CMIS102 Week 8: Final Project Test Report

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| Test Case: | Input (Height and Weight for each person, respectively): | Expected Output: | Actual Output: | Result: |
| 1. Two people of normal weight, two underweight people, two overweight people | 61,123,  71,158,  67,100,  69,98,  54,147,  52,163 | The Body Mass Index for Josh is: 23.238108035474333  The Body Mass Index for Shelby is: 22.034120214243206  The Body Mass Index for Michael is: 15.66050345288483  The Body Mass Index for Astrid is: 14.470489392984668  The Body Mass Index for Ethan is: 35.43930041152263  The Body Mass Index for Jim is: 42.37758875739645  Participant 1 is of normal weight.  Participant 2 is of normal weight.  Participant 3 is underweight.  Participant 4 is underweight.  Participant 5 is overweight.  Participant 6 is overweight.  There are 2 underweight people in this group.  There are 2 people of normal weight in this group.  There are 2 overweight people in this group. | The Body Mass Index for Josh is: 23.238108035474333  The Body Mass Index for Shelby is: 22.034120214243206  The Body Mass Index for Michael is: 15.66050345288483  The Body Mass Index for Astrid is: 14.470489392984668  The Body Mass Index for Ethan is: 35.43930041152263  The Body Mass Index for Jim is: 42.37758875739645  Participant 1 is of normal weight.  Participant 2 is of normal weight.  Participant 3 is underweight.  Participant 4 is underweight.  Participant 5 is overweight.  Participant 6 is overweight.  There are 2 underweight people in this group.  There are 2 people of normal weight in this group.  There are 2 overweight people in this group. | Pass |
| 1. Three normal weighted, three overweight people, zero underweight people. | 63, 128  74,163,  69,132,  65,177,  59,161,  50,180 | The Body Mass Index for Josh is: 22.671705719324766  The Body Mass Index for Shelby is: 20.925675675675677  The Body Mass Index for Michael is: 19.490863264020163  The Body Mass Index for Astrid is: 29.45112426035503  The Body Mass Index for Ethan is: 32.51450732548118  The Body Mass Index for Jim is: 50.616  Participant 1 is of normal weight.  Participant 2 is of normal weight.  Participant 3 is of normal weight.  Participant 4 is overweight.  Participant 5 is overweight.  Participant 6 is overweight.  There are 0 underweight people in this group.  There are 3 people of normal weight in this group.  There are 3 overweight people in this group. | The Body Mass Index for Josh is: 22.671705719324766  The Body Mass Index for Shelby is: 20.925675675675677  The Body Mass Index for Michael is: 19.490863264020163  The Body Mass Index for Astrid is: 29.45112426035503  The Body Mass Index for Ethan is: 32.51450732548118  The Body Mass Index for Jim is: 50.616  Participant 1 is of normal weight.  Participant 2 is of normal weight.  Participant 3 is of normal weight.  Participant 4 is overweight.  Participant 5 is overweight.  Participant 6 is overweight.  There are 0 underweight people in this group.  There are 3 people of normal weight in this group.  There are 3 overweight people in this group. | Pass |
| 1. Four underweight, one normal weighted, one overweight person. | 67,99,  70,101,  72,97,  66,129,  55,149,  65,94 | The Body Mass Index for Josh is: 15.50389841835598  The Body Mass Index for Shelby is: 14.490408163265306  The Body Mass Index for Michael is: 13.154128086419753  The Body Mass Index for Astrid is: 20.818870523415978  The Body Mass Index for Ethan is: 34.62710743801653  The Body Mass Index for Jim is: 15.640710059171598  Participant 1 is underweight.  Participant 2 is underweight.  Participant 3 is underweight.  Participant 4 is of normal weight.  Participant 5 is overweight.  Participant 6 is underweight.  There are 4 underweight people in this group.  There are 1 people of normal weight in this group.  There are 1 overweight people in this group. | The Body Mass Index for Josh is: 15.50389841835598  The Body Mass Index for Shelby is: 14.490408163265306  The Body Mass Index for Michael is: 13.154128086419753  The Body Mass Index for Astrid is: 20.818870523415978  The Body Mass Index for Ethan is: 34.62710743801653  The Body Mass Index for Jim is: 15.640710059171598  Participant 1 is underweight.  Participant 2 is underweight.  Participant 3 is underweight.  Participant 4 is of normal weight.  Participant 5 is overweight.  Participant 6 is underweight.  There are 4 underweight people in this group.  There are 1 people of normal weight in this group.  There are 1 overweight people in this group. | Pass |

Written Report:

In order to test my Mass Calculation Program, I created and executed 3 test cases. All of them passed successfully.

For my first test case, I decided to split the individuals equally. Therefore, I entered data for 2 people of normal weight, two overweight people, and two underweight people. The data are arranged on the above table so that the Height and Weight for each person are next to each other, followed by the data for the next person underneath them. The program worked as expected, as it correctly calculated all body mass indices, determined the mass category of the participants, and outputted the final number of participants in each category. The first test case was therefore passed.

My second test case involved entering an equal number of overweight individuals, and people of normal weight (3), while leaving no underweight people. Once again, the program worked flawlessly, accurately calculating and displaying all indices, distributing the individuals into correct categories, and counting the number of people in each one. The second test case was, therefore, also effectively passed.

In the final test case, I decided to see how the program would behave having a majority in a certain category. For this purpose, I chose to enter data for four underweight, one normal weighted, and one overweight person. Here, too, the program’s operations were very smooth, with no visible mistakes in any of the output. The test case, and, consequently, the entire test report, passed with flying colors.