#include <bits/stdc++.h>

TREE CreateTNode(int x)

{

TREE p;

p = new TNODE;

if (p == NULL)

exit(1);

p->key = x;

p->pLeft = NULL;

p->pRight = NULL;

return p;

}

void Insert(TREE &T, int x)

{

if (T)

{

if (T->key == x)

return;

if (T->key > x)

return Insert(T->pLeft, x);

return Insert(T->pRight, x);

}

T = CreateTNode(x);

}

void CreateTree(TREE &T)

{

int x;

cin>>x;

while (x != -1)

{

Insert(T, x);

cin>>x;

}

}

void PrintTree(TREE T)

{

if (T == NULL)

{

cout<<"Empty Tree.";

return;

}

stack<TREE> s;

TREE currentNode = T;

while (currentNode != NULL || !s.empty())

{

while (currentNode != NULL)

{

s.push(currentNode);

currentNode = currentNode->pLeft;

}

currentNode = s.top();

s.pop();

cout << currentNode->key << " ";

currentNode = currentNode->pRight;

}

}