Setup for hardware inputs - Abisha Fenn

1. Identify a series of hardware components that require I2C modifications.
2. Identify an IC or breadboard component that can generate I2C functionality
3. Work with software to get the component working with arduino through i2C only
4. Document process of getting component to work to streamline process and help with later tutorials
5. Assist with integration of uno code working with i2c enabled component to feather board support
6. Assist with writing class to create object that can be called by wills software

Serial communication as a whole is used for:

I2C for the hardware components attached to protocontrol

SPI for communication between the feather and the LCD screen

UART for communication between the feather and the user system, an arduino, an msp430, and a raspberry pi.

SPI is fairly straightforward in terms of the way we use it, we are using a built in library that configures the communication.

I2C might require some modifications to be able to identify when the user connects one of the components. This could be done by attempting to initialize every single component we support over and over, and it will work whenever they connect it, but that doesn't seem very robust so that's part of what we wanna figure out

UART is the most customizable. We are creating a protocol that will send an unknown number of values, and receive an unknown number of values, that we want to map to where they go.

We will get some sort of information about how many values need to be transferred over UART from the software, but it will be different for every system so we need to support an unknown amount.

Addressing issues? For each pcb linked to a component?