**Introduction**

The purpose of this lab is to give you practice setting UI constraints to:

* Position controls relative to other controls, views, or the screen
* Center controls on the screen
* UI layout should respond to both screen size and orientation

**Tic-tac-toe Game**

Create a game app that has buttons for each of the 9 squares in the game and a reset button. The buttons should all have no text on them when the app starts. When the user taps on a button an O should be displayed on that button. After tapping on a button, the app should randomly add an X to some un-used button. The user should be prevented from tapping on buttons that have already been used. The reset button will clear all the grid buttons. Buttons will be automatically centered on the screen regardless of screen size or orientation. Separate the game logic into a separate class (don’t put it in the ViewController).

**Alternative lab assignment**  
Build any app that has a grid of buttons and/or labels. There should be at least 10 controls on the screen and some of them must be buttons. The controls should be centered on the screen regardless of the screen size or orientation.

**Submission**

Take four screen shots of the app running that show it on a:

* Small screen, portrait orientation
* Small screen, landscape orientation
* Large screen, portrait orientation
* Small screen, landscape orientation

Beta Version

* Zip the solution folder. (Remove the *bin* and *obj* folders before zipping.)
* Put the screen shots in a document, label each screen shot, and upload the document.
* Post both files in the Beta + Code Review forum

Release Version

Revise your code and upload it to the Moodle Lab Release assignment along with the code review your lab partner gave you. Complete the “Release’ column of the review to show what you revised.