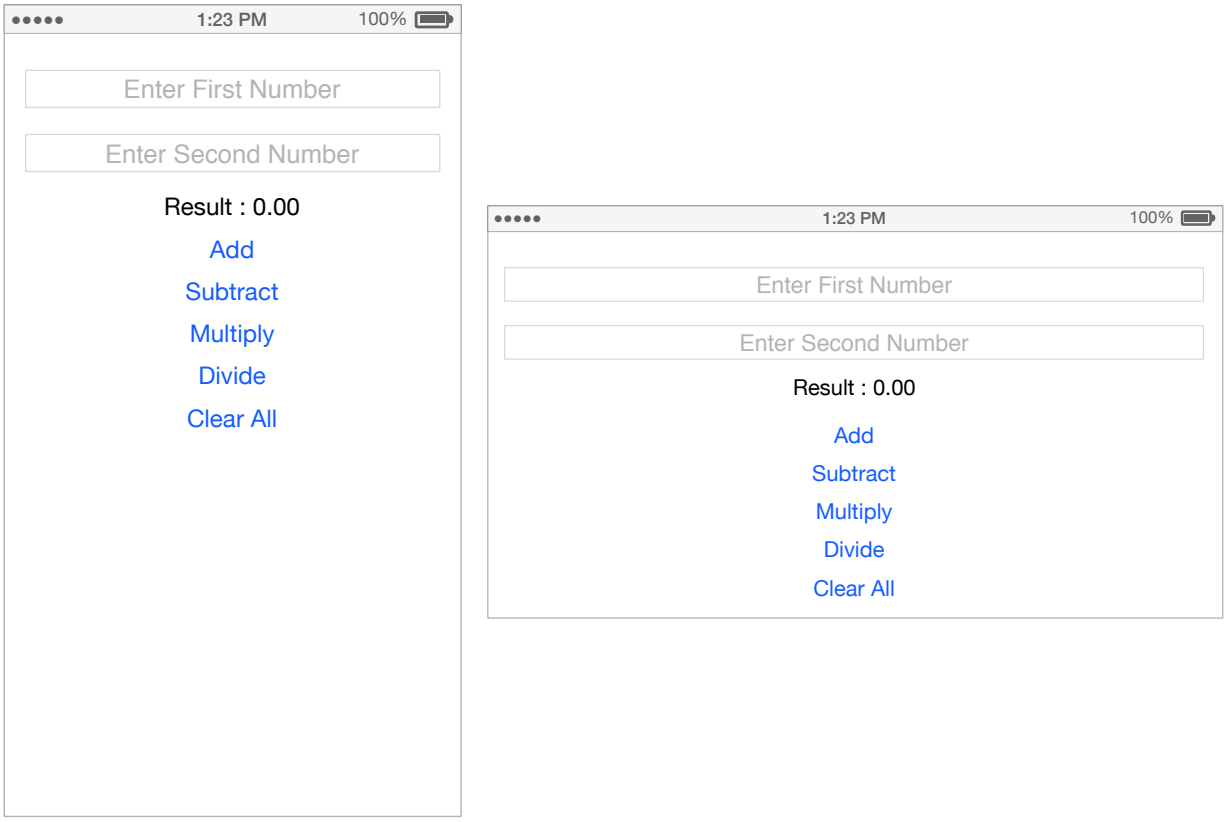
ITIS/ITCS 6010 – Advanced Topics for Mobile App Development
In Class Assignment 3

Basic Instructions:

1. In every file submitted you MUST place the following comments:
   a. Assignment #.
   b. File Name.
   c. Student Full Name.
2. This is an individual assignment, each student is expected to work alone and submit their own work.
3. Your assignment will be graded for functional requirements and efficiency of your submitted solution. You will loose points if your code is not efficient, does unnecessary processing or blocks the UI thread.
4. Please download the support files provided with this assignment and use them when implementing your project.
5. Create a zip file which includes all the project folder, any required libraries, and your presentation material.
6. Submission details:
   a. You should submit the assignment through canvas: Submit the zip file.
7. **Failure to follow the above instructions will result in point deductions.**

In Class Assignment 3 (100 Points)

In this assignment you will build a simple iOS application. You will get familiar with common iOS components and how to interact with them. You will build a single window simple calculator application.



(a) Portrait **(b) Landscape**

Figure 1: Application Wireframe

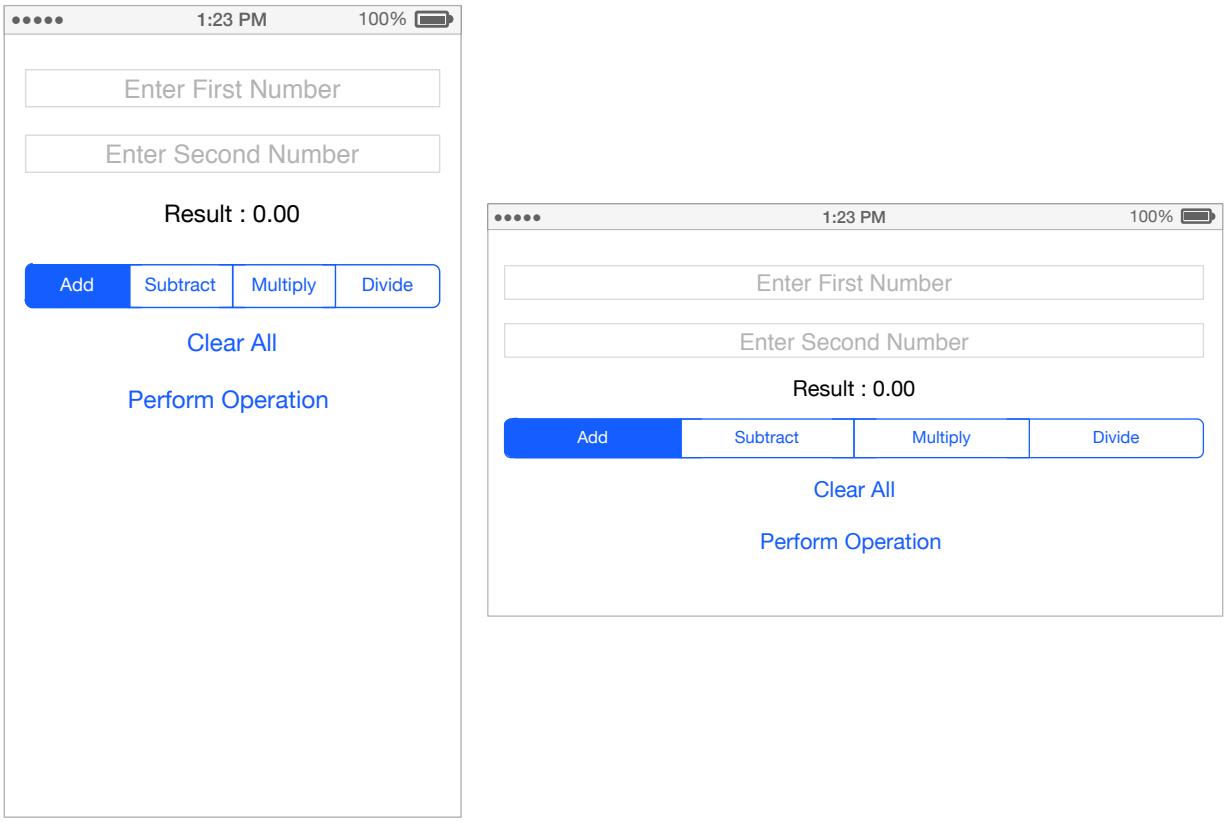
Part 1 (80 Points)

The interface should be created to match the user interface (UI) presented in Figure 1. To build the UI, please follow the following tasks:

1. Create a new project called “InClass02a”
2. This is a simple calculator for basic operations (+,-,x, and /) for two inputs. Each button will perform the logic of the corresponding operation and display the result in the Result textView. Note that:
   a. Add operation: Result = Number1 + Number 2
   b. Subtract operation: Result = Number1 - Number 2
   c. Multiply operation: Result = Number1 * Number 2
   d. Divide operation: Result = Number1 / Number 2
   e. Clear All should clear all the input fields and resets the Result to 0.00
3. Your code should check for special cases such as when there are no numbers

entered, invalid numbers and divide by zero. In such special cases display a Toast message indicating the error.

4. The selected operation is executed when the corresponding operation's button is clicked.
5. Your code should check for special cases such as when there are no numbers entered or divide by zero. In such special cases display an alert dialog indicating to the user that an error has occurred.
6. Use auto layout to configure the layout such that it matches Figure 1(a) in portrait and Figure 2(b) in landscape.



(a) Portrait **(b) Landscape**

Figure 2: Application Wireframe

Part 2 (20 Points)

The interface should be created to match the user interface (UI) presented in Figure 2. To build the UI, please follow the following tasks:

1. Create a new project called "InClass02b"
2. This is a simple calculator for basic operations (+,-,x, and /) for two inputs. Each button will perform the logic of the corresponding operation and display the result in the Result textView. Note that:
   a. Add operation: Result = Number1 + Number 2
   b. Subtract operation: Result = Number1 - Number 2

   c. Multiply operation: Result = Number1 * Number 2
   d. Divide operation: Result = Number1 / Number 2
3. The app uses the segmented control UI component to display the different operation options.
4. Your code should check for special cases such as when there are no numbers entered, invalid numbers and divide by zero. In such special cases display a Toast message indicating the error.
5. ClearAll: clear all the input fields and resets the Result to 0.00
6. The selected operation is executed when the “Perform Operation” button is clicked.
7. Your code should check for special cases such as when there are no numbers entered or divide by zero. In such special cases display an alert dialog indicating to the user that an error has occurred.
8. Use auto layout to configure the layout such that it matches Figure 2(a) in portrait and Figure 2(b) in landscape.