```
 1
 2  ////// Insert a Node in binary
tree/////////////////////////////////////////////
 3  /////// insert the node where we find a node whose left or right child is
null///////
 4  #include<stdlib.h>
 5  #include<stdio.h>
 6  #include<iostream>
 7  #include<queue>
 8
 9  using namespace std;
10
11  struct BinaryNode
12  {
13      struct BinaryNode *left;
14      struct BinaryNode *right;
15      int data;
16
17  };
18
19  struct BinaryNode * createBinaryNode(int value)
20  {
21      struct BinaryNode *B=(struct BinaryNode *)malloc(sizeof(struct BinaryNode));
22      B->right=NULL;
23      B->left=NULL;
24      B->data=value;
25      return B;
26  };
27
28  queue<BinaryNode *> q;
29
30  void insertInBinaryNode(struct BinaryNode *root,struct BinaryNode *newNode)
31  {
32      if(root==NULL)
33      {
34          root=newNode;
35          return;
36      }
37      else
38          q.push(root);
39
40      while(!q.empty())
41      {
42          struct BinaryNode *temp=q.front();
43          q.pop();
44          if(temp->left)
45              q.push(temp->left);
46          else
47          {
48              temp->left=newNode;
49              return;
50          }
51
52
53          if(temp->right)
54              q.push(temp->right);
55          else
56          {
57              temp->right=newNode;
58              return;
59          }
60      }
61
62  }
63
64  queue<BinaryNode *> q1;
```

```
65
66  void levelOrderTraversal(struct BinaryNode *root)
67  {
68      if(root==NULL)
69          return;
70      else
71          q1.push(root);
72
73      while(!q1.empty())
74      {
75          struct BinaryNode *temp=q1.front();
76          printf("%2d\t",temp->data);
77          q1.pop();
78          if(temp->left)
79              q1.push(temp->left);
80          if(temp->right)
81              q1.push(temp->right);
82      }
83
84  }
85
86  int main()
87  {
88      struct BinaryNode *root=createBinaryNode(20);
89      struct BinaryNode *newNode=createBinaryNode(200);
90      root->left=createBinaryNode(30);
91      root->right=createBinaryNode(40);
92      root->left->left=createBinaryNode(50);
93      //root->left->right=createBinaryNode(60);
94      root->right->left=createBinaryNode(70);
95      root->right->right=createBinaryNode(80);
96      printf("Level Order Traversal Before Insering node\n");
97      levelOrderTraversal(root);
98      insertInBinaryNode(root,newNode);
99      printf("\nLevel Order Traversal after Insering node\n");
100     levelOrderTraversal(root);
101 }
```