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Lab 1 Summary

1. Conclusions/Observations – While Reagan and I worked on this lab we noticed that when you wanted to control the blinking of the LED you actually had to double your desired frequency. This was due to the fact that the oscilloscope was counting the frequency based on positive edges of the LED signal, which only happened every other time the ISR was called. So to actually get the correct frequency for the LED to blink you had to double it to account for the LED turning on and off.

2. Problems/Challenges – There was only one problem that we ran into, which was figuring out that we had to double the desired frequency in order to get the correct frequency for the LED to blink.

3. How we Overcame Question 2 – While working on question 2, we noticed that you could do it off of the board, but it was very slow. We decided to use a transistor wired to a power supply, and control the opening and closing of the transistor through our Ardunio. That way we got much more current than before and were able to quickly heat up the resistor. This isn’t the most efficient way since it would be better control if we were able to get the mapping worked out like we initially intended, but it served as controlling the resistor nonetheless.