**Test Plan**

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| **Test Case** | **Input** | **Expected Output (Before implementation)** | **Actual Output (After implementation)** | **Result (Pass/Fail)** |
| **1** | Steve: 74 in. 220 lbs  Tony: 73 in. 225 lbs  Natasha: 67 in. 131 lbs  Bruce: 69 in. 128 lbs  Peter: 70 in. 167 lbs  Bucky: 69 in. 150 lbs | Underweight: 0  Normal weight: 4  Overweight: 2 | Underweight:  Normal weight:  Overweight: |  |
| **2** | Wanda: 67 in. 160 lbs  Vision: 73 in. 221 lbs  Stephen: 74 in. 193 lbs  Clint: 71 in. 200 lbs  Scott: 72 in. 197 lbs  T‘Challa: 69 in. 180 lbs | Underweight: 0  Normal weight: 2  Overweight: 4 | Underweight: 0  Normal weight: 1  Overweight: 5 | pass |
| **3** | Logan: 66 in. 180 lbs  Xavier: 73 in. 195 lbs  Wade: 71 in. 176 lbs  Sam: 69 in. 158 lbs  Gamora: 65 in. 127 lbs  Drax: 72 in. 230 lbs | Underweight: 0  Normal weight: 3  Overweight: 3 | Underweight: 0  Normal weight: 1  Overweight: 5 | pass |
| **4** | Teen Groot: 64 in. 119 lbs  Happy: 69 in. 240 lbs  Nick: 71 in. 191 lbs  Pietro: 70 in. 178 lbs  Thor: 73 in 217 lbs  Janet: 65 in. 150 lbs | Underweight: 1  Normal weight: 1  Overweight: 4 | Underweight: 0  Normal weight: 1  Overweight: 5 | pass |

**Analysis**

**Input**:

Height (in inches) and weight (in pounds) for six individuals.

**Output**:

BMI values for each individual.

Categorization into our "Underweight," "Normal weight," or "Overweight" options.

**Process**:

Get user input for height and weight.

Calculate BMI using the formula: BMI = (weight (lbs)/height(in)^2) × 703

BMI scaling:

* Underweight: BMI < 18.5
* Normal weight: 18.5 ≤ BMI < 24.9
* Overweight: BMI ≥ 25

Count the number of individuals in each category.

**Variables**

heights (array of floats): Holds height of each person.

weights (array of floats): Holds weight of each person.

bmis (array of floats): Stores BMI values.

uw\_count (int): Tracks how many individuals are underweight.

n\_count (int): Tracks how many individuals have normal weight.

ow\_count (int): Tracks how many individuals are overweight.