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CS 221-02

Coding Assignment Three

Test Plan

Intentions:

This test plan tests a Binary Search Tree Program and a few of its functions. The function IsEmpty is tested before items are added to the tree as well as afterwards. PutItem is called seven times. GetLength is then used after these seven items are added. LeafCount and SingleParentCount are then tested. Error is included to test whether the program will print out an error statement or if the program will stop functioning. Then the program ends.

Input File:

|  |
| --- |
| Input File: Input |
| IsEmpty PutItem N PutItem F PutItem Q PutItem K PutItem D PutItem G PutItem B IsEmpty GetLength LeafCount SingleParentCount Error Quit |

Expected Output File:

|  |
| --- |
| OutPut File: Output |
| The tree is empty  The item N was added to the tree  The item F was added to the tree  The item Q was added to the tree  The item K was added to the tree  The item D was added to the tree  The item G was added to the tree  The item B was added to the tree  The tree is not empty  The length of the tree is: 7  The number of Leaves is: 3  The number of Single Parent Nodes is: 2  Error occurred. Command not recognized |

Results:

Text

Description automatically generated

Text

Description automatically generatedText

Description automatically generated