Group Members: Omar Vallejo, Tiffany Watson, Darian Thomas, Rachel Strehlow, Richard Rivera.

Step 1: Consider 3 Project ideas that you could create. They should be able to use sensors to monitor their surroundings, provide a mechanism for a user to interact with, and provide analysis of the collected data to the user. For each idea, list the sensors, interactions, and data analysis that could be performed.

**Project Idea 1:**

A program where it takes the average temperature and humidity readings of the room every day. The user can then press a button to display the readings along with the average recordings.

**Project Idea 2:**

**Nurse Dial:**

When a patient needs a nurse, they use a clicker which notifies a nurse they are needed. We can simulate this by setting up a button when pressed will send a signal to a different circuit that will make LEDs flash and a buzzer sound make a noise pattern to alert that “nurse” they are needed.

**Project Idea 3:**

**Kitchen:**  Use the rotator to raise and lower the time period, have an LED blink every second until the timer reaches 0, once the timer reaches 0 it will set off a buzzer. The kitchen will have a flame sensor that will set off warning LEDs in case of a possible fire happening. This kitchen will also have an automatic light sensor that will turn on the lights if it detects movement or if the light switch is turned to the on position. Adding to the safety in the kitchen, there will be a device with a buzzer and a temperature reader module that will alert you when it gets too hot in the kitchen by setting off an alarm.This can imitate the idea of smart appliances in a home scenario with built in security measures.

Step 2: Merge your ideas with your group. Could any of your ideas work together?

Step 3: Formalize the idea.

We will be using Idea #3. These devices will work together to do a pretend-smart home kitchen area. They will communicate with each other and be sending back data to the database for the information to be interpreted and make sure all is normal.