EGR326 PreLab 7 F22

Control of a stepper motor

A stepper motor provides an embedded system with a means of fairly precise control of rotational movement at reasonable cost. In your design project you have a requirement to control a stepper motor in to operate a speedometer. The **unipolar stepper** motor (The flat white motor) provided in your lab/project kit is driven by the L293 control board which interfaces to the GPIO pins on the MSP432

* Draw a schematic of a complete circuit, from the MSP432, including the circuits on the motor control board and finally the stepper motor.
* Document the sequence in which you will step the signals to the motor over GPIO (both directions)
* Review Lecture 7 I2C code. You’ll find an example of both master and slave implementations
* Draw a schematic connecting two MSP432 via the I2C communication modules.
* Download the lab 7 exercise document and study the deliverables. Come to lab prepared to show your full step control sequence of the stepper motor used in part I of the lab.
* Document your description of the MC-motor interface schematic and MC-MC I2C interface schematics in your lab book.