#include<stdio.h>

#include<stdlib.h>

struct node{

int key;

struct node \*left, \*right;

};

struct node \*newNode(int item){

struct node \*temp = (struct node \*)malloc(sizeof(struct node));

temp->key = item;

temp->left = temp->right = NULL;

return temp;

}

void traversetree(struct node \*root){

if (root != NULL){

traversetree(root->left);

printf("%d \t", root->key);

traversetree(root->right);

}

}

struct node\* insert(struct node\* node, int key){

if (node == NULL) return newNode(key);

if (key < node->key)

node->left = insert(node->left, key);

else if (key > node->key)

node->right = insert(node->right, key);

return node;

}

int main(){

struct node \*root = NULL;

root = insert(root, 23);

insert(root, 15);

insert(root, 12);

insert(root, 17);

insert(root, 32);

insert(root, 29);

printf("The tree is :\n");

traversetree(root);

printf("\nInseting 45 to the tree\n");

insert(root, 45);

printf("Tree after insertion is :\n");

traversetree(root);

return 0;

}