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| Test: ***Black Box #1*** | | | Current Status: ***In progress*** | | |
| Test title: Invalid N input. | | | | | |
| Testing approach: This test consists of four (4) separate steps with different input variations, to help determine how the program responds to invalid ***and*** valid inputs. Test will cover invalid N inputs, such as: (1) Perfect square input, (2) None perfect square input, (3) Empty input and (4) Negative input.  This test is categorized as a ***Black Box (Boundary Value Analysis)*** testing. | | | | | |
| STEP  1.1  1.2  1.3  1.4 | OPERATOR ACTION  ***N =*** 9  ***Values =*** [1, 2,…, 5]  ***N =*** 5  ***Values =*** [1, 2,…, 5]  ***N =*** <*empty*>  ***Values =*** [1, 2,…, 5]  ***N =*** -9  ***Values =*** [1, 2,…, 5] | PURPOSE  To verify that the program will catch and throw an exception if the N input is invalid. | | EXEPCTED RESULTS  *Valid*: The test will go through, and the program will proceed accordingly. Output will be a Table.  *Invalid*: An exception will be thrown stating the N input is invalid. Program will stop. There will be no output. | COMMENTS  Step(s) 1.1 area *Valid.*  Step(s) 1.2, 1.3 and 1.4 are *Invalid.*  N inputs are assuming the Values [] input is correct. |
| Testing Notes: | | | | | |

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| Test: ***Black Box #2*** | | | Current Status: ***In progress*** | | |
| Test title: Valid Values [] input. | | | | | |
| Testing approach: This test consists of three (3) separate steps with different variations, to help determine how the program responds to invalid ***and*** valid inputs. Test will cover valid Values [] inputs, such as: (1) Sorted array, (2) None sorted array and (3) Empty array.  This test is categorized as a ***Black Box (Boundary Value Analysis)*** testing. | | | | | |
| STEP  1.1  1.2  1.3 | OPERATOR ACTION  ***N =*** 9  ***Values =*** [0, 1, 2,…, 5]  ***N =*** 9  ***Values =*** [1, 4, 3, 2, 5, 0]  ***N =*** 9  ***Values =*** [*empty*] | PURPOSE  To verify that the program will be able to handle multiple types of the standard Values [] input. | | EXEPCTED RESULTS  Step(s) 1.1 and 1.2 should both output a sorted 3x3 table containing the input in ascending order.  Step(s) 1.3 should output an empty 3x3 table, since no integers are present in the Values []. | COMMENTS  Values [] inputs are assuming the N input is valid. |
| Testing Notes: | | | | | |

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| Test: ***Black Box #3*** | | | Current Status: ***In progress*** | | |
| Test title: Valid/Invalid N & Values [] inputs. | | | | | |
| Testing approach: This test consists of four (4) separate steps with different input variations to help determine how the program responds to invalid ***and*** valid inputs. Test will cover (1) Invalid N / Invalid Values [], (2) Invalid N / Valid Values [], (3) Valid N / Invalid Values [] and (4) Valid N / Valid Values [].  This test is categorized as a ***Black Box*** testing. | | | | | |
| STEP  1.1  1.2  1.3  1.4 | OPERATOR ACTION  ***N =*** -2  ***Values =*** [1, 3, a, 6, b, @]  ***N =*** 3  ***Values =*** [1, 4, 3, 6, 7, 8]  ***N =*** 9  ***Values =*** [1, 3, a, 6, b, @]  ***N =*** 9  ***Values =*** [1, 4, 3, 6, 7, 8] | PURPOSE  To verify that the program will be able to handle and catch multiple types of the standard N and Values [] inputs. | | EXEPCTED RESULTS  Step 1.1: The program will stop and throw an exception on the invalid N and/or invalid Values [] input.  Step 1.2: The program will stop and throw an exception on ***only*** the invalid N input.  Step 1.3: The program will stop and throw an exception on ***only*** the invalid Values [] input.  Step 1.4: The program will run and output an ascending ordered table, containing the values from the Values []. | COMMENTS  Step(s) 1.2 and 1.4 are the basic requirements the program should handle.  Step(s) 1.1 and 1.3 are extra requirements the program is ***recommended*** to handle. To fully test all inputs and variations. |
| Testing Notes: | | | | | |