Computer Science Project - Documentation

Chloé Lefevre

Target assessment level

Target assessment level of this work is 2.

Specification

What does the program do?

The program

1. Takes in and reads the user's age, either continuing the program or terminating it.
2. Takes in and reads the user's weight and height units and values.
3. Calculates the bmi variable in different cases according to the user's inputs.
4. Prints the user's bmi and meaning according to the calculated bmi variable.

The user supplies inputs from the keyboard, giving variables and strings that lead to different condition clauses and cases.

Data format

The input data consists of individual lines and numerical values, as follow:

`age, massunit, weight, height.`

`age, weight,` and `height` all are double values (numbers), while `massunit` is a single word from the two options `kg` and `lbs`.

Correctness and exception handling

Typical test cases

The first output case with inputs: `21, lbs, 150, 70` is:

```
Your BMI is: 21.520408163265305 lbs/in2

You are normal; of a healthy weight.
```

The second output case with inputs: `63, kg, 50, 1.65` is:

```
Your BMI is: 18.36547291092746 kg/m2
```

```
You are underweight
```

The third output case with input `12` is

```
Sorry, the BMI calculator is more accurate for adults.
```

The outputs are correct, efficiently calculating the BMIs of the user according to their inputs.

Exception handling

If the `age` input of the user is not in a `int` form, an exception will be caught and signalled the user, as well as the program terminating.

```
This is a BMI calculator. How old are you sixty three
got exception: java.util.InputMismatchException
Command execution failed.
```

```
This is a BMI calculator. How old are you 72.7
got exception: java.util.InputMismatchException
Command execution failed.
```