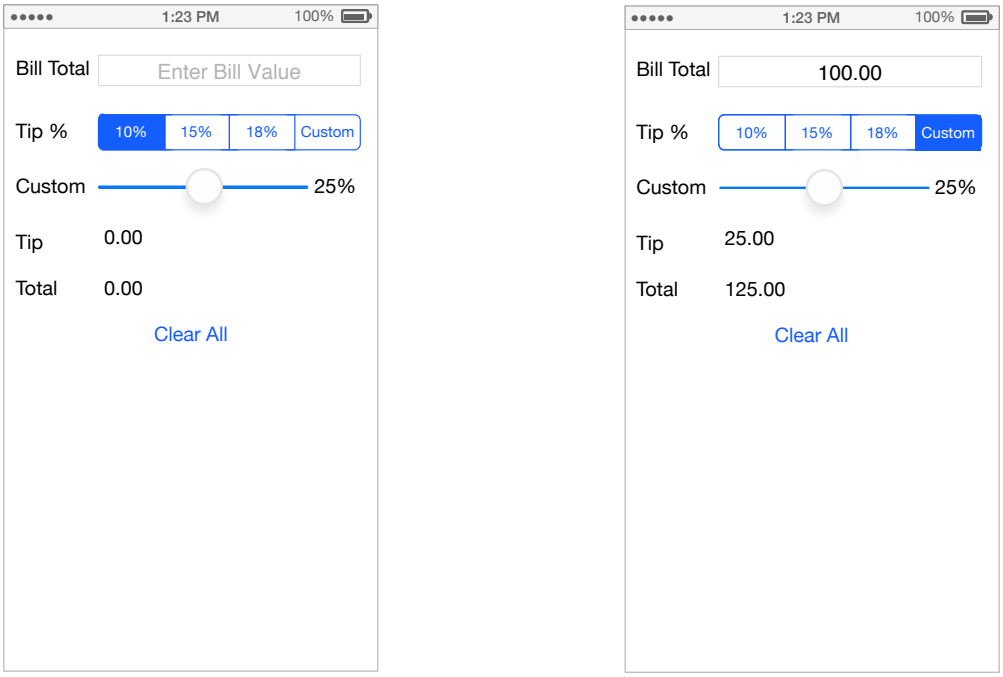
ITIS/CS 4180 – Mobile App Development
Homework 01

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.**

Homework 01 (100 Points)

In this assignment you will get familiar with common iOS components and how to interact with them. You will build a single activity Tip Calculator application.



(a) Initial Screen (b) Custom Tip Example

Figure 1, App Wireframe

Part 1 (30 Points): Building the Interface

The interface should be created to match the user interface (UI) presented in Figure 1. The requirements are as follows :

1. Use a Text Field component for the user to enter the bill value. The Text Field component should be setup to limit the bill total value to only positive numbers. When the application starts the bill total Text Field should be empty, and should display the placeholder text “Enter Bill Value” as indicated in Figure 1(a).
2. Use a Segmented Control to enable the user to pick from the tip options 10%, 15%, 18% and Custom. When the application starts the 10% tip choice should be selected.
3. Use the Slider to enable the user to pick a custom tip value, the maximum custom tip value should be set to 50%. When the application starts the custom tip value should be set to 25%. On the right of the Slider use a Label to display the current progress of the Slider, which represents the current custom tip value.
4. Use Label components to display the tip and total values. When the application starts the bill value, tip and total values should be set to 0.00. The tip segmented control set to 10% and the custom slider to 25%.

Part 2 (70 Points): Event Handlers and App Behavior

In this part you will build the required logic for the tip calculator app. The requirements are as follows:

1. The tip Segmented Control should enable the user to select one of tip options. If a tip option is selected the tip and total values should be calculated and update based on the selected tip option and the bill total. See Figure 1.
2. If the user updates or edits the bill total the tip and total values should be updated to reflect their new values.
3. If the bill total is empty, then tip and total values should be set to 0.00.
4. When the custom Slider is changed the current custom tip progress should be updated to show the Slider progress. If the custom tip option is selected, then the tip and total values should be calculated based on the current custom tip progress.
5. Clicking the Clear All button should set the bill value, tip and total to 0.00, and set the tip segmented control to 10% and set the custom slider to 25%.