

Assignment - 9

Write a program to implement all the binary tree traversal methods using classes.

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https://github.com/RPChinhara-202117/DSA_Assignments.git

Code:

75 lines (56 sloc) | 1.36 KB

Raw Blame  

```
1  #include <iostream>
2  using namespace std;
3
4  class Node
5  {
6  public:
7      int data;
8      Node *left, *right;
9
10     Node(int data)
11     {
12         this->data = data;
13         left = right = NULL;
14     }
15
16     // Printing a Binary Tree according to PostOrder Traversal
17
18     void PostOrder(Node *node)
19     {
20         if(node == NULL)
21             return;
22
23         PostOrder(node->left);
24         PostOrder(node->right);
25         cout<<node->data<<" ";
26     }
27
28     // Printing a Binary Tree according to InOrder Traversal
29
30     void InOrder(Node *node)
31     {
32         if(node == NULL)
33             return;
```

```
34
35     void InOrder(Node *node)
36     {
37         if(node == NULL)
38             return;
39
40         InOrder(node->left);
41         cout<<node->data<<" ";
42         InOrder(node->right);
43     }
44
45     // Printing a Binary Tree according to PreOrder Traversal
46
47     void PreOrder(Node *node)
48     {
49         if(node == NULL)
50             return;
51
52         cout<<node->data<<" ";
53         PreOrder(node->left);
54         PreOrder(node->right);
55     }
56 };
57
58 int main()
59 {
60     Node *root = new Node(1);
61     root->left = new Node(2);
62     root->right = new Node(3);
63     root->left->left = new Node(4);
64     root->left->right = new Node(5);
65
66     cout<<"\nPreOrder Traversal of Binary Tree is \n";
67     (*root).PreOrder(root);
68 }
```

```

48     PreOrder(node->left);
49     PreOrder(node->right);
50 }
51 };
52
53
54
55 int main()
56 {
57     Node *root = new Node(1);
58     root->left = new Node(2);
59     root->right = new Node(3);
60     root->left->left = new Node(4);
61     root->left->right = new Node(5);
62
63     cout<<"\nPreOrder Traversal of Binary Tree is \n";
64     (*root).PreOrder(root);
65
66     cout<<"\nInOrder Traversal of Binary Tree is \n";
67     (*root).InOrder(root);
68
69     cout<<"\nPostOrder Traversal of Binary Tree is \n";
70     (*root).PostOrder(root);
71
72     cout<<endl;
73
74     return 0;
75 }

```

Terminal Output:

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```

sal/"TreeTraversal
rudrachinhara@dell-vostro:~/Documents/CUH/3rd Sem/Data Structure and Algorithms/DSA_Assignments$ cd "/home/rudrachinhara/Documents/CUH/3rd
Sem/Data Structure and Algorithms/DSA_Assignments/Assignment-9/TreeTraversal/" && g++ TreeTraversal.cpp -o TreeTraversal && "/home/rudrachi
nhara/Documents/CUH/3rd Sem/Data Structure and Algorithms/DSA_Assignments/Assignment-9/TreeTraversal/"TreeTraversal

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
rudrachinhara@dell-vostro:~/Documents/CUH/3rd Sem/Data Structure and Algorithms/DSA_Assignments/Assignment-9/TreeTraversal$

```

Ln 70, Col 13 Spaces: 4 UTF-8 LF C++ Linux