

## Assignment 1

**Due date:** as indicated on Moodle

You may work alone or in a group of 2.

### Objectives:

- Create a fully functioning Java application
- Get familiar with the IDE (IntelliJ **Community**)

### Instructions:

1. Develop a Java application that calculates the Body Mass Index (BMI) based on the following formula:

$$\text{BMI} = \frac{\text{mass(kg)}}{(\text{height(m)})^2}$$

2. The application should not accept weights more than 300 kg or less than 10 kg
3. The application should not accept heights more than 2.2 meters or less than 0.2 meters.
4. The application should display a recommendation phrase based on the Singaporean health risk analysis of the BMI value. You can find the analysis @  
[http://en.wikipedia.org/wiki/Body\\_mass\\_index](http://en.wikipedia.org/wiki/Body_mass_index)
5. You have to start the process of developing this app by coming up with at least 5 test cases. These test cases should not all be focused on one test category. For example, a couple of test cases should be for sanity testing; another couple for negative testing, and another couple for boundary testing.
6. Class name and variable names must be meaningful.
7. Internal documentation is a must.
8. Once you are done, you need to zip the test cases file, and the .java file and upload the zip file to Moodle.
9. The whole team will give a demo to the instructor in the lab.

Have fun 😊