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CSC615

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Due: April 2, 2021

Assignment 3: Running Motor

Hardware

- WaveShare Motor Hat
- Raspberry Pi 4
- Motor
- 9V battery
- Button

Description

This program uses Raspberry Pi I2C to communicate between Raspberry Pi 4 to the motor. PWM will also be used to control the speed of the motor. To demonstrate this, I used WaveShare's included "PCA9865" program. Additionally, a button is used to start the motor's sequence.

Issues

The button was initially hard to set up. Using Pi Zero, I found that even after setting up wiringPi properly, the pin that was supposed to only show whether button was pressed was acting erratically. After trying some possible solutions for a few days, I decided to transfer my work over to a Pi 4, which solved the issue.

Another issue I had was trying to decode the documentation that WaveShare included. I also read through their included demo code so that I can recreate the register read/writes. It turned out to be very difficult. As a result, I decided to use the PCA9864 program included with WaveShare's demo.

HARDWARE DIAGRAM

