

Instructions – A2 – BMI

Overview:

You'll be creating a simple python program that prompts the user for information and will calculate BMI (Body Mass Index) based on the information entered, as well as the categories associated with the calculated BMI.

Logical Flow:

Prompt the user to enter:

- a first name
- a last name
- height in feet (e.g. 5)
- the number of inches (e.g. 7)
 - (for example, if the height you want to enter is 5'7, first you would enter 5 for the feet, then 7 in the next prompt for the inches)
- weight in pounds (lbs)

Make sure your prompts are readable and inform the user of the type of data to enter (e.g. inches, etc.). You should include a colon and an extra space at the end of your prompt, so it looks nice when entering in the data.

Then, calculate the BMI based off of the information given. You can use one of these two formulas:

- $([\text{weight (lbs)}] / [\text{height (in)}]^2) \times 703$
- $([\text{weight (lbs)}] / [\text{height (in)}] / [\text{height (in)}]) \times 703$

Note that since the user will input this information as feet and inches separately, you'll need to calculate the total inches for this to work. The calculated BMI should be rounded to the 2nd decimal place.

BMI also has categories associated with the numerical calculation. Calculate the category associated with the numerical BMI:

- Underweight: < 18.5
- Normal weight: $18.5 \leq x < 25$
- Overweight: $25 \leq x < 30$
- Obese: 30 or greater

At the end, you should print out the user's first name, last name, numerical BMI, and BMI category formatted like this:

- Amit Patel has a BMI of 15.77. The associated category is: Underweight.

As with any python program, there is variation in how exactly you implement it. Just make sure you fulfill the requirements listed in the rubric below.

Upload just the python file to Learning Suite.

Example Output:

please enter your first name: Amit

please enter your last name: Patel

enter your height in feet: 6

please enter height in inches: 7

please enter weight in lbs: 140

Amit Patel has a BMI of 15.77. The associated category is: Underweight.

Rubric:

Requirement	Points	Notes
stores first name	5	
stores last name	5	
stores height in feet	5	
stores height in inches	5	
stores weight	5	
includes units and extra space during input prompts	5	
calculates BMI correctly	20	· -5 if they attempt it, but it doesn't get stored correctly
Rounds BMI to 2nd decimal	10	· - 3 if attempted, but not done correctly · - 1 if they round, but not to the 2nd decimal. Note, when using the round() function, the ending result may not show 2 decimals if the number doesn't have decimals, e.g. 15.00 might show as 15. That is fine.
calculates BMI category correctly	20	· -5 if attempted, but not calculated correctly
prints out correctly formatted message	15	· -3 for each missing piece of data (first name, last name, BMI, category) · - 5 if the data isn't at least attempted to be formatted correctly. If missing a period, that is fine. But it should be spaced nicely.
includes comments: name and description at the top, and comments throughout	5	· -1 if it didn't include their name · -1 if it didn't include a project description · -2 if it didn't include general comments. Err on the side of leniency
Total	100	