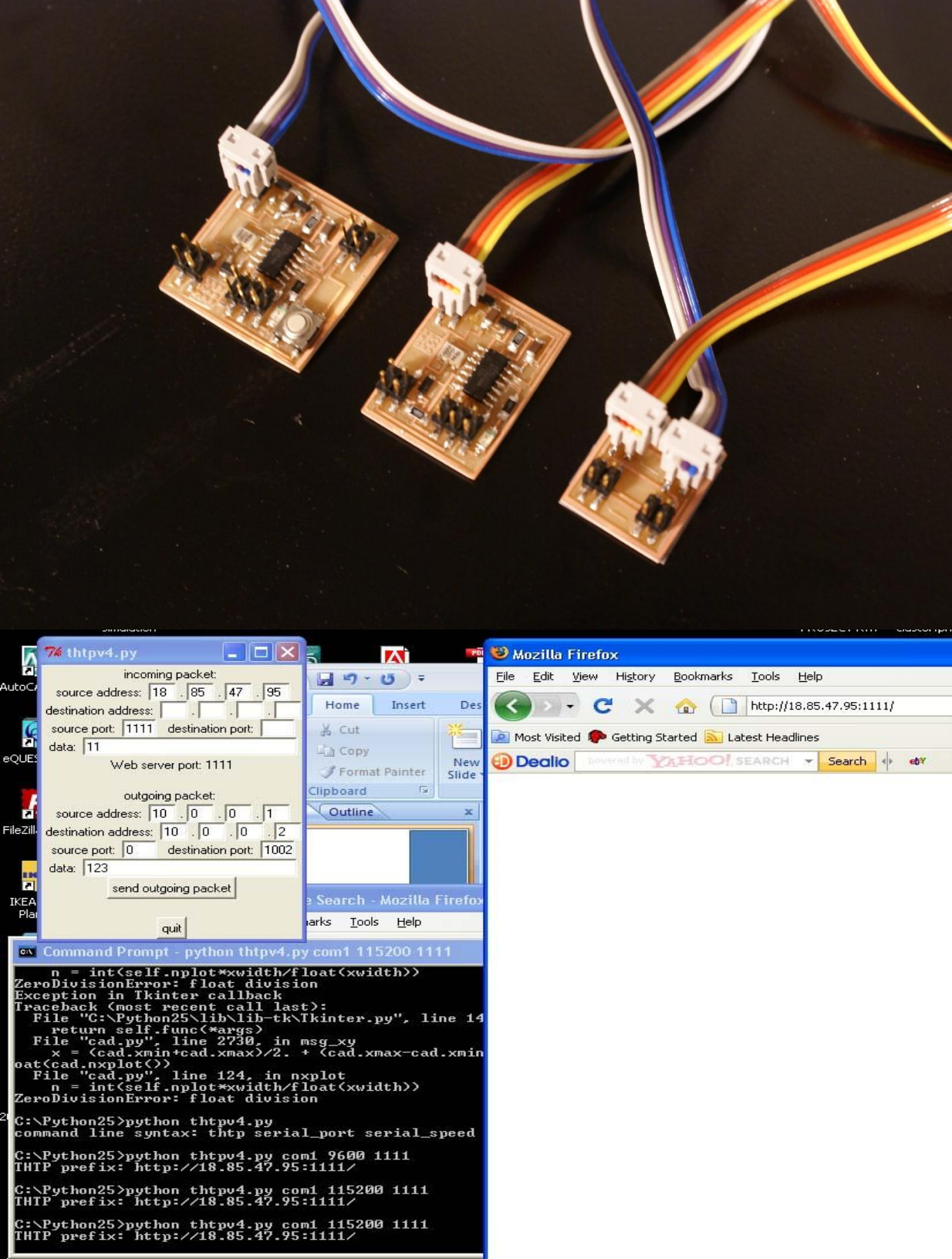


MAS 863

How To Make (almost) Anything

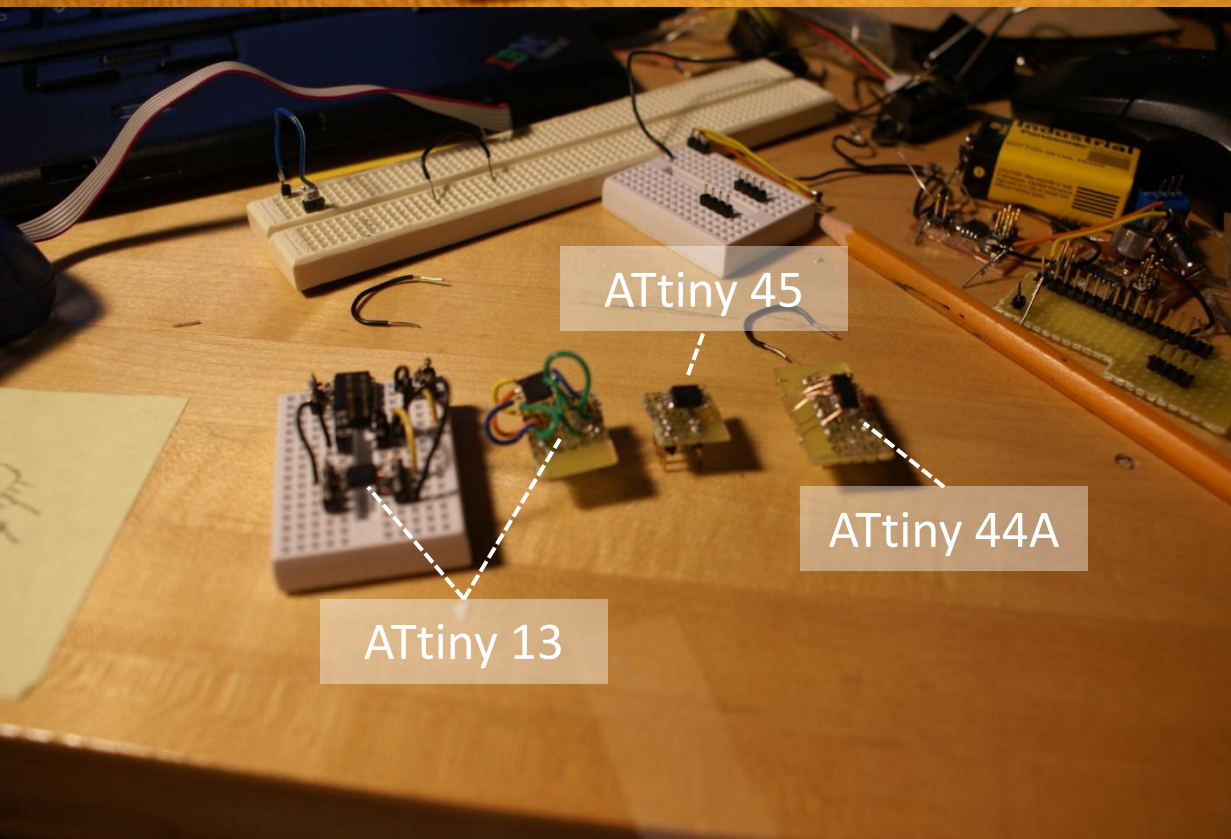
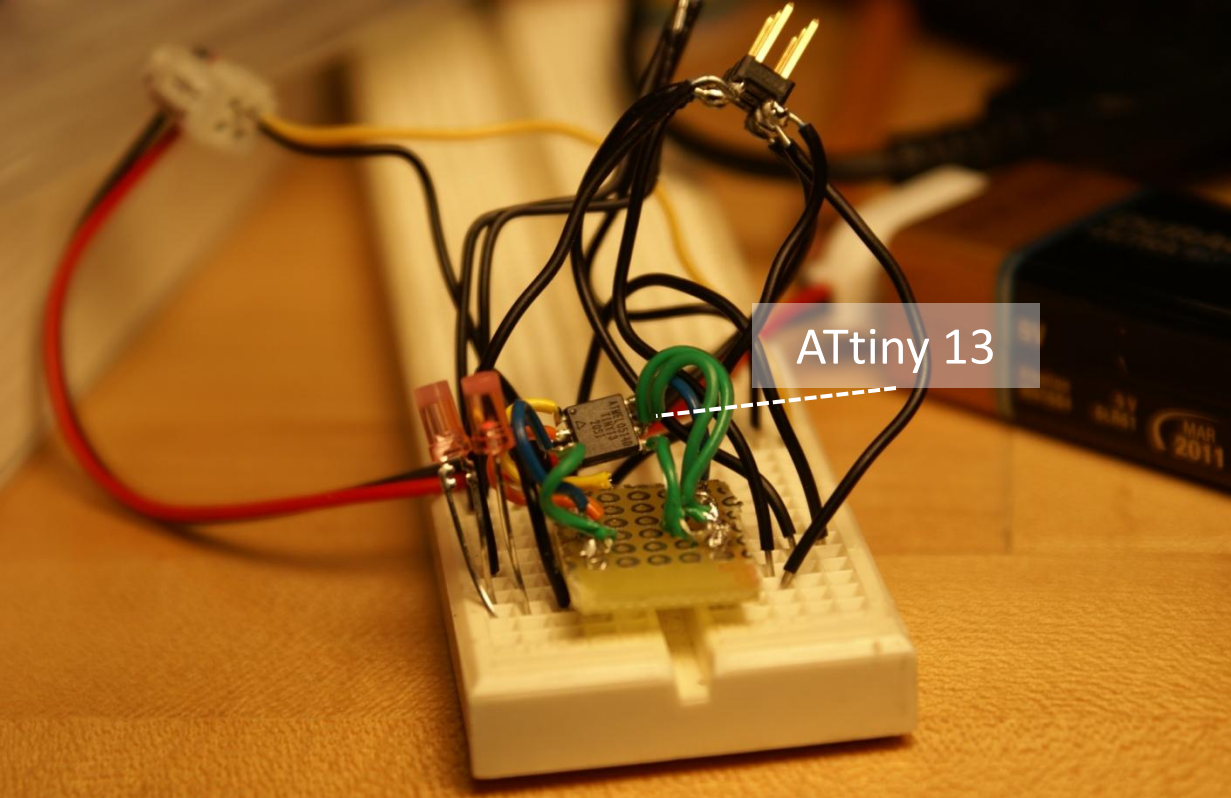
2009

Networking and Communications



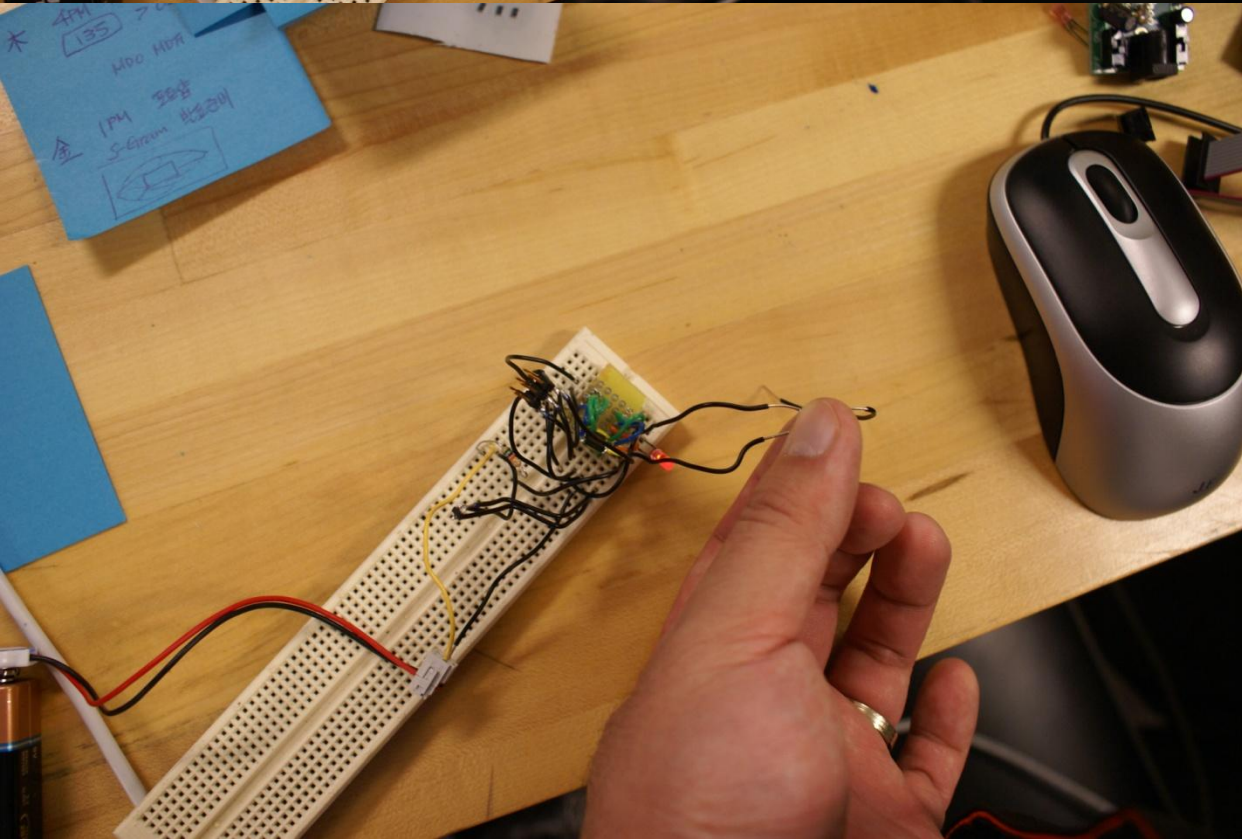
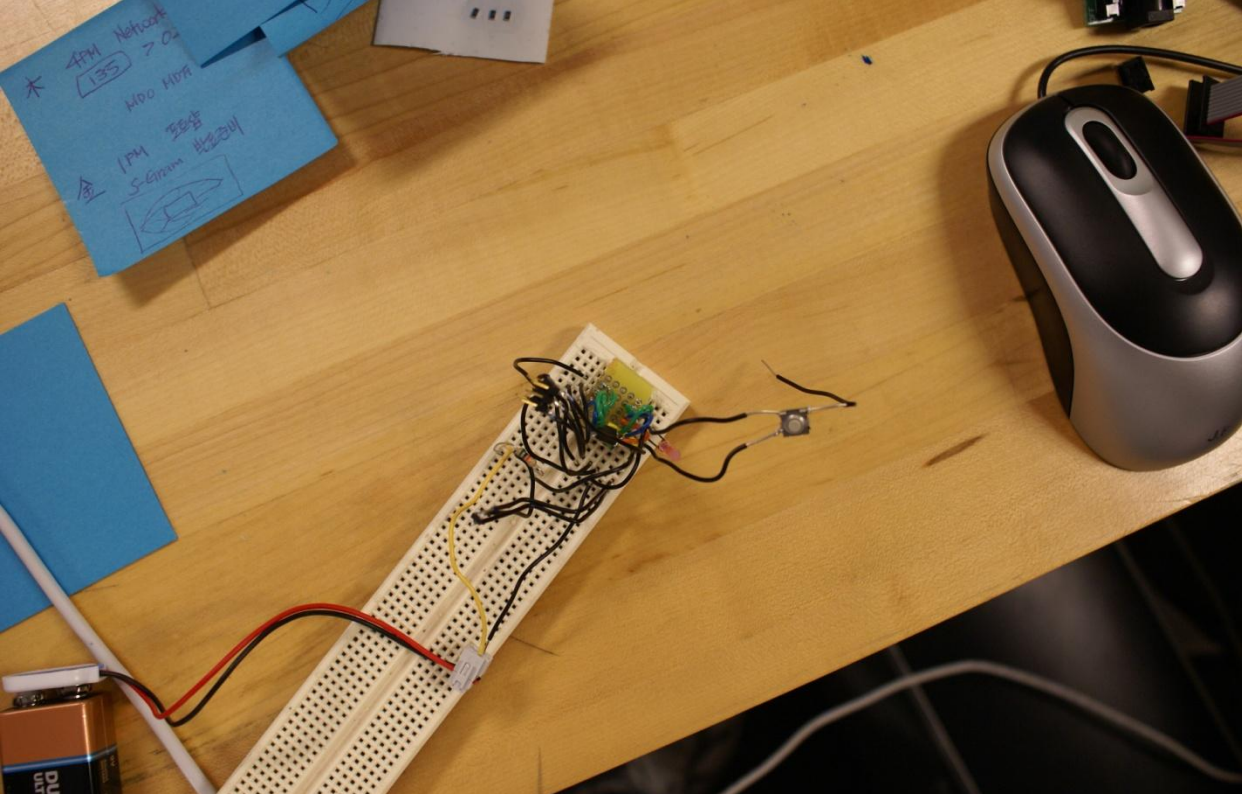
During the Thanksgiving and this week, I did two things. One is making a network and the other is reviewing what I learned for this semester so far.

For the network, I made an I/O, a serial and a hub board. After writing a program into three boards, I connected serial board and computer. It looks good and I succeeded to get a THTP address of `http://15.85.47.95:1111/`. However, when I clicked the button, I could not get a random address as I heard from the demo last class.



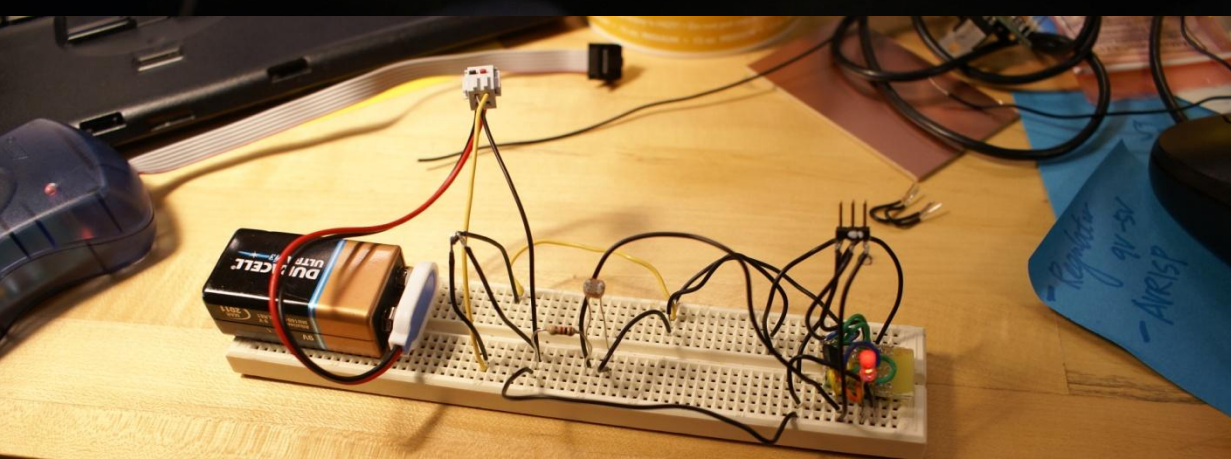
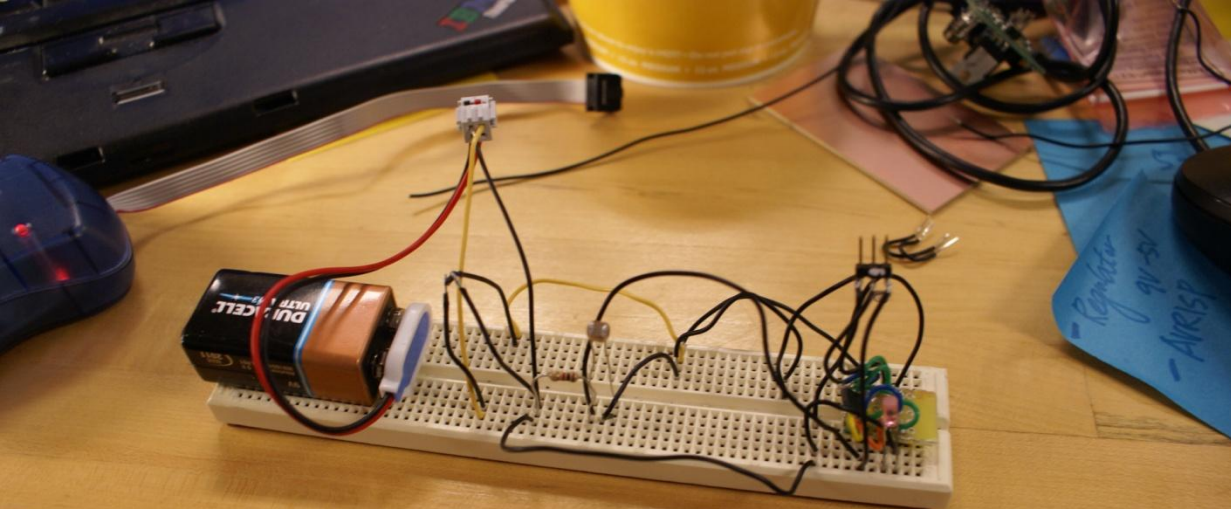
The second, actually major, thing I did was reviewing the class. Though I made lots of boards and sensors, and I made them all work, I felt like that I was not confident about what I am doing.

Since I need to work at my lab most of the time, I made breadboard prototypes with ATtiny series (t13, t45, t44a, mega88 and mega168 from Arduino).



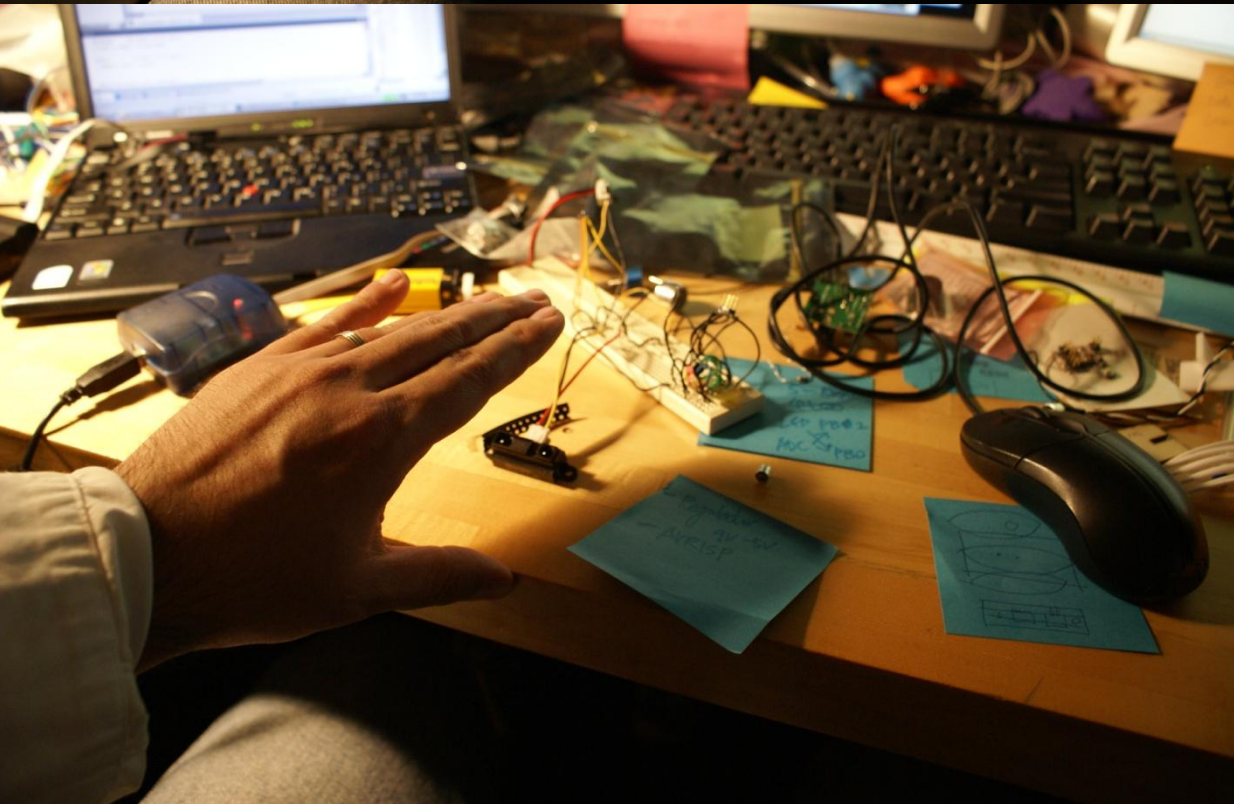
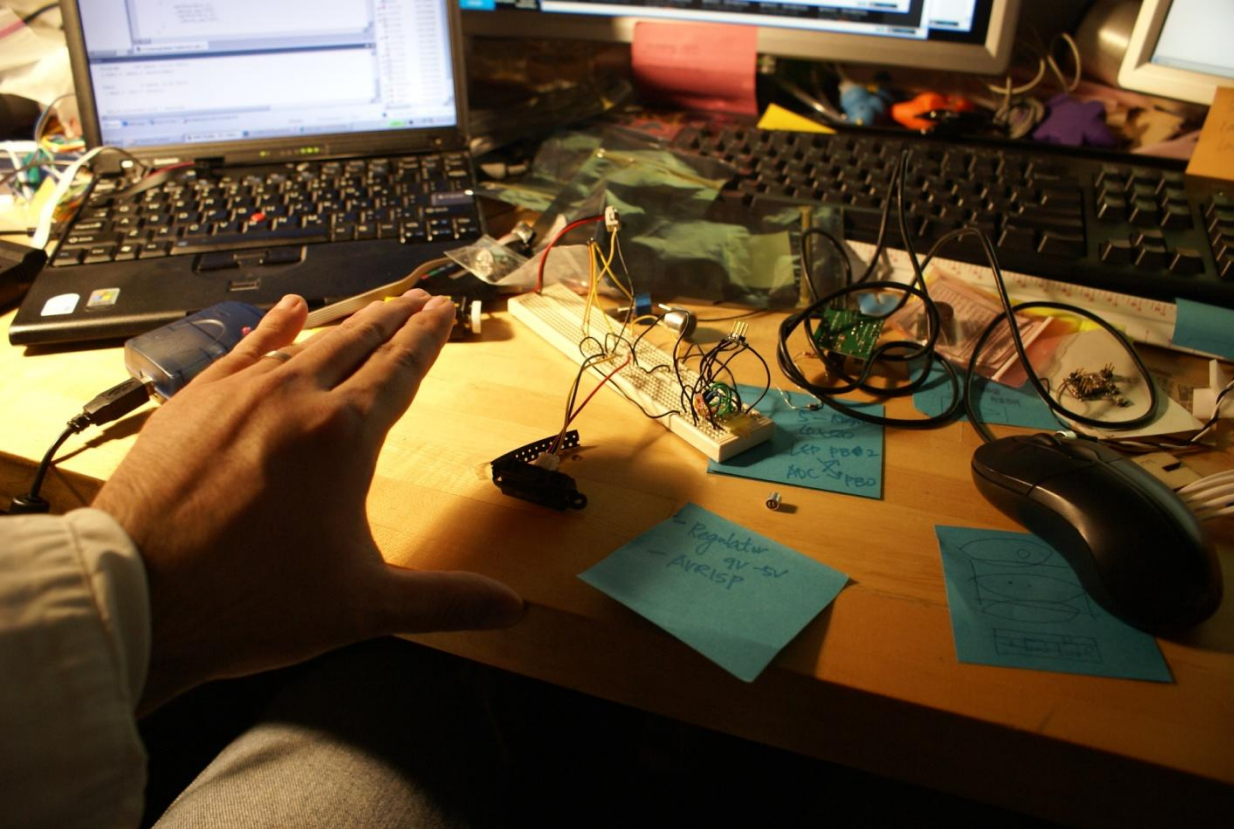
Review of PCB Fabrication Week

I remade a board with ATTiny13 from a scratch. All the codes were written in C programming language.



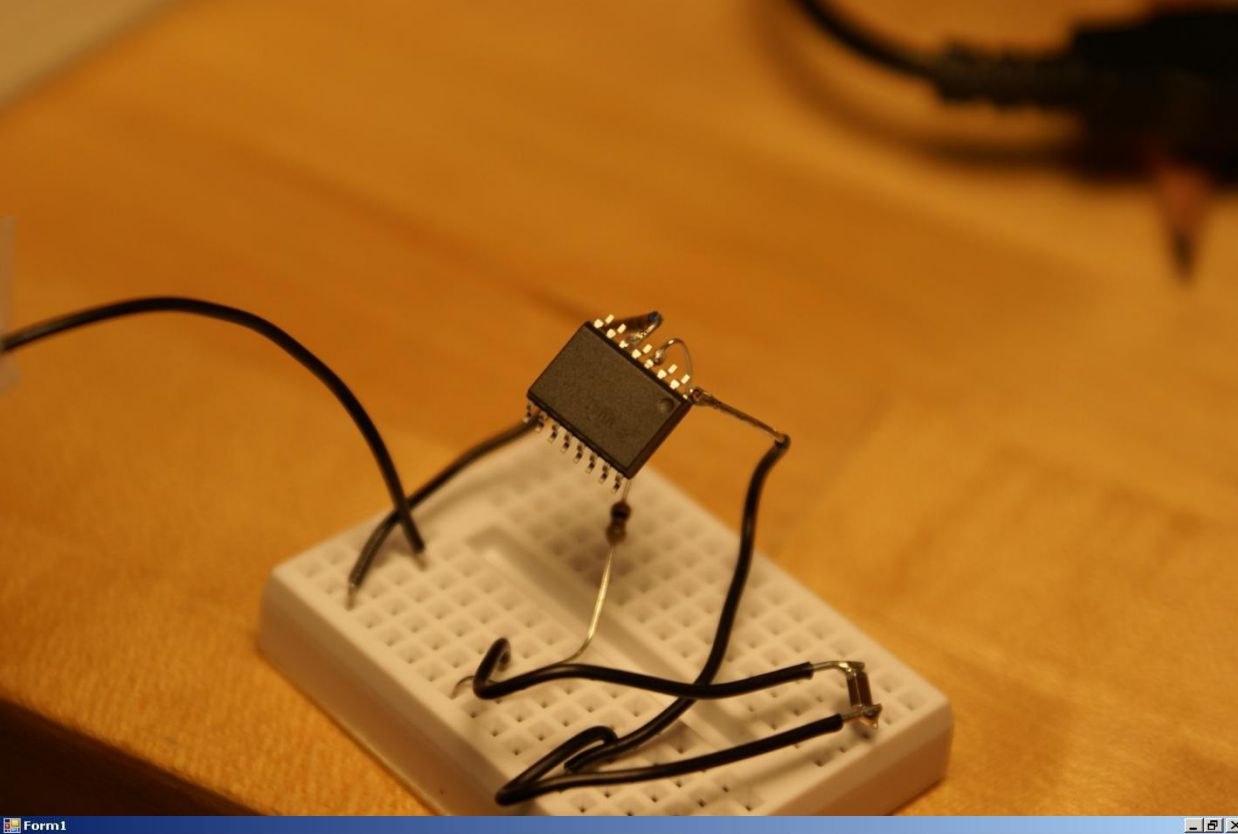
Review of Input Devices - ADC

This board uses light sensor. When the value of a light sensor exceeds 128 (a median value of ADC, a LED turns on)



Review of Input Devices –
ADC
Distance Sensor
PWM

In this example, the distance sensor sends the distance value using ADC, brightness of light is changed based on the received value.



Form1

Earthquake Sensing and Simulation using Accelerometer



Earthquake Richter Scale 4 : Warning

Received Data : 419

Start | arduino-0017 | arduino-0017 | acceleromet... | sketch_dec... | accel_ardu... | COM7 | Form1 | 99% | 5:41 AM

Review of Output Devices –

UART

Serial Communication

For the lab project, I used a accelerometer with C# simulation. A received date from the accelerometer communicates with C# using a serial port. Based on the received data, the degree of screen shakes varies. I used Arduino for this project since I did not fully understand the UART in Attiny yet.