

Introduction

The goal of this lab was to make a light move back and forth on an LED. Once we were able to do that, we then had to create a PWN effect that allows a delaying effect on other lights (“knight rider affect”).

Functionality and Correctness

We first programmed port C to “on”, then we went into multiple registers for PC0-PC4 and PC8-PC12 to help with activating port C. The next thing we did was create a function (assign) that handles the ODR for the pins. The code that helps move the lights on the LED back and forth is in a while loop. This while loop also calls the assign function. To access the address that helps turns” on” the lights in the ODR is an array variable called “t”. The PWN effect is inside of the assign function as well.

Post-lab assignment

(no post-lab assignment for this lab)

Conclusion

Overall, the lab was successful. We made the LED move back and forth the way we wanted to. We had problems at first with the dimming effect and most of that was due to not structuring the code properly. We put the dimming effect in the assign function, which isn’t bad but there were some errors that came up along the way that most likely would have been resolved if we created a separate function for that effect. When we work on labs going for, we’ll make sure to structure our code more clearly by making functions do specific task and not do more than it needs to do. Overall, though our lab did work, and we learned a lot in the process.