

GEEN165 Lab Quiz 1

You are required to implement a Body Mass Index (BMI) calculator. The BMI is calculated from a person's height and weight:

$$\text{BMI} = ((\text{weight})/(\text{height} \times \text{height})) * 703$$

For full credit, your GUI should verify that the JTextFields contain valid positive numerical values after the calculate button is clicked. The result should be displayed in the bottom right JLabel. You should also display either: Underweight, Normal weight, Overweight or Obese depending on how the calculated falls in the following ranges:

- Those with a BMI below 18.5 are considered **underweight**.
- Those with a BMI between 18.5 and 24.9 are considered **normal weight**.
- Those with a BMI between 25.0 and 29.9 are considered **overweight**.
- Those with a BMI of 30.0 and above are considered **obese**.

The Reset button clears the weight and height TextFields and returns the BMI result Label back to 0.0.

Grading:

Level 1 (5 pts) – Non- functional GUI with appropriate Layout Panes.

Level 2 (10 pts) – A functional GUI that calculates BMI only with no input validation.

Level 2 (17 pts) – A functional GUI that calculates BMI and BMI Status with no input validation.

Level 3 (20 pts) – A functional GUI with input validation (checks for positive numerical values in the TextFields).

