***HW 3 – Testcases***

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| Purpose of the Test | Test whether the code handles valid and invalid choices correctly, validates inputs, does correct arithmetic, outputs correctly, handles character and number input correctly |
| Pre-Conditions | None |
| Post-Conditions | Program finishes running without errors and exits |

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| Step | Action | Expected System Response | Pass/ Fail | Comments |
| 1 | Enter choice for random number creation | Program proceeds to random number creation and asks for a number between 10 and 1000 |  |  |
| 2 | Enter choice for character input statistics | Program proceeds to character input statics and asks for a character input |  |  |
| 3 | Enter an invalid choice | Program prints error message and asks for choice again |  |  |
| Random Number Creation | | | | |
| 1 | Enter 10 | Program proceeds to ask for number of times to run loop |  |  |
| 2 | Enter 1000 | Program proceeds to ask for number of times to run loop |  |  |
| 3 | Enter number between 10 and 1000 | Program proceeds to ask for number of times to run loop |  |  |
| 4 | Enter number out of bounds | Program prints error message and asks for a number again |  |  |
| Random Number Creation: Loop | | | | |
| 1 | Enter number more than 3 | Program calculates, prints out a correct table, displays lowest, highest, average values and completes successfully |  |  |
| 2 | Enter number 3 | Program prints error message and asks for a number again |  |  |
| 3 | Enter number less than 3 | Program prints error message and asks for a number again |  |  |
| Character input statistic | | | | |
| 1 | Enter one vowel, press enter | Program prints the character, its numeric decimal value and the classification “vowel.” Add 1 to number of vowels entered |  |  |
| 2 | Enter one capital vowel, press enter | Program prints the character, its numeric decimal value and the classification “vowel.” Decimal value should be different from the non-capital vowel. Add 1 to number of vowels entered |  |  |
| 3 | Enter a consonant, press enter | Program prints the character, its numeric decimal value and the classification “consonant.” Add 1 to number of consonants entered |  |  |
| 4 | Enter a consonant, press enter | Program prints the character, its numeric decimal value and the classification “consonant.” Decimal value should be different from the non-capital consonant. Add 1 to number of consonants entered |  |  |
| 5 | Enter a number, press enter | Program prints the number, its decimal value and the classification “number.” Add 1 to number of numbers entered |  |  |
| 6 | Enter any other character | Program prints the character, its decimal value and the classification “other characters.” Add 1 to the number of other characters entered |  |  |
| 7 | Enter more than 1 character | Program should take first character, ignores the rest and continues with the first character |  |  |
| Character input statistic: Continue | | | | |
| 1 | Enter Y or y | Program prompts the user to enter a character |  |  |
| 2 | Enter N or n | Program displays the number of each type of character previously entered, then exits |  |  |
| 3 | Enter other characters | Program prints error message and asks for Y,y or N,n |  |  |