Problem Set 1 Exercise #19: Body Mass Index

Reference: Lecture 3 notes

Learning objectives: Selection statements

Estimated completion time: 25 minutes

Problem statement:

Given a person's weight in kilograms and height in meters, his/her BMI (Body Mass Index) is calculated based on this formula:

$$BMI = Weight / Height^2$$

The following table shows the body types according to a person's gender and BMI:

	Female	Male
Underweight	BMI $\leq$ 19	BMI $\leq$ 20
Acceptable	BMI > 19 and $\leq$ 24	BMI > 20 and $\leq$ 25
Overweight	BMI > 24	BMI > 25

Write a program **bmi.c** to do the following:

1. Read the user's gender (type **`int`**), weight (type **`double`**) and height (type **`double`**).
2. Call a function **`body_type()`** that takes in the above values, and returns the body type which is an integer.
3. Upon obtaining the body type, display a suitable advice for the user.

The gender is encoded using the following integers:

- 0 to represent female
- 1 to represent male

The body type is encoded using the following integers:

- -1 to represent underweight
- 0 to represent acceptable
- 1 to represent overweight

Sample run #1:

```
Enter your gender (0 for female, 1 for male): 0
Enter your weight (kg) and height (m): 62 1.6
Time to join the gym!
```

Sample run #2:

```
Enter your gender (0 for female, 1 for male): 1
Enter your weight (kg) and height (m): 62 1.6
Great! Maintain it!
```

Sample run #3:

```
Enter your gender (0 for female, 1 for male): 1
Enter your weight (kg) and height (m): 61.5 1.8
Stuff yourself with more food!
```