

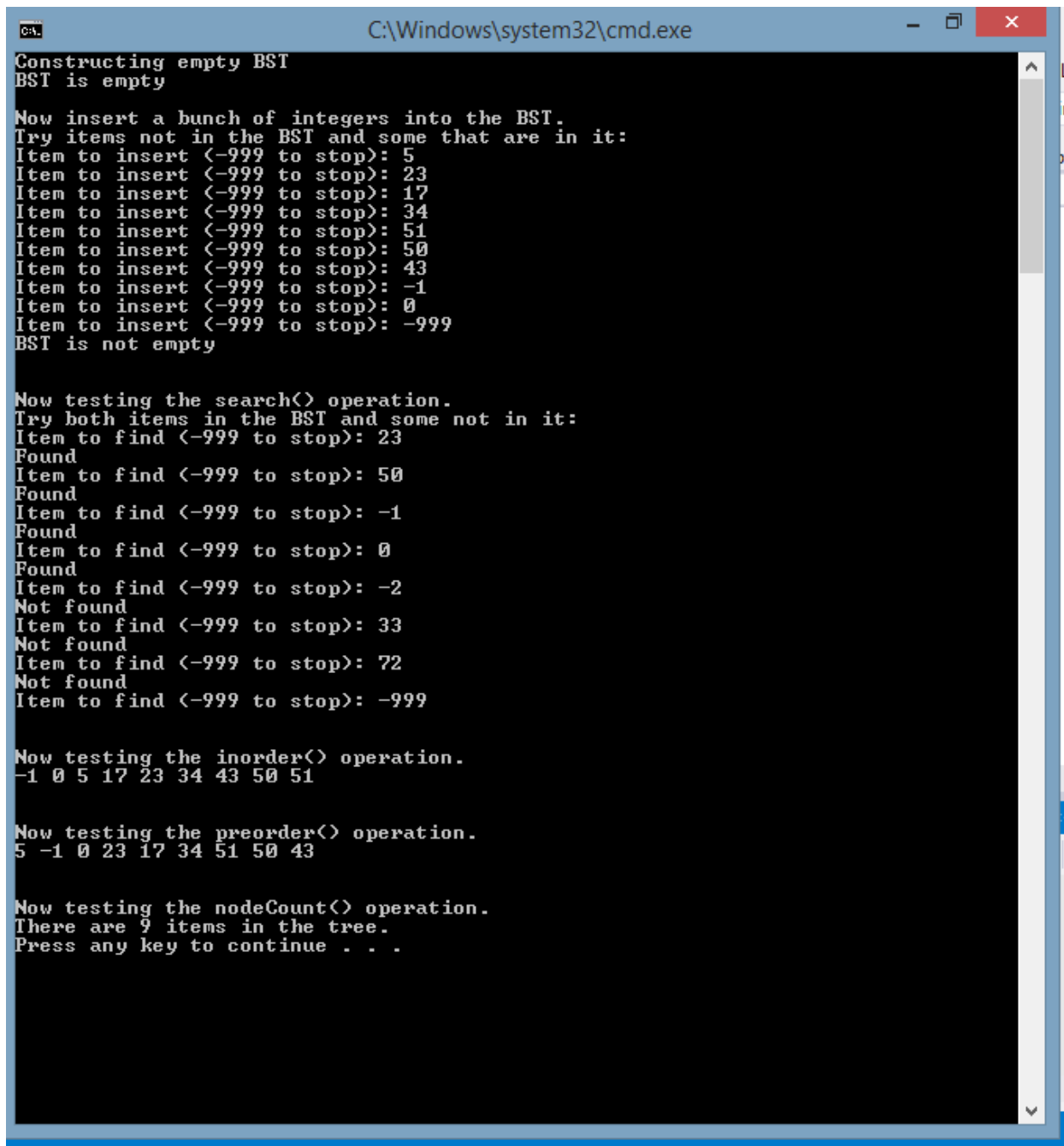
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CST 370

Programming Assignment 7

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This screen shot shows the operation of the recursive search function with items found and not found, inorder(), preorder() and nodeCount() when the tree is not empty.

A screenshot of a Windows command prompt window titled "C:\Windows\system32\cmd.exe". The window has a black background with white text. The text shows the execution of a program for a Binary Search Tree (BST). It starts with "Constructing empty BST" and "BST is empty". Then, it prompts to insert integers, listing 10 items: 5, 23, 17, 34, 51, 50, 43, -1, 0, and -999. After insertion, it says "BST is not empty". Next, it tests the search operation with 10 items, marking some as "Found" and others as "Not found". Then, it tests the inorder operation, displaying the sorted list: "-1 0 5 17 23 34 43 50 51". After that, it tests the preorder operation, displaying the list: "5 -1 0 23 17 34 51 50 43". Finally, it tests the nodeCount operation, stating "There are 9 items in the tree." and "Press any key to continue . . .".

```
C:\Windows\system32\cmd.exe
Constructing empty BST
BST is empty

Now insert a bunch of integers into the BST.
Try items not in the BST and some that are in it:
Item to insert (-999 to stop): 5
Item to insert (-999 to stop): 23
Item to insert (-999 to stop): 17
Item to insert (-999 to stop): 34
Item to insert (-999 to stop): 51
Item to insert (-999 to stop): 50
Item to insert (-999 to stop): 43
Item to insert (-999 to stop): -1
Item to insert (-999 to stop): 0
Item to insert (-999 to stop): -999
BST is not empty

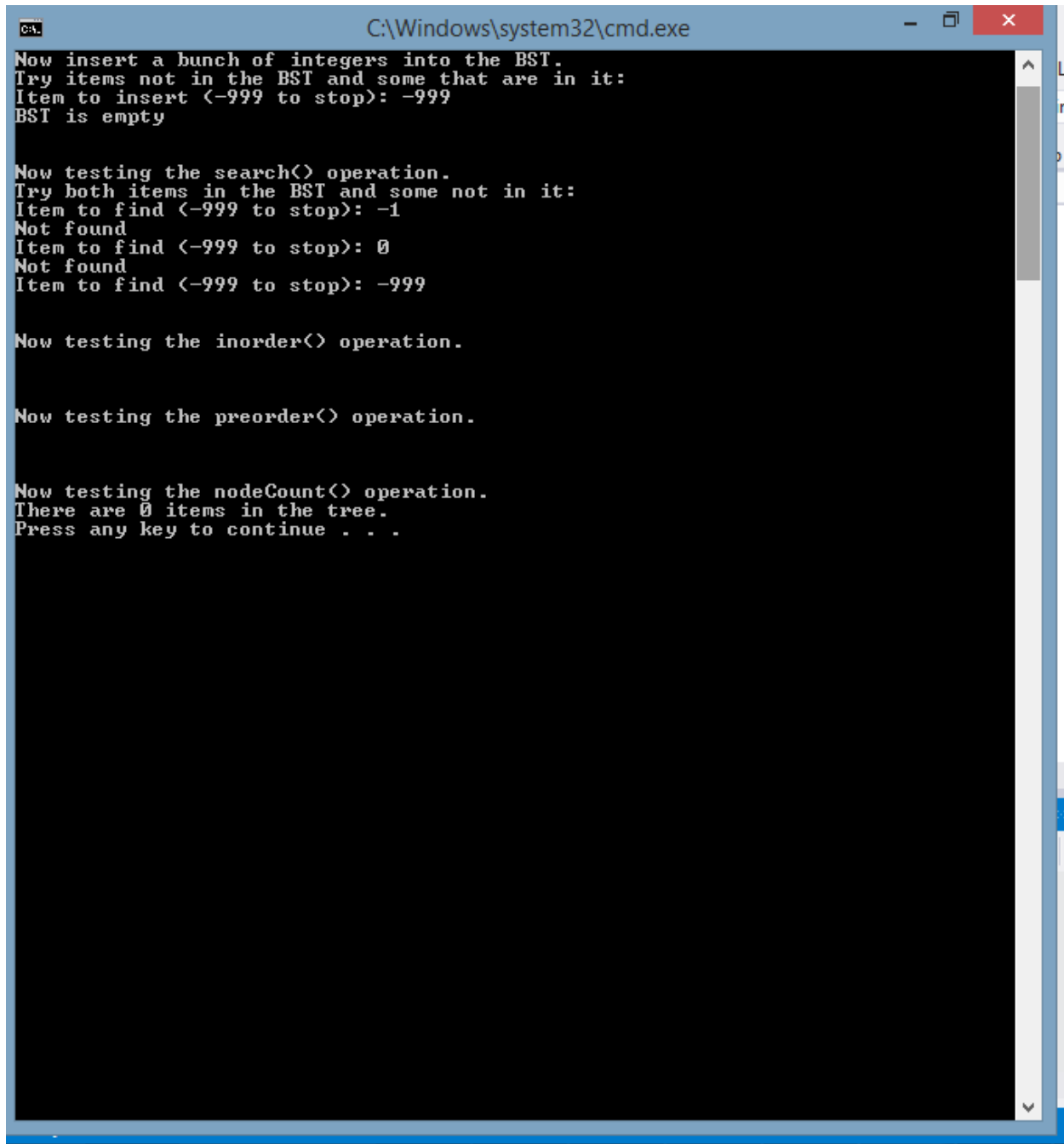
Now testing the search() operation.
Try both items in the BST and some not in it:
Item to find (-999 to stop): 23
Found
Item to find (-999 to stop): 50
Found
Item to find (-999 to stop): -1
Found
Item to find (-999 to stop): 0
Found
Item to find (-999 to stop): -2
Not found
Item to find (-999 to stop): 33
Not found
Item to find (-999 to stop): 72
Not found
Item to find (-999 to stop): -999

Now testing the inorder() operation.
-1 0 5 17 23 34 43 50 51

Now testing the preorder() operation.
5 -1 0 23 17 34 51 50 43

Now testing the nodeCount() operation.
There are 9 items in the tree.
Press any key to continue . . .
```

This screen shot shows the operation of the recursive search function with items not found, inorder(), preorder() and nodeCount() when the tree is empty.

A screenshot of a Windows command prompt window titled "C:\Windows\system32\cmd.exe". The window has a black background with white text. The text shows a series of commands and their outputs for testing a Binary Search Tree (BST) when it is empty. The commands include inserting -999, testing search for -1, 0, and -999, testing inorder and preorder traversals, and testing nodeCount. The output indicates the tree is empty and that the items -1 and 0 were not found, while -999 was found. The nodeCount shows 0 items in the tree. The prompt "Press any key to continue . . ." is visible at the bottom.

```
C:\Windows\system32\cmd.exe
Now insert a bunch of integers into the BST.
Try items not in the BST and some that are in it:
Item to insert <-999 to stop>: -999
BST is empty

Now testing the search() operation.
Try both items in the BST and some not in it:
Item to find <-999 to stop>: -1
Not found
Item to find <-999 to stop>: 0
Not found
Item to find <-999 to stop>: -999

Now testing the inorder() operation.

Now testing the preorder() operation.

Now testing the nodeCount() operation.
There are 0 items in the tree.
Press any key to continue . . .
```