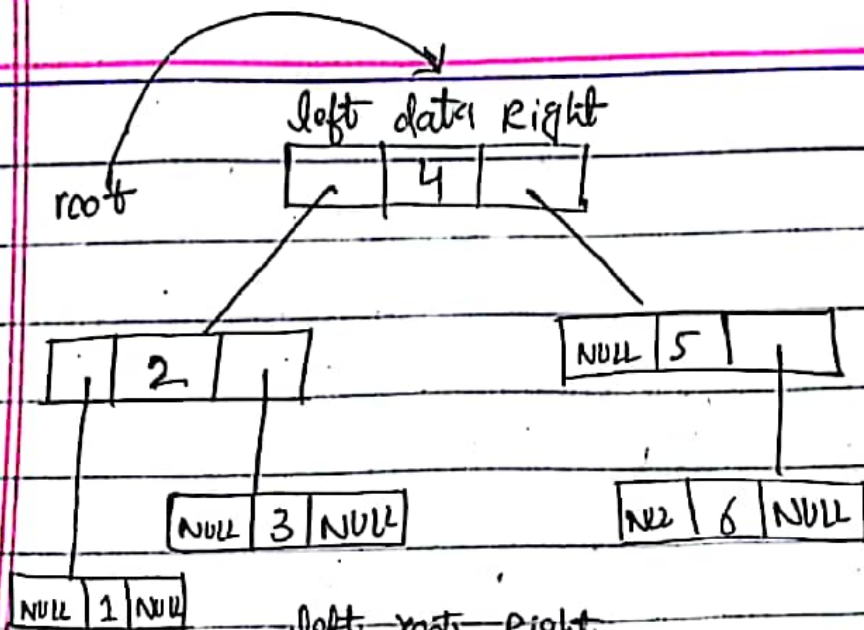
Null	5	Null
------	---	------

	4	
--	---	--

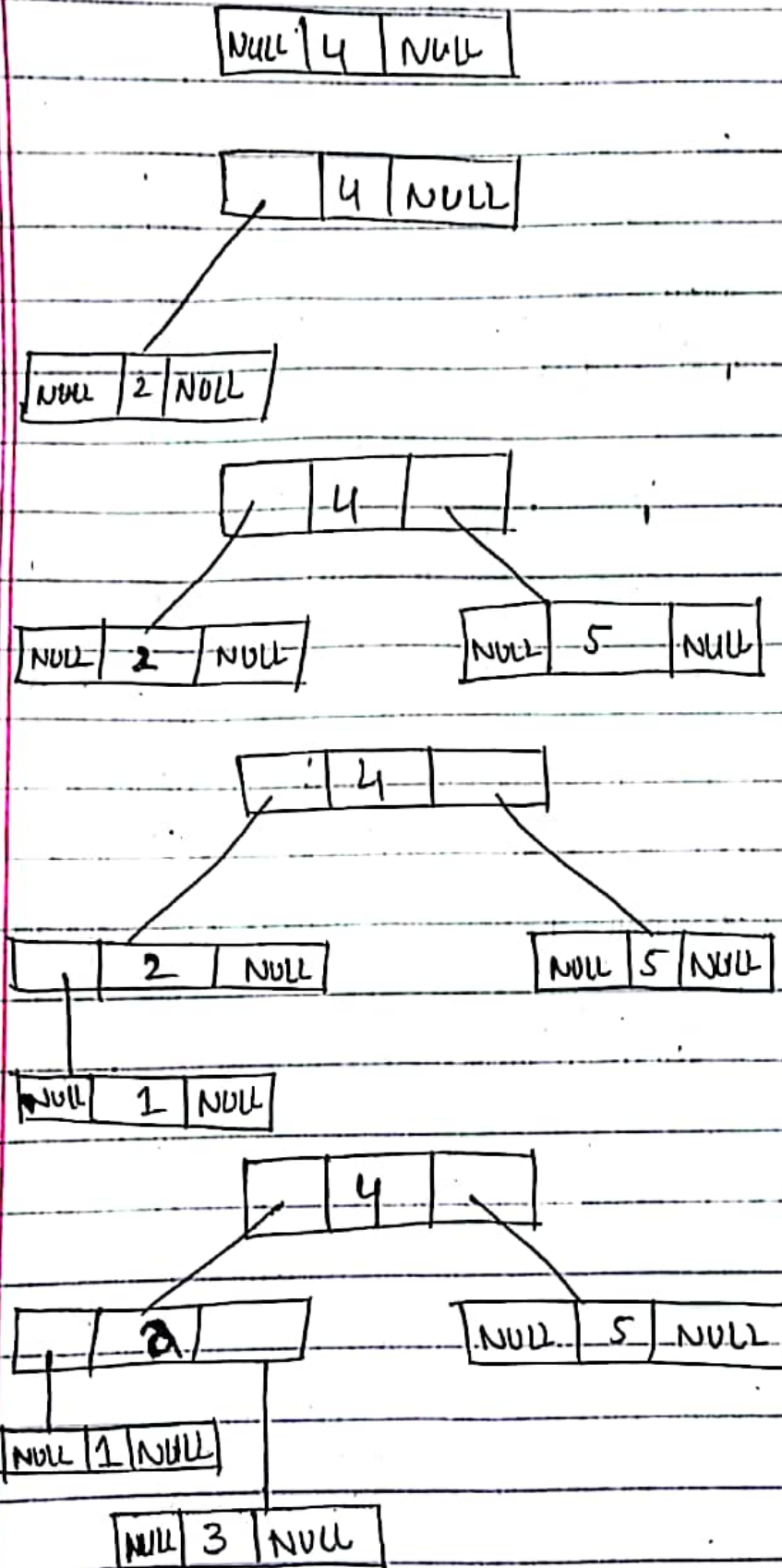
	2	Null
--	---	------

Null	5	Null
------	---	------

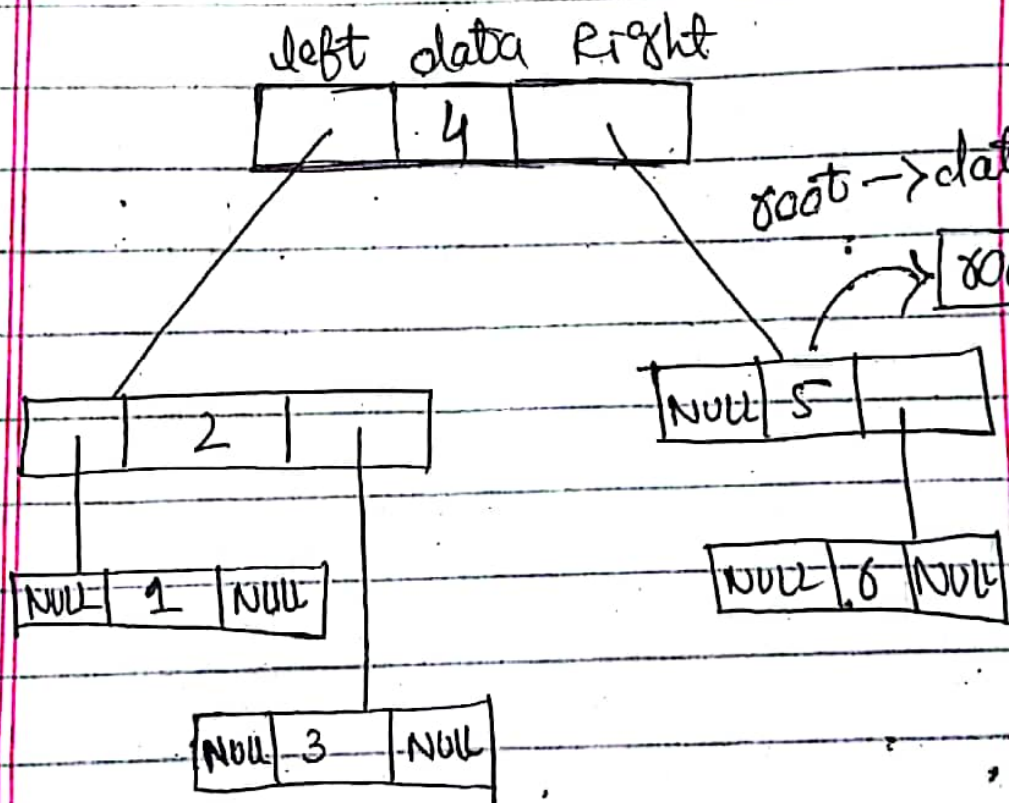
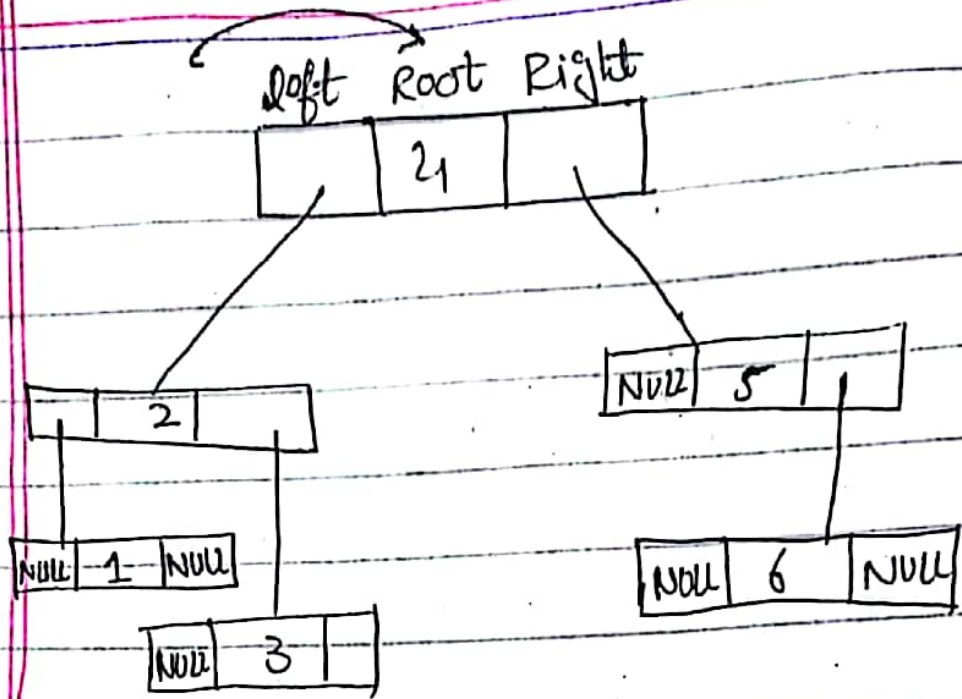
Null	1	Null
------	---	------



## 2-Searching For maximum value







## ● Pre-order tree traversal:

```

- int main()
- {
-     struct Node* root = newNode(1);

```

root

(The newNode function is called)

```

- Node* newNode(int data)
- { Node* temp = new Node;

```

temp?

root?

root



1

```

-     temp->data = data;

```

temp

root node

1

```

-     temp->left = temp->right = NULL;

```

```

-     return temp; }

```



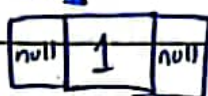
(again going to main function)

```

-     root->left = newNode(2);

```

root

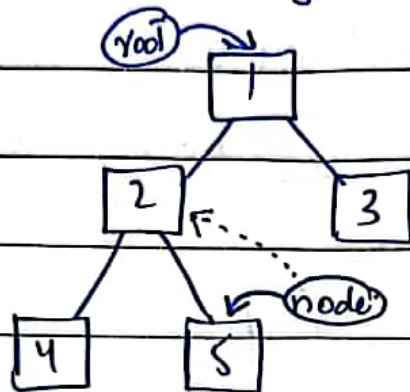


temp

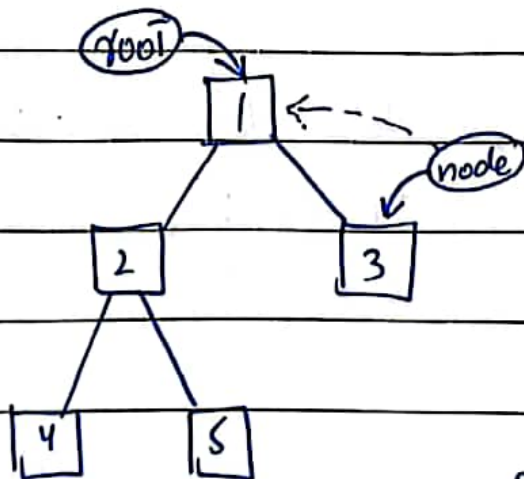
(again newNode function called)

Now, this node "4" doesn't  
has left subtree (if condition  
applied), so function returns.

prinPreorder(~~node~~ node → right);



Output: 1 2 4 5



(function is  
called again)

Output: 1 2 4 5 3

After this, the main function  
is terminated by return 0;

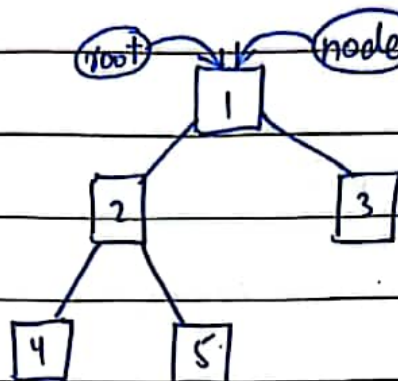


`printPreorder(root);`

(now `printPreorder` function is called)

(if condition doesn't apply so...)

`cout << node->data << " ";`

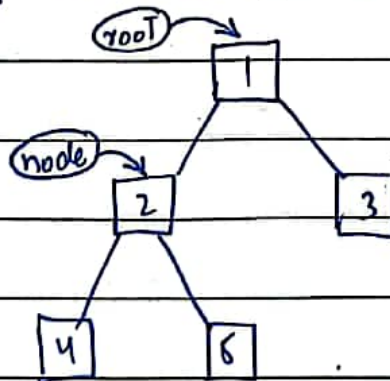


→ This pointer from  
[void printPreorder(struct Node\* no

By this, node's data is printed (1).

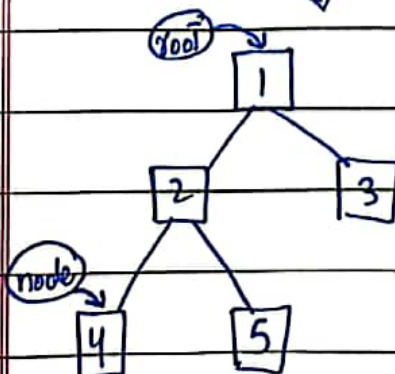
Output: 1

`printPreorder(node->left);`



(again, the whole function is called for left node)

Output: 1 2



Output: 1 2 4

## ● Post-order tree traversal:

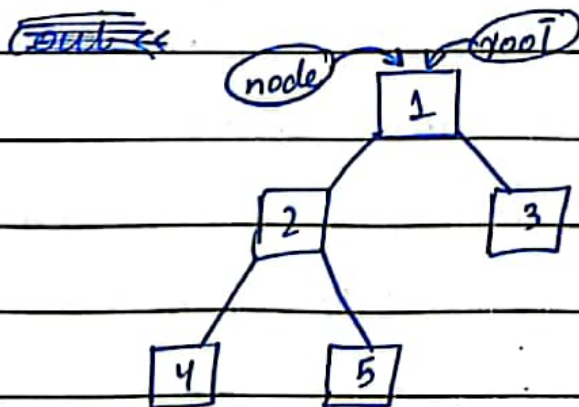
```
- int main() {  
- struct Node* root = newNode(1);  
- root->left = newNode(2);  
- root->right = newNode(3);  
- root->left->left = newNode(4);  
- root->left->right = newNode(5);
```

(Tree is created by same procedure as previous code).

```
- printPostorder(root);
```

(printPostorder function is called)

if-condition is not applicable  
so function proceeds to next line.

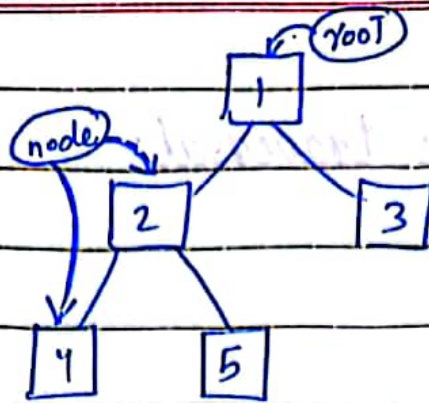


```
- printPostorder(node->left);
```

Signature: \_\_\_\_\_

Excellent ☐ Good ☐ Need improvement ☐



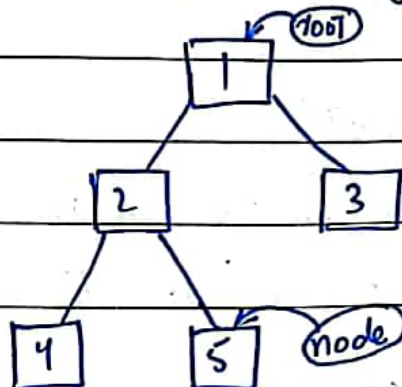


(whole function)  
called again  
for each node

Now "4" node doesn't has  
left & right subtree, so its  
data is printed in output by  
- `cout << node->data << " ";`

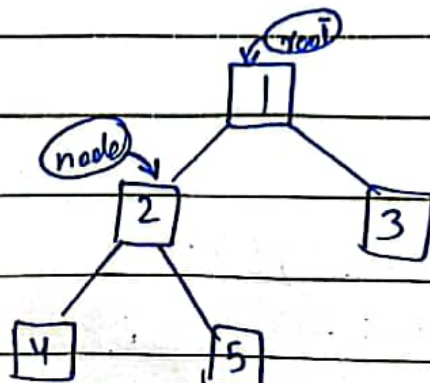
Output: 4

- `printPostOrder(node->right);`



Now, this "5" doesn't has any  
left or right subtree, so; its  
data will be printed in output.

Output: 4 5



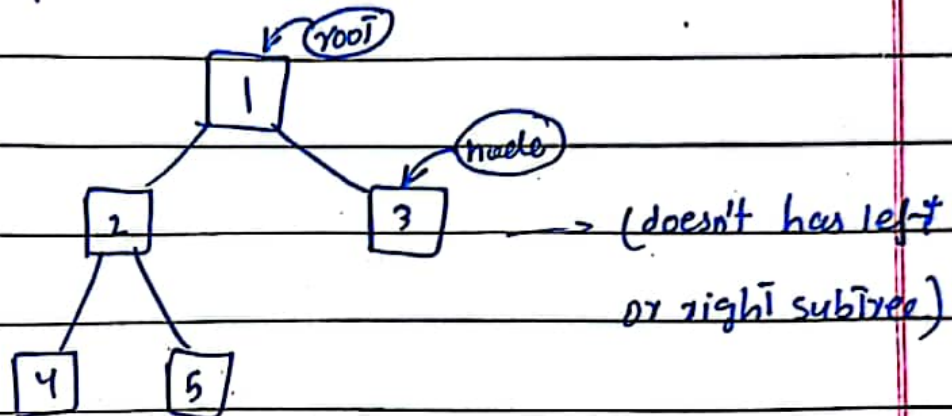
Output: 4 5 2

Signature: \_\_\_\_\_, Excellent ☐ Good ☐ Need improvement ☐

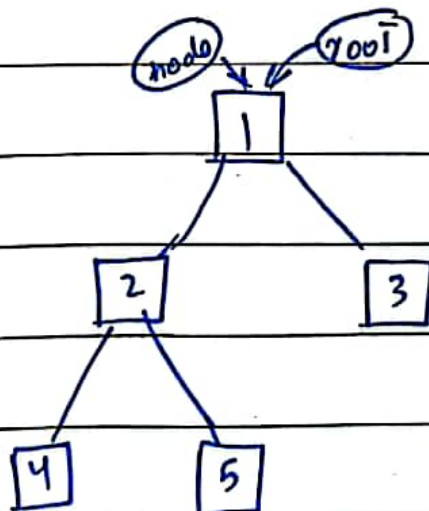
Again, function calls:

→ `printPostOrder(node → right);`

Now, in function, node pointer points to right of root.



Output: 4 5 2 3



Output: 4 5 2 3 1