

**National University of Computer and Emerging Sciences**



**Lab Manual 09**  
**Data Structures**

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## Lab Content

√ Binary tree

### Question 1:

Code for BinaryTree:

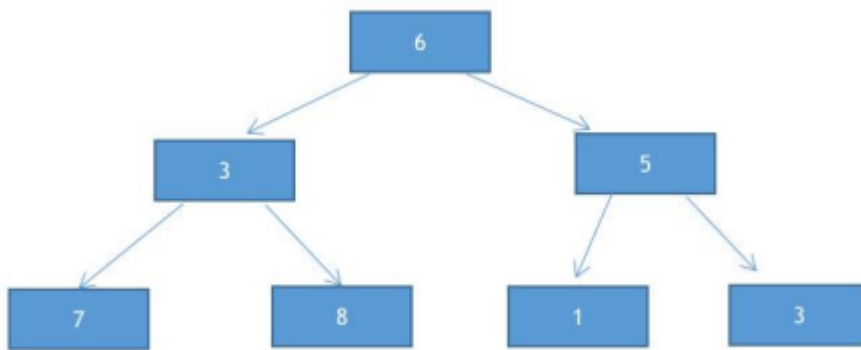
```
struct Node
{ int data;
Node *left;
Node *right;
public:
Node(int d)
{ data=d; left=NULL; right=NULL;
}
};
int main()
{ Node *root=NULL;
root=new Node(6);
root->left=new Node(3);
root->right=new Node(5);
root->left->left=new Node(7);
root->left->right=new Node(8);
root->right->left=new Node(1);
root->right->right=new Node(3);
}
```

Following Operation that you perform with BinaryTree are mention below:

- inorder : that takes the Node type pointer, perform inorder operation recursively
- preorder: that takes the Node type pointer, perform preorder operation recursively
- postorder: that takes the Node type pointer, perform postorder operation recursively
- searchNode:that takes the Node type pointer and integer type variable, search element recursively
- DeleteNode:that takes the Node type pointer and integer type variable, delete element recursively and replace it with deepest node if it is inner node.

**Question 2:**

Check if two nodes are cousins in a Binary Tree Say two node be 7 and 1, result is TRUE. Say two nodes are 3 and 5, result is FALSE. Say two nodes are 7 and 5, result is



Say two node be 7 and 1, result is TRUE.

Say two nodes are 3 and 5, result is FALSE.

Say two nodes are 7 and 5, result