

Assignment No-4

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Roll no=SI- 48

Class=SE-IT

Aim- EXPRESSION TREE TRAVERSALS

```
#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

```

=== Code Execution Successful ===