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Subject: DSA

LAB ASSIGNMENT NO. 04

```
#include <iostream>
using namespace std;
struct Node {
 int data;
 struct Node *left, *right;
};
Node* newNode(int data)
{
 Node* temp = new Node;
 temp->data = data;
 temp->left = temp->right = NULL;
 return temp;
}
void printInorder(struct Node* node)
{
 if (node == NULL)
 return;
 printInorder(node->left);
 cout << node->data << " ";
 printInorder(node->right);
}
void printPreorder(struct Node* node)
{
 if (node == NULL)
 return;
 cout << node->data << " ";
 printPreorder(node->left);
```

```
 printPreorder(node->right);
}
void printPostorder(struct Node* node)
{
 if (node == NULL)
 return;
 printPostorder(node->left);
 printPostorder(node->right);
 cout << node->data << " ";
}
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);

cout << "\nPreorder traversal of binary tree is \n";
 printPreorder(root);
 cout << "\nInorder traversal of binary tree is \n";
 printInorder(root);
 cout << "\nPostorder traversal of binary tree is \n";
 printPostorder(root);
 return 0;
}
```

Output

Preorder traversal of binary tree is

1 2 4 5 3

Inorder traversal of binary tree is

4 2 5 1 3

Postorder traversal of binary tree is

4 5 2 3 1