Report: BMI Calculation Program

Source Code: https://github.com/NepsterBR/graduation-projects/blob/main/%20Programming%20language/BMI/bmi_calculator.py

Introduction: The Body Mass Index (BMI) is a measure used to assess whether a person has a healthy weight in relation to their height. It is calculated by dividing a person's weight by their height squared. In this report, we will describe the development of a program in Python to calculate the BMI.

Methods: The program was developed in the Python programming language and utilizes two main functions: `calculate_bmi` and `interpret_bmi`.

The `calculate_bmi` function takes the weight (in kg) and height (in meters) of a person as parameters. It calculates the BMI using the formula: BMI = weight / height^2. The result is returned as a numeric value.

The `interpret_bmi` function takes the BMI value as a parameter and returns an interpretation of the result based on pre-defined ranges. These ranges are commonly used to classify the BMI into categories such as "Underweight," "Normal weight," "Overweight," and "Obesity."

Results: The BMI calculation program was tested with different weight and height values provided by the user. The obtained results were consistent and corresponded to the expected categories.

The table below shows some examples of results obtained by the program:

Weight (kg)	Height (m)	BMI	Interpretation
60	1.65	22.04	Normal weight
75	1.70	25.95	Overweight
90	1.80	27.78	Overweight
65	1.60	25.39	Overweight
80	1.75	26.12	Overweight

It is important to note that these categories are just a way to interpret the BMI result and should not be considered as a definitive medical diagnosis.

Conclusion: In this report, we presented the development of a Python program to calculate the Body Mass Index (BMI). The program utilizes two main functions, `calculate_bmi` and `interpret_bmi`, to calculate the BMI and interpret the result into pre-defined categories.

The program was successfully tested, and the obtained results were consistent with the expected ranges. However, it is important to remember that BMI is just a general measure and does not take into account other individual factors such as body composition and fat distribution.

This program can be useful for individuals who wish to monitor their weight and assess their overall health condition. However, it is always recommended to seek professional medical guidance for a more comprehensive and accurate evaluation.