/\*searching in BST\*/

#include <stdio.h>

#include <stdbool.h>

#include <stdlib.h>

//Represent a node of binary search tree

struct node{

int data;

struct node \*left;

struct node \*right;

};

//Represent the root of binary search tree

struct node \*root = NULL;

static bool flag = false;

//createNode() will create a new node

struct node\* createNode(int data){

//Create a new node

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

newNode->data = data;

newNode->left = NULL;

newNode->right = NULL;

return newNode;

}

void searchNode(struct node \*temp, int value){

//Check whether tree is empty

if(root == NULL){

printf("Tree is empty\n");

}

else{

if(temp->data == value){

flag = true;

return;

}

if(flag == false && temp->left != NULL){

searchNode(temp->left, value);

}

if(flag == false && temp->right != NULL){

searchNode(temp->right, value);

}

}

}

int main()

{

//Add nodes to the binary tree

root = createNode(1);

root->left = createNode(2);

root->right = createNode(3);

root->left->left = createNode(4);

root->right->left = createNode(5);

root->right->right = createNode(6);

searchNode(root, 5);

if(flag)

printf("Element is present in the binary search tree");

else

printf("Element is not present in the binary search tree");

return 0;

}

