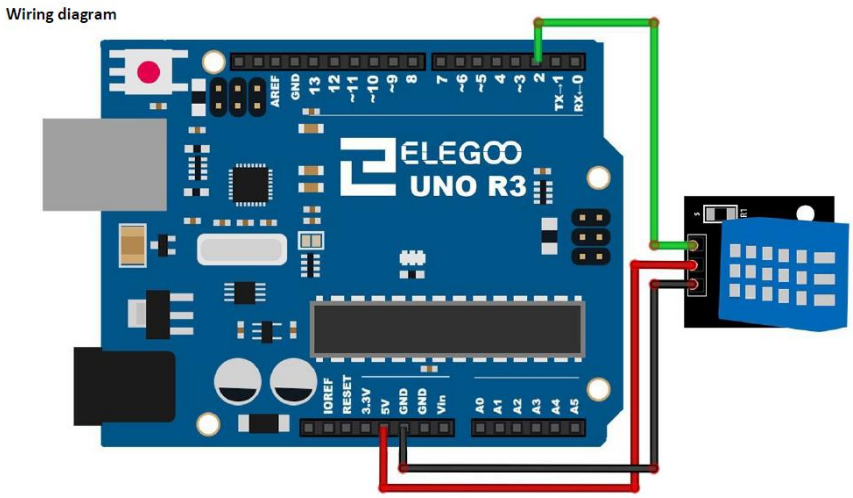
ME 331 Project #3

In the assignment, we will use the LCD that you successfully wired in class with a different sensor. You will display the data from a temperature and humidity sensor (DHT11). More information about the DHT is posted in two slides with this assignment

Complete the following steps:

1. Follow the instructions here.to install the library for the DHT
2. The DHT11 that comes with your Elegoo kit does not have the unused pin that is shown in the Adafruit tutorial. Wire the DHT11 as shown below (but use different wiring for the DATA pin, since we will be using Arduino pin 2 for the LCD)



3. Create a new Arduino sketch. Open Examples->DHT->DHT Tester.
4. Run the tester code, and verify that your DHT is working properly
5. Create a *new* Arduino sketch, and name this as Project3_yourname.
6. Wire the LCD to the Arduino and repeat part 1 of in-class assignment 4a to verify that it is working (copy “hello world” into your Project3 sketch)
7. Now you know everything is wired correctly. Using the DHT tester code as a model, modify your Project3 code to read the DHT and display the following in the LCD, **with units** similar to this example shown
    a. Temperature in Fahrenheit
    b. Relative humidity
    c. Heat Index

Hint: You might want to consider using strings. Arduino C has a String class that works very much the same as in Python. This link has lots of information about strings (scroll down to find how to use the String class)

8. Try to modify temperature (hold something hot or cold nearby). It may take a while to show (it is a slow sensor). Record a video of your results

On Blackboard, submit:

1. the sketch (.ino file) with a unique name such as Project3_GMUID.ino
2. a video of your Arduino circuit running the sketch