

**/\*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){

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printf("Tree is empty\n");
}
else{

if(temp->data == value){
flag = true;
return;
}

if(flag == false && temp->left != NULL){
searchNode(temp->left, value);
}

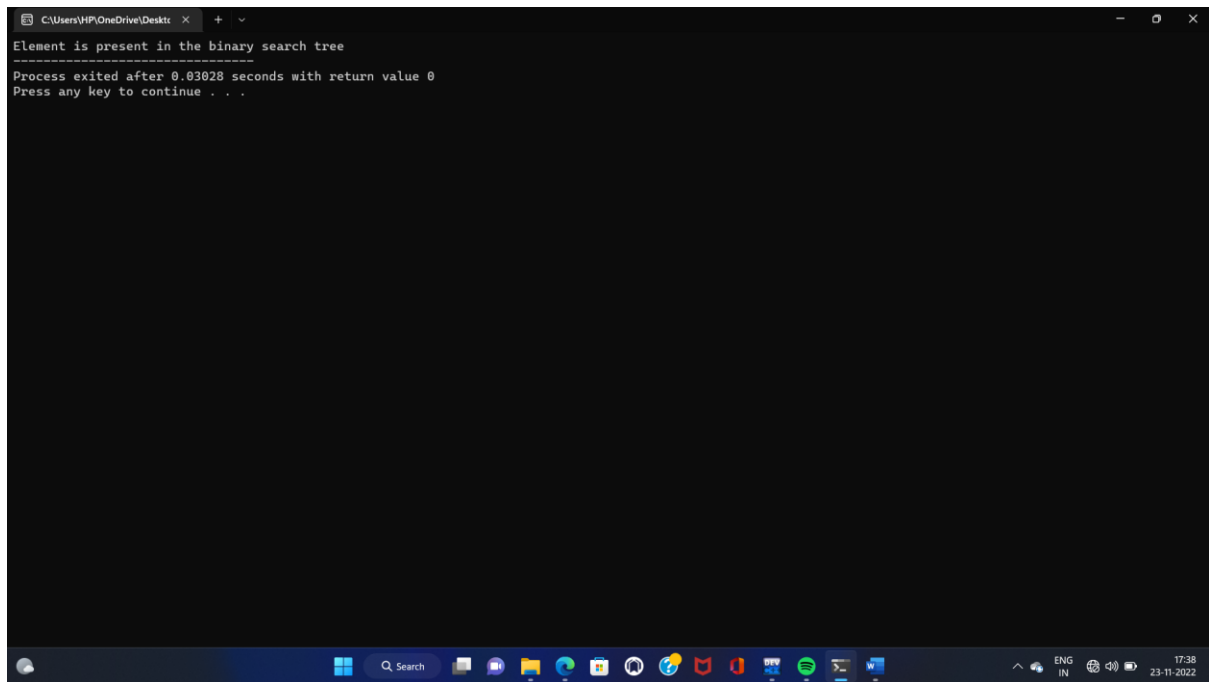
if(flag == false && temp->right != NULL){
searchNode(temp->right, value);
}
}

}

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;
}
```



A screenshot of a Windows command prompt window. The title bar shows the file path "C:\Users\HP\OneDrive\Desktop". The window contains the following text: "Element is present in the binary search tree", followed by a dashed line separator, "Process exited after 0.03028 seconds with return value 0", and "Press any key to continue . . .". The Windows taskbar is visible at the bottom, showing the Start button, a search bar, and several application icons. The system tray on the right shows the language set to "ENG IN", the date "23-11-2022", and the time "17:38".