**CS1181 Programming Assignment 12**

**Android Application (60 pts)**

**Option 1: Tic-Tac-Toe Game**

Write a basic game of tic-tac-toe, where two players take turns pressing buttons in a 3x3 grid to mark "X" or "O" characters on them respectively. The “X” and “O” characters should be different colors. If any player can place three of their letter in a row horizontally, vertically, or diagonally, that player wins the game. Setting up the buttons for the game is a good opportunity to practice using GridLayout. You'll probably want to set the buttons to have a large size so that they fill a large portion of the screen, as well as giving them a large font to make them easier to read and click. If you want a simpler implementation, you can write your code as though two human players were playing it on the same screen; the first tap is an X move, the second is an O move, and so on. If you want more challenge, you could have the computer play as the second player. A simple strategy would be to just randomly move on any open square, but a more complex computer player would try to "block" the human player if the human has any two-in-a-rows and is one move away from winning the game. The game should also display the results, such as how many times X won, how many times O won, and how many times the game ended in a draw.



**Option 2: Make Up Your Own – Must be COOL!!!**

If you prefer to do something unique on your own, please feel free to do so. If you come up with your own idea, make sure you incorporate the following requirements:

* Your project should not always use the default names. (For example, rather than calling your project the default name of MyApplication and your activity the default name of MainActivity, call your project something like TicTacToe and your activity something like TicTacToeActivity, etc.)
* Your app must use at least **2 different layouts**. (Examples: a LinearLayout with another LinearLayout inside it; or a RelativeLayout with a GridLayout inside it; etc.)
* Your layout must adjust the properties of at least two widgets or views. (Example: setting the gravity, weight, padding, margins, color, font, etc. of a widget to adjust its appearance or spacing.)
* Your app must respond to at least one **event**. (Example: clicks on a button.)
* Along with your app, turn in a Word document describing your app, what it does, and how a user would interact with it. This should be at least a full page.