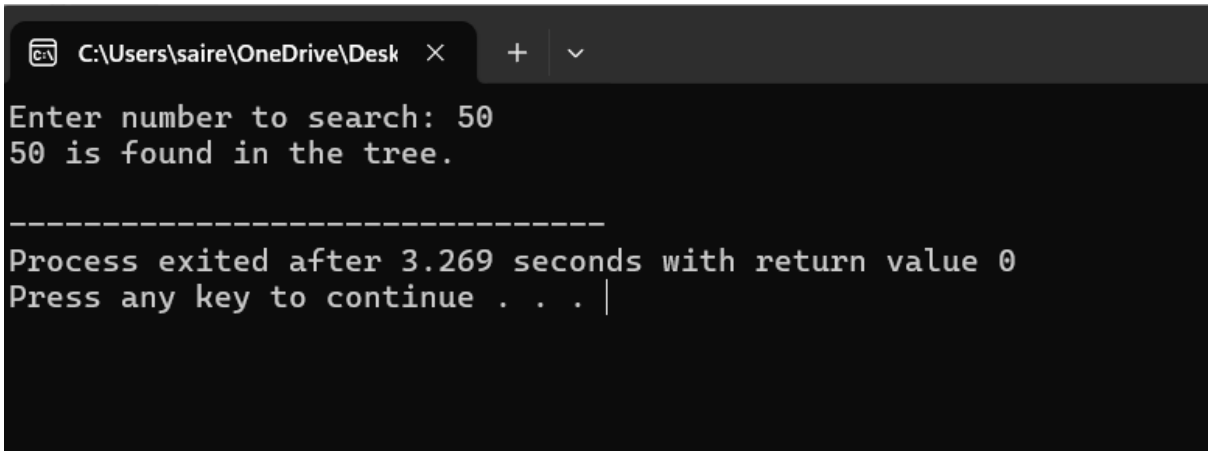
17. Write a C program to search a number using Binary tree Implementation

```
#include <stdio.h>
#include <stdlib.h>
struct Node {
   int data;
   struct Node* left;
   struct Node* right;
};
struct Node* createNode(int value)
{
   struct Node* newNode = (struct Node*)malloc(sizeof(struct Node));
   newNode->data = value;
   newNode->left = NULL;
   newNode->right = NULL;
   return newNode;
}
struct Node* insert(struct Node* root, int value)
{
   if (root == NULL) {
      return createNode(value);
   }
if (value < root->data) {
      root->left = insert(root->left, value);
   } else if (value > root->data) {
      root->right = insert(root->right, value);
   }

   return root;
```

```
}



int search(struct Node* root, int key) {
   if (root == NULL) return 0;
   if (root->data == key) return 1;

   if (key < root->data)
      return search(root->left, key);
   else
      return search(root->right, key);
}
int main() {
   struct Node* root = NULL;
   root = insert(root, 50);
   insert(root, 30);
   insert(root, 70);
   insert(root, 20);
   insert(root, 40);
   int num;
   printf("Enter number to search: ");
   scanf("%d", &num);
   if (search(root, num))
      printf("%d is found in the tree.\n", num);
   else
      printf("%d is NOT found in the tree.\n", num);

   return 0;}
```

Output


C:\Users\saire\OneDrive\Desk
Enter number to search: 50
50 is found in the tree.

Process exited after 3.269 seconds with return value 0
Press any key to continue . . .