**ECE 211 Lab-A1 – Worksheet**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Exercise 1**

1. Follow the instructions in the lesson *2.3 Digital Inputs* and run the code.
2. Next, do the activities from the lesson *2.5 Active Buzzer*.
3. **Ask your Scrum Master to verify** that your setup is working for these two lessons.
4. Follow the instruction in the lesson *2.7 Tilt Ball Switch*. It is a very short activity.

**Exercise 2**

This exercise has two subtasks:

1. First, do the lesson *2.8 Servo* exactly as written to get a functioning servo circuit. Look the code over carefully to see how it works.
2. Next, modify the servo code to incorporate components you used in the previous lessons. For example, instead of having the servo continuously swing back and forth by itself, make it a user-controlled action by adding a push button switch. You could also add some LEDs (remember to use 220 Ω resistors in series with them) to indicate the rotation state of the servo.
3. Once you are done, upload your modified Arduino servo program (.ino) to D2L.
4. **Ask your Scrum Master to verify** that your setup is working.
5. In the text box below, answer two questions:
   * How did you modify the servo code, i.e. which function did you add or modify? A couple of sentences will suffice.
   * Copy the code that corresponds to this modification / addition.
6. **Upload this completed worksheet with your name and answers on D2L**
7. **Upload your Exercise 2 Arduino .ino program to the Lab-A1 Submission Folder on D2L.**