



TP19 Tree data structure (explain).mp4

KrySengHortPracticeTreeDataStructure.cpp X

Year 02 &gt; Data Structure &amp; Programming &gt; C++ &gt; Course &gt; Chapter 12 Trees Data Structure &gt; KrySengHortPracticeTreeData



```
1  #include<iostream>
2  using namespace std;
3  struct node{
4      int data;
5      node *left, *right;
6  };
7  node *insertTree(node *root, int newData){
8      if(root == NULL){
9          root = new node;
10         root->data = newData;
11         root->left = NULL;
12         root->right = NULL;
13     }
14     else if(newData > root->data){
15         root->right = insertTree(root->right, newData);
16     }
17     else if(newData < root->data){
18         root->left = insertTree(root->left, newData);
19     }
20     return root;
21 }
22 void PreOrder(node *root){
23     if(root!=NULL){
```

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Year 02 &gt; Data Structure &amp; Programming &gt; C++ &gt; Course &gt; Chapter 12 Trees Data Structure &gt; KrySengHortPracticeTreeDataStructure.cpp &gt; PreOrder(node \*)

```
23     if(root!=NULL){
24         cout<<root->data<<" ";
25         PreOrder(root->left);
26         PreOrder(root->right);
27     }
28 }
29 int main(){
30     node *r1;
31     r1 = NULL;
32     r1 = insertTree(r1,5);
33     r1 = insertTree(r1,0);
34     r1 = insertTree(r1,9);
35     r1 = insertTree(r1,6);
36     PreOrder(r1);
37     return 0;
38 }
39
```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

Warning: PowerShell detected that you might be using a screen reader and has disabled PSReadLine for compatibility purposes. If you want to re-enable it, run 'Import-Module PSReadLine'.

```
PS D:\Year 02> cd "d:\Year 02\Data Structure & Programming\C++\Course\Chapter 12 Trees Data Structure\" ; if ($?) { g++ KrySengHortPracticeTreeDataStructure.cpp -o KrySengHortPracticeTreeDataStructure } ; if ($?) { .\KrySengHortPracticeTreeDataStructure }
```

5 0 9 6

```
PS D:\Year 02\Data Structure & Programming\C++\Course\Chapter 12 Trees Data Structure> 
```



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KrySengHortPracticeTreeDataStructure.cpp X

Year 02 &gt; Data Structure &amp; Programming &gt; C++ &gt; Course &gt; Chapter 12 Trees Data Structure &gt; KrySengHortPracticeTreeDataStructure.cpp &gt; ma



```
19     }
20     return root;
21 }
22 void PreOrder(node *root){
23     if(root!=NULL){
24         cout<<root->data<<" ";
25         PreOrder(root->left);
26         PreOrder(root->right);
27     }
28 }
29 void InOrder(node *root){
30     if(root!=NULL){
31         InOrder(root->left);
32         cout<<root->data<<" ";
33         InOrder(root->right);
34     }
35 }
```





TP19 Tree data structure (explain).mp4 KrySengHortPracticeTreeDataStructure.cpp X

Year 02 > Data Structure & Programming > C++ > Course > Chapter 12 Trees Data Structure > KrySengHortPracticeTreeDataStructure.cpp > InOrder(node \*)

```

32         cout<<root->data<<" ";
33         InOrder(root->right);
34     }
35 }
36 int main(){
37     node *r1;
38     r1 = NULL;
39     r1 = insertTree(r1,5);
40     r1 = insertTree(r1,0);
41     r1 = insertTree(r1,9);
42     r1 = insertTree(r1,6);
43     cout<<"data which represent as pre-order such that :"<<endl;
44     PreOrder(r1);
45     cout<<endl<<"data which represent as in-order such that :"<<endl;
46     InOrder(r1);
47     return 0;
48 }
49

```

PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

```

PS D:\Year 02> cd "d:\Year 02\Data Structure & Programming\C++\Course\Chapter 12 Trees Data Structure\" ; if ($?) { g++ KrySengHortPracticeTreeDataStructure.cpp -o KrySengHortPracticeTreeDataStructure } ; if ($?) { .\KrySengHortPracticeTreeDataStructure }
data which represent as pre-order such that :
5 0 9 6
data which represent as in-order such that :
0 5 6 9
PS D:\Year 02\Data Structure & Programming\C++\Course\Chapter 12 Trees Data Structure>

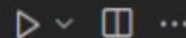
```

```
36 void searchDataInTree(node *root, int searchData){
37     if(root==NULL){
38         cout<<"the number"<<searchData<<" is not found !"<<endl;
39     }
40     else{
41         if(searchData == root->data){
42             cout<<"the number"<<searchData<<" is found"<<endl;
43         }
44         else if(searchData > root->data){
45             searchDataInTree(root->right, searchData);
46         }
47         else if(searchData < root->data){
48             searchDataInTree(root->left, searchData);
49         }
50     }
51 }
```



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KrySengHortPracticeTreeDataStructure.cpp



Year 02 > Data Structure & Programming > C++ > Course > Chapter 12 Trees Data Structure > KrySengHortPracticeTreeDataStructure.cpp > searchDataInTree(node \*, int)

```
56     r1 = insertTree(r1,0);
57     r1 = insertTree(r1,9);
58     r1 = insertTree(r1,6);
59
60     cout<<"data which represent as pre-order such that :"<<endl;
61     PreOrder(r1);
62
63     cout<<endl<<"data which represent as in-order such that :"<<endl;
64     InOrder(r1);
65
66     cout<<endl<<"the result for searching data in tree"<<endl;
67     searchDataInTree(r1,9);
68     searchDataInTree(r1,0);
69     searchDataInTree(r1,-1);
70     return 0;
71 }
72
73
```



PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE

Code + - [ ] [X] ^ X

```
data which represent as pre-order such that :
5 0 9 6
data which represent as in-order such that :
0 5 6 9
the result for searching data in tree
the number9 is found
the number0 is found
the number-1 is not found !
```

