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Lab G

**TESTING:**

For my driver program the user is prompted with a menu to perform a linear search, bubble sort, or a binary search on a text file filled with random integers. One file only contains the integers 1-9 and the other is a copy of the first with a 0 amended to the end. Here are some of the tests I conducted to ensure that my search and sort functions were properly implemented.

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| --- | --- | --- | --- | --- |
| Test Case | Input | Test Function | Expected Outcomes | Observed Outcomes |
| Linear Search for existing target | testCopy.txt  Target: 0 | switch(choice){  case 1: LinearSearch | The value 0 is located at index position: 20 | The value 0 is located at index position: 20 |
| Linear Search for non-existent target | test.txt  Target: 0 | switch(choice){  case 1: LinearSearch | The file test.txt does not contain the value 0 | The file test.txt does not contain the value 0 |
| Binary Search for existing target | testCopy.txt  Target: 0 | switch(choice){  case 3: BinarySearch | The value 0 is located at index position: 20 | The value 0 is located at index position: 20 |
| Binary Search for non-existent target | test.txt  Target: 0 | switch(choice){  case 3: BinarySearch | The file test.txt does not contain the value 0 | The file test.txt does not contain the value 0 |
| BubbleSort | Input File: test.txt “4,3,2,1” (example values)  Output File: sorted.txt | switch(choice){  case 2: BubbleSort | Contents of sorted.txt: “1 2 3 4” | Contents of sorted.txt: “1 2 3 4” |