

ITIS/CS 5180 Mobile Application Development  
In Class Assignment 2

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**Basic Instructions:**

1. In every file submitted you **MUST** place the following comments:
  - a. Assignment #.
  - b. File Name.
  - c. Full name
2. Each team is required to submit the assignment on Canvas.
3. Please download the support files provided with this assignment and use them when implementing your project.
4. Submission details:
  - a. Compress the contents of your project folder. The file name is very important and should follow the following format: **InClass02.zip**
  - b. Only one group member is required to submit on behalf of the whole group.
  - c. You should submit the assignment through Canvas: Submit the zip file.
5. The required Android Virtual Device (AVD) should have **minimum SDK version set to 16 and target SDK at 25**.
6. **Failure to follow the above instructions will result in point deductions.**

## In Class Assignment 2 (100 points)

Today we are building our first Android application. The app is a Body Mass Index (BMI) calculator. To calculate the BMI follow the below equation. The standard weight status categories associated with BMI ranges for adults (18 years and above) are shown in the following table.

$$BMI = 703 \times \frac{\text{mass (pounds)}}{\text{height}^2 \text{ (inches)}}$$

Category	BMI
Underweight	$BMI < 18.5$
Normal or Healthy Weight	$18.5 \leq BMI < 25$
Overweight	$25 \leq BMI < 30$
Obese	$30 \leq BMI$

### **BMI Calculator (100 points)**

This is a single Activity application, as shown in Figure 1. The app requirements are as follows:

1. The app enables the user to calculate their BMI based on the values provided in the the Weight and Height EditTexts. The BMI should be calculated based on the equation provided above.
2. Clicking the “Calculate” button:
  - a) If the age or weight or height are not entered correctly, display a toast indicating that this field is required.
  - b) If the age is less than 18, display a Toast message indicating that the age should be 18 and above.
  - c) If all the values are entered correctly, calculate the BMI value based on the provided equation and display the feedback as presented in the Figures 2(a) to 2(c). Notice the color differences in the presented cases.

The wireframe shows a mobile app interface titled "BMI Calculator". It features three input fields: "Age" with a unit selector set to "Years", "Weight" with a unit selector set to "Pounds", and "Height" with two unit selectors, "Feet" and "Inches". Below these fields is a large "Calculate" button. The interface is designed with a dark header and light-colored input fields.

**Figure 1, App Wireframe**

BMI Calculator

Age

Weight

Height

Calculate

Result

BMI = 21.52 (Normal)

Normal BMI range: 18.5 - 25

Keep up the good work !!

(a) Normal BMI

BMI Calculator

Age

Weight

Height

Calculate

Result

BMI = 28.70 (Overweight)

Normal BMI range: 18.5 - 25

You will need to lose 25.8 lbs to reach a BMI of 25

(b) Overweight/Obese BMI

BMI Calculator

Age

Weight

Height

Calculate

Result

BMI = 14.35 (Underweight)

Normal BMI range: 18.5 - 25

You will need to gain 28.9 lbs to reach a BMI of 18.5

© Underweight BMI

Figure 2, App Wireframe