Experiment-15 : AVL Tree-Searching

15.Write a C Program To Search For a Key Element In an AVL Tree.

Code :

#include <stdio.h>

#include <stdlib.h>

struct Node {

int key;

struct Node \*left;

struct Node \*right;

int height;

};

struct Node\* search(struct Node\* root, int key) {

if (root == NULL || root->key == key)

return root;

if (root->key < key)

return search(root->right, key);

return search(root->left, key);

}

int main() {

struct Node \*root = NULL; // Initialize an empty AVL tree

// Perform key element search

int keyToSearch = 10;

struct Node \*result = search(root, keyToSearch);

if (result != NULL)

printf("Key %d found in the AVL tree.", keyToSearch);

else

printf("Key %d not found in the AVL tree.", keyToSearch);

return 0;

}

Output :

A screenshot of a computer

Description automatically generated