

ជាតិ សាសនា ព្រះមហាក្សត្រ

Institute of technology of Cambodia

Department of Information and communication Engineering



The lesson taking about using tree in c++

Class activity (from 2-06-2022)

TP: Algorithm and Programming II

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```
Start here X treeroof.cpp X
1  #include<iostream>
2  using namespace std;
3  struct Node{
4      int data;
5      Node*left;
6      Node *right;
7  };
8  Node * insertData2Tree (Node *root, int newData)
9  {
10     if (root==NULL) {
11         root=new Node;
12         root->data=newData;
13         root->left=NULL;
14         root->right=NULL;
15     } else if (newData>root->data)
16     {
17         root->right=insertData2Tree (root->right,  newData);
18     } else if (newData<root->data)
19     {
20         root->left=insertData2Tree (root->left,newData);
21     }
22 }
23 void preorder (Node*root)
24 {
25     if (root!=NULL)
26     {
27         cout<<root->data<<" ";
28         preorder (root->left);
29         preorder (root->right);
30     }
31 }
```

```

32 void inorder(Node*root)
33 {
34     if(root!=NULL)
35     {
36         inorder(root->left);
37         cout<<root->data<<" ";
38         inorder(root->right);
39     }
40 }
41 main()
42 {
43     Node *t1;
44     t1=NULL;
45     t1= insertData2Tree(t1,15);
46     t1= insertData2Tree(t1,9);
47     t1= insertData2Tree(t1,23);
48     t1= insertData2Tree(t1,3);
49     t1= insertData2Tree(t1,12);
50     t1= insertData2Tree(t1,19);
51     t1= insertData2Tree(t1,10);
52     t1= insertData2Tree(t1,21);
53     preorder(t1);
54     cout<<endl;
55     inorder(t1);
56 }
57

```

"C:\Users\Admin\Desktop\code c++\treeroof\treeroof.exe"

```

15 9 3 12 10 23 19 21
3 9 10 12 15 19 21 23
Process returned 0 (0x0)   execution time : 0.031 s
Press any key to continue.

```