

ITIS/ITCS 5180 Mobile Application Development  
In Class Assignment 02

**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 (if there is any) 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: **Group#\_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.
  - d. You will have two zip files in this assignment. So, zip them again into one zip to submit.
5. The required Android Virtual Device (AVD) should have **minimum SDK version set to 22 and target SDK at 27**.
6. **Failure to follow the above instructions will result in point deductions.**

### **In Class Assignment 02 (100 points)**

This is the first graded assignment. You will be developing two applications with your partner. First, the BMI calculator and next, the Weight Estimator. Both of the applications will be utilizing the variations of the same formula. The formula for calculating Body Mass Index (BMI) is:

$$\text{BMI} = (\text{Weight in Pounds} / (\text{Height in inches} \times \text{Height in inches})) \times 703$$

**1 foot = 12 inches**

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

The wireframe shows a smartphone screen with a black header bar containing the text "BMI Calculator". Below the header is a white content area. At the top of this area is the text "Body Mass Index (BMI)" followed by a horizontal blue line. Below this are three input fields. The first is labeled "Weight" and contains the number "176" followed by the unit "lb". The second is labeled "Height" and contains the number "5" followed by the unit "feet". The third is also labeled "Height" and contains the number "7" followed by the unit "inches". Below these input fields is a grey button with the text "Calculate BMI". At the bottom of the screen, the text "Your BMI: 27.6" and "You are Overweight" is displayed.

**Figure 1: BMI Calculator Wireframe**

The interface should be created to match the user interface presented in Figure 1. Try to design it as similar as possible, however, it is recommended to give more time to implement the logics first. Please follow the following instructions:

1. Create a new android project named "In Class 2a".
2. The String values used for the button labels should be read from the strings.xml file and should not be hardwired in the layout file.
3. This is the first application you will develop. Here you will develop the BMI calculator using the aforementioned formula.

4. First, use a TextView to display the String, "Body Mass Index (BMI)."
5. Next, use another TextView to display the String "Weight".
6. Then, use an EditText to create an input form for taking Weight input.
7. Subsequently, display Height TextView, two EditTexts to take Height inputs.
8. Display a button having the String, "Calculate BMI".
9. Finally, Display your results using two TextViews.
  - a. First, display your BMI.
  - b. Second, you need to display the current BMI status. BMI Categories are:
    - Underweight =  $<18.5$
    - Normal weight =  $18.5\text{--}24.9$
    - Overweight =  $25\text{--}29.9$
    - Obesity = BMI of 30 or greater
10. When you click on the button, you should calculate and display the result accordingly. Display a Toast having the message, "BMI Calculated".

**NOTE: All the inputs must be non negative Real numbers. You need to check for any anomaly in case for inputs. If any invalid input is given, your applications should Toast a message, "Invalid Inputs."**

**Good Luck!**