**Task: Develop Arduino Scripts for the various sensors (Torsion, EMG, Pressure Sensors).**

The goal is to have all the sensors interfaceable via software. This will involve writing scripts to an Arduino in order to utilize basic function of each sensor; each sensor signal will be sent to the Arduino, and code must be written up to produce meaningful information from the raw voltage signal.

**Software Requirements**

Requirements are not entirely clear-cut since each sensor has a different behavior. Here are some general guidelines.

* Write a separate Arduino file for each sensor.
* Comment your code.
* Refer to sensor data sheet.

**Resources**

Here are resources to get you started in your task. It is recommended that you research these items. These datasheets are probably the most valuable resource.

* **Torsion Sensor Datasheet (600EN-128-CN1, optical 128 pulse per rev, 2-bit gray code)** 
  + We intend to use the Arduino Due’s rotary decoder hardware feature. Refer to the Due’s datasheet as well.
* MyoWare EMG Muscle Sensor (AT-04-001)
* DigiKey TruStability Pressure Sensors (480-5394-5-ND)
* Implement your code in one function

**On Commenting Code**

Commenting your code allows other programmers to understand your code and to pick up where you left off. We are going to follow this convention for commenting code:

* Use block comments on top of functions, and use inline comments for quick descriptors.
* Add additional comments on sections of code you think are unclear at first glance. These can be block comments or inline.
* For functions have a brief description of what the function does. It should describe the parameters (if any) and the most important operations as well.
  + Example:

/\*

This sets the PWM. It takes in a digitized voltage signal and checks against

the current pressure settings.

Parameters: voltage (float)

Return: None

\*/

void setPWM(int digiVoltage){

//inline comment

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}