**Lab 03: Pre-Lab**

Instructions: Print off this pre-lab form, complete and turn it in by the start of your lab section. If there is a demo associated with this lab, you can turn it when you do your demo.

**Part 1: DualShock 4 Introduction**

Watch the DualShock 4 (DS4) Introduction video on Canvas. This video goes over some of the basics of using the DS4 controllers in the lab. It also covers some of the troubleshooting measures that you can take if you are having difficulties using the controllers.

**Question 1:** Based on watching the DS4 intro video on Canvas, describe the steps that you would take to disconnect and then re-pair the controller from the computer you are working on in lab.

**Part 2: Time Conversions**

When working with the controllers, the time that you work with is coming from the controller in milliseconds. This is very important to know for this lab and future labs when you need to use the time flag for various things such as a “timer” or “time delay”. Thus we need to know how to properly convert the time.

**Question 2:** Convert the following time (from milliseconds) to the correct number of minutes, seconds, and milliseconds. Example: 129313 (ms), *minutes*: 2, *seconds:* 9, *milliseconds:* 313. (Show your work)

* **Time 1: 107548 ms**
  + **Hours: \_\_\_\_\_\_\_\_\_\_**
  + **Minutes: \_\_\_\_\_\_\_\_\_\_**
  + **Seconds: \_\_\_\_\_\_\_\_\_\_**
  + **Milliseconds: \_\_\_\_\_\_\_\_\_\_**
* **Time 2: 146392 ms**
  + **Hours: \_\_\_\_\_\_\_\_\_\_**
  + **Minutes: \_\_\_\_\_\_\_\_\_\_**
  + **Seconds: \_\_\_\_\_\_\_\_\_\_**
  + **Milliseconds: \_\_\_\_\_\_\_\_\_\_**

**Question 3:** Now try to come up with a generalized formula/function to calculate each of the values- minutes, seconds and milliseconds. You should come up with a way to do minutes, seconds, and milliseconds individually. Write your generalized formulas below. Use an example that you come up with to show that it works.

**TA Check Off:**

**Pre-lab and Attendance TA Signature:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **Question 1:** | **/3** |
| **Question 2:** | **/5** |
| **Question 3:** | **/7** |
| **Total:** | **/15** |