**CST8130 – Data Structures**

**Test Plan < Lab 2>**

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**Feature: Numbers**

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| --- | --- | --- | --- | --- | --- |
| Test# | Description | Input | Expected Output | Actual Output | Status |
| Test1 | To check average method with default input | 0.0f | 0.0 | 0.0 | y |
| Test2 | To check average method with user input | 100.0f  200.0f  3.0f | 101.0 | 101.0 | y |
| Test3 | To find min amd max with default input | 0 | Empty array | Empty array | n |
| Test4 | To find min amd max with user input | 17.0f  10.0f  5.0f | Minimum: 5.0  Maximum : 17.0  Mod min : 2.0 | Minimum: 5.0, Maximum: 17.0, Max Mod Min: 2.0 | y |
| Test5 | To test Factorial method with default input | 0 | 0 | 0 | n |
| Test6 | To test Factorial method with user input input | 10.0f  12.0f | 479001600 | 479001600 | y |
| Test7 | to test addValues with outbound array | 6 | No room in array to add all values | No room in array to add all values | y |
| Test8 | To test readFiles method with no file name | null | java.io.FileNotFoundException: null (The system cannot find the file specified)  at java.base/java.io.FileInputStream.open0(Native Method)  at java.base/java.io.FileInputStream.open(Unknown Source)  at java.base/java.io.FileInputStream.<init>(Unknown Source)  at java.base/java.io.FileInputStream.<init>(Unknown Source)  at java.base/java.io.FileReader.<init>(Unknown Source)  at primary.Numbers.readFile(Numbers.java:50)  at primary.Lab2\_driver.main(Lab2\_driver.java:87) | File Not found | n |
| Test9 | Testing for save file  With null array |  | Exception in thread "main" java.lang.NullPointerException: Cannot invoke "java.lang.Float.toString()" because "this.num[i]" is null  at primary.Numbers.saveFile(Numbers.java:103)  at primary.Lab2\_driver.main(Lab2\_driver.java:98) | Array is null. | n |

**Feature:main**

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| --- | --- | --- | --- | --- | --- |
| Test# | Description | Input | Expected Output | Actual Output | Status |
| Test1 | testing menu  With string input | tuna | Invalid input | Invalid input. Please enter an integer for the menu choice. | n |
| Test2 | Testing with inrange int number | 3 | Please select one of the following:  1: Initialize a default array  2: To specify the max size of the array  3: Add value to the array  4: Display values in the array  5: Display average of the values, minimum value, maximum value, max mod min, factorialMax  6: To Exit  > 3  Add Value : 5  Value added to the array. | Please select one of the following:  1: Initialize a default array  2: To specify the max size of the array  3: Add value to the array  4: Display values in the array  5: Display average of the values, minimum value, maximum value, max mod min, factorialMax  6: To Exit  > 3  Add Value : 5  Value added to the array. | y |
| Test3 | Testing with out of range int numbers` | 7 | Invalid choice. | Invalid choice. Please select a valid option. | n |