Brandon Martinez

       For our Peripherals project, Nick Mitchell and I have played around with the Honeywell I2C Humidity and Temperature Sensor. We have looked at the datasheet of the sensor and found these important specifications:

1. The I2C address for the sensor is 0x27 which should be sent by the Master to the Slave
2. The pinout of the sensor's circuit.
3. The I2C Data Fetch Format to send and receive data to the sensor. It contains the start bit, the slave address (0x27), the read bit, acknowledge bits, 2 data bytes for humidity, 2 data bytes for temperature, and the stop bit.
4. Sensor reads data in 500 kHz frequency

We tried building the i2c_self_test code to the esp32 but the esp cannot connect with the sensor. We changed our configurations for the I2C in the menuconfig interface. The default data frequency was 100 kHz. We looked at the self test code as well where the local light sensor is used as an example. We changed the slave address in the sdkconfig.h file from 0x28 to 0x27. This was our hope for the sensor to work but the esp32 still couldn't connect. We ran the i2c self test numerous times through the command prompt but nothing seems to be working. I am planning to ask Professor Marchiori for guidance on how to fix this issue and how to utilize the source code he sent from an arduino humidity sensor using C++.