CPE301 – SPRING 2019

MIDTERM I

Student Name: John Duriman

Student #: 5002373995

Student Email: duriman@unlv.nevada.edu

Primary Github address: https://github.com/johnduriman/pirahnaplant.git

Directory: pirahnaplant/Midterms/Midterm I

Submit the following for all Labs:

1. In the document, for each task submit the modified or included code (only) with highlights and justifications of the modifications. Also, include the comments.
2. Use the previously create a Github repository with a random name (no CPE/301, Lastname, Firstname). Place all labs under the root folder ESD301/DA, sub-folder named LABXX, with one document and one video link file for each lab, place modified asm/c files named as LabXX-TYY.asm/c.
3. If multiple asm/c files or other libraries are used, create a folder LabXX-TYY and place these files inside the folder.
4. The folder should have a) Word document (see template), b) source code file(s) and other include files, c) text file with youtube video links (see template).

1. **COMPONENTS LIST AND CONNECTION BLOCK DIAGRAM w/ PINS**

Parts used:

ESP8266 ESP01 WiFi module

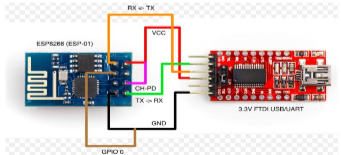
5V Serial to USB Converter

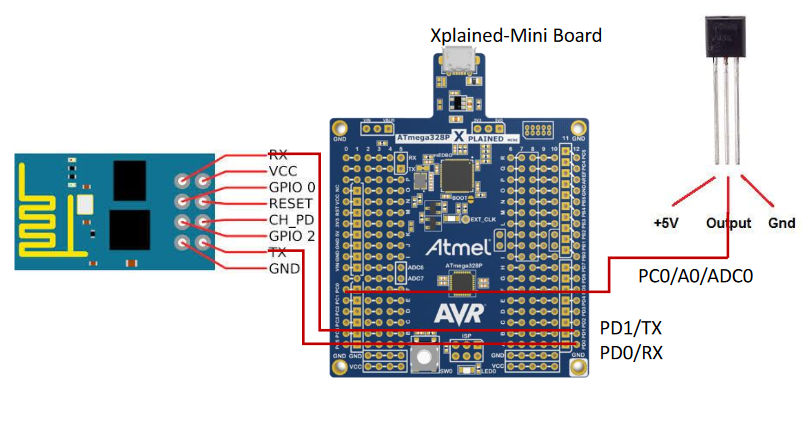
Atmega 328P

Breadboard

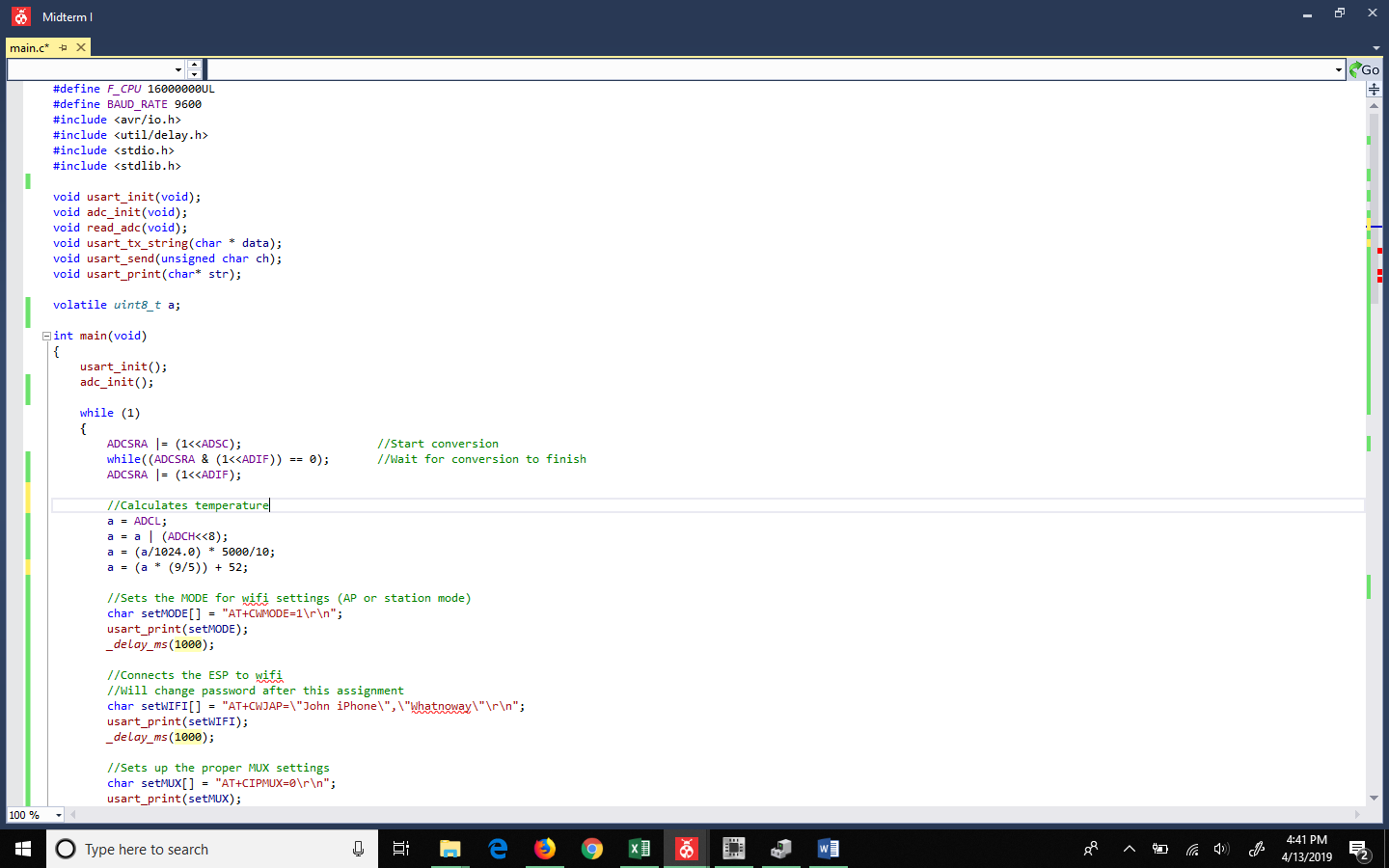
Jumper wires

LM35 temperature sensor

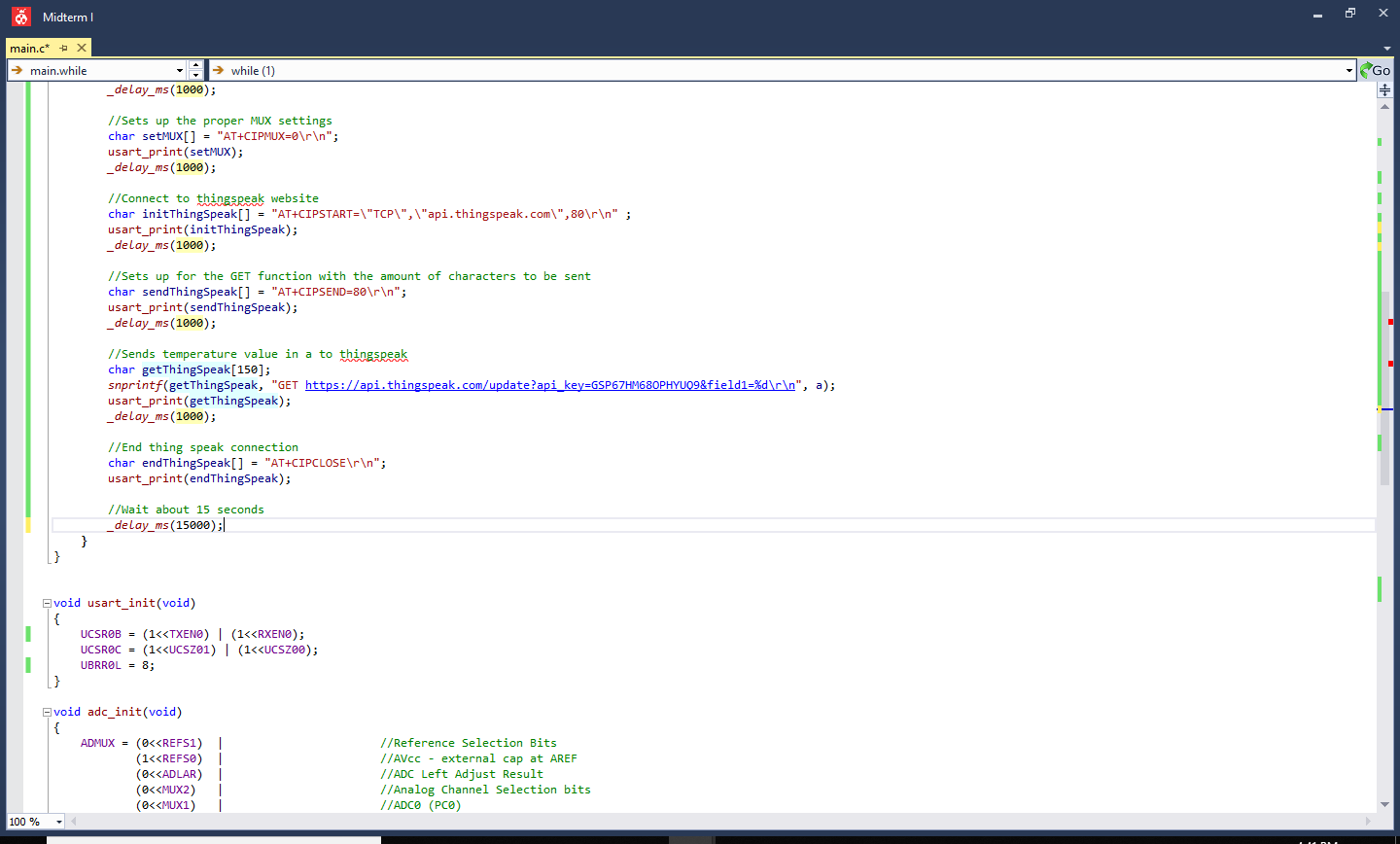
To program the ESP01, I wired it with the converter using this schematic (there is actual footage in my video)

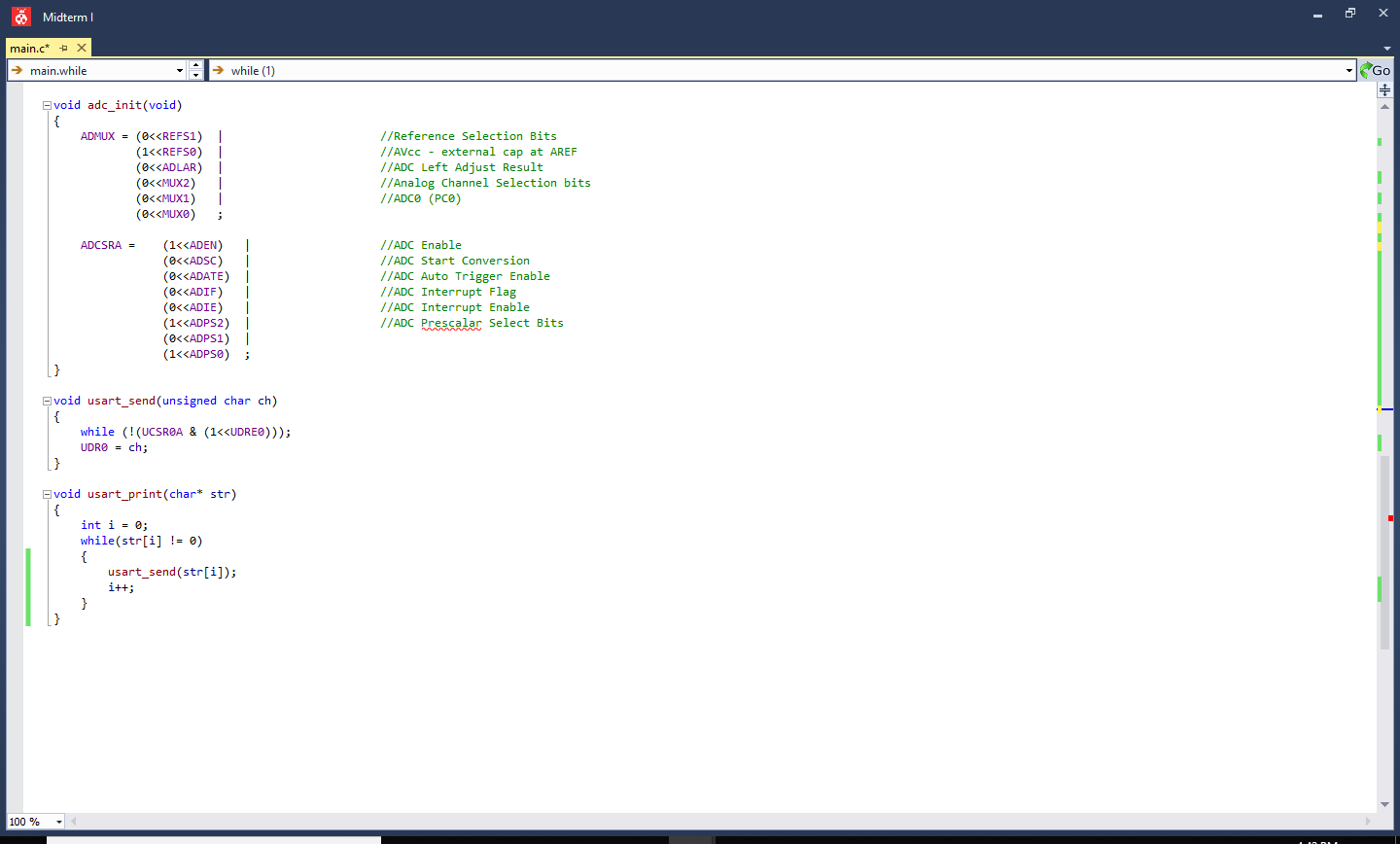
Once programmed, I hooked up the LM35 to the ATMEGA328P and used PD.0 for RX and PD.1 for TX.

1. **INITIAL/MODIFIED/DEVELOPED CODE OF TASK 1/A**





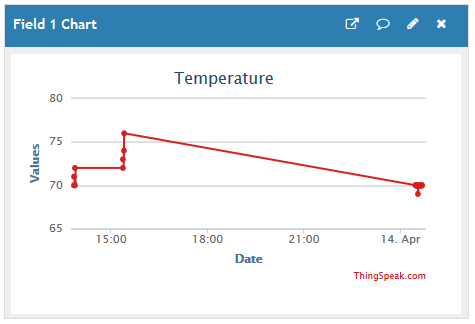
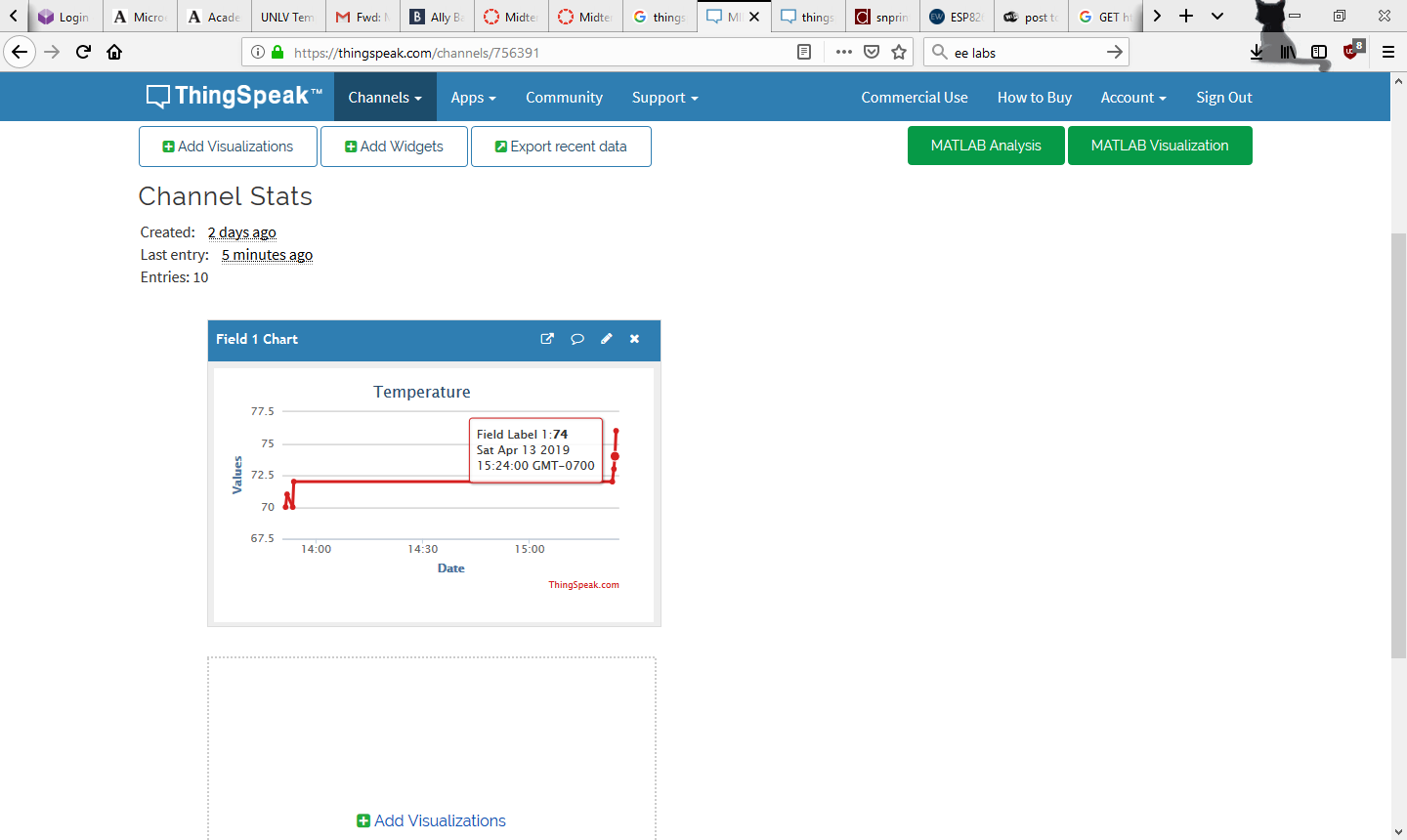




1. **SCREENSHOTS OF EACH TASK OUTPUT**





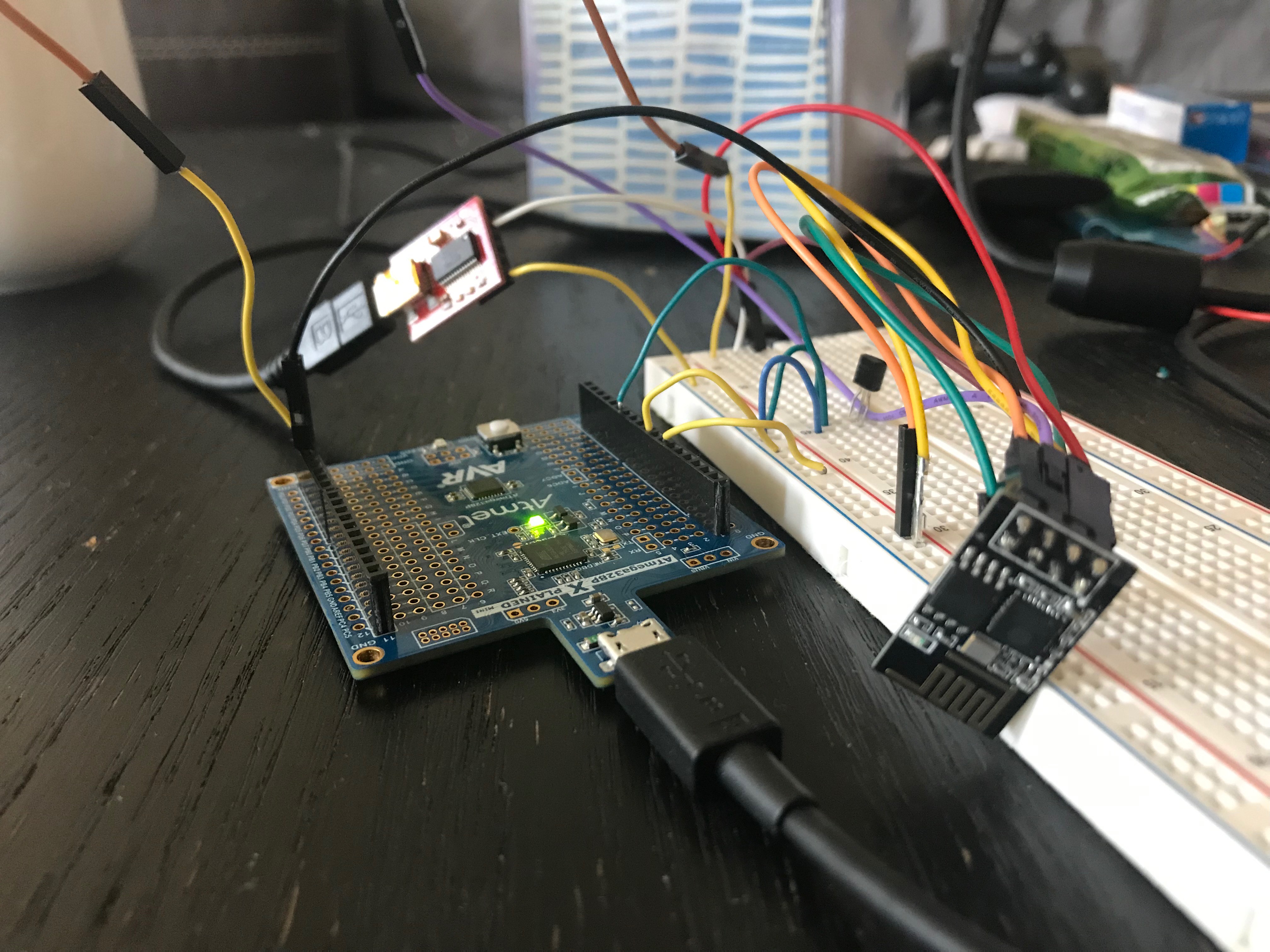
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1. **SCREENSHOT OF EACH DEMO (BOARD SETUP)**

Here is what the ESP looked like when it was getting programmed.



Here is the final setup of the components where the temperature sensor data is being sent out to thingspeak through the ESP.



1. **VIDEO LINKS OF EACH DEMO**

https://youtu.be/B\_91\_-1\_Ehc

1. **GITHUB LINK OF THIS DA**

https://github.com/johnduriman/pirahnaplant.git

**Student Academic Misconduct Policy**

<http://studentconduct.unlv.edu/misconduct/policy.html>

“This assignment submission is my own, original work”.

John Duriman