

Jeffrey

ART385

LED Complexity

Tues, April 7th

Re-state the Assignment

Project two will involve using 2 input devices as well as two output devices to create a piece of physical computer software that takes real world input and uses it to produce real world output. Due to the situation around the world, our input devices are limited to the items that were handed out in class and whatever we can find at home.

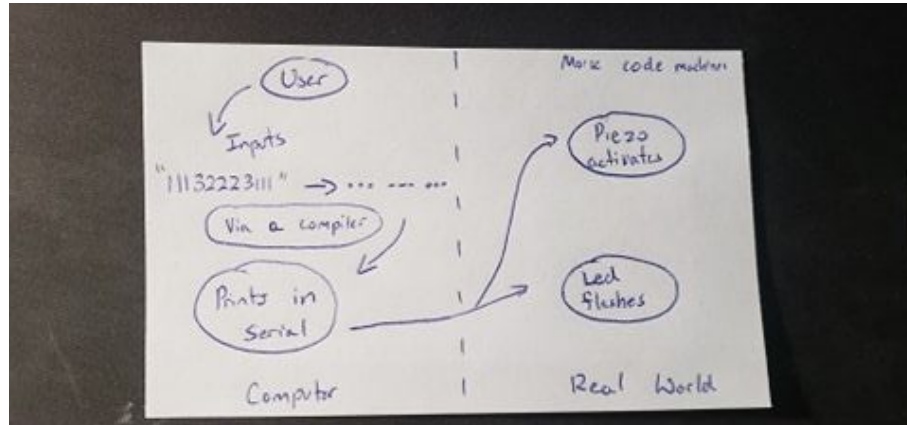
Overall Concept

The original concept of this project was to make a morse code machine that made a beeping sound in response to button presses as well as changes in light LDR. That way, a person can encode a morse code message via the button presses (short presses for dots and long presses for dashes) and play morse code messages by scanning a card with black dots and dashes via the LDR (a light is shown through the back of a white card and any black ink will block the light so the LDR will read it as “off”). However, this idea was scrapped due to two reasons: 1) it seemed kind of simplistic and boring, 2) I broke my button and I didn’t grab the potentiometer before the break. As such, I thought it was a good idea to come up with a new idea involving inputs from my computer so the new concept is to have the user input a string of numbers and then have it encoded into dots and dashes and played back on the arduino. This way, the arduino is more consistent in terms of dot/dash lengths on the piezo beeps/led blips and the code looks more...er...”complicated”.

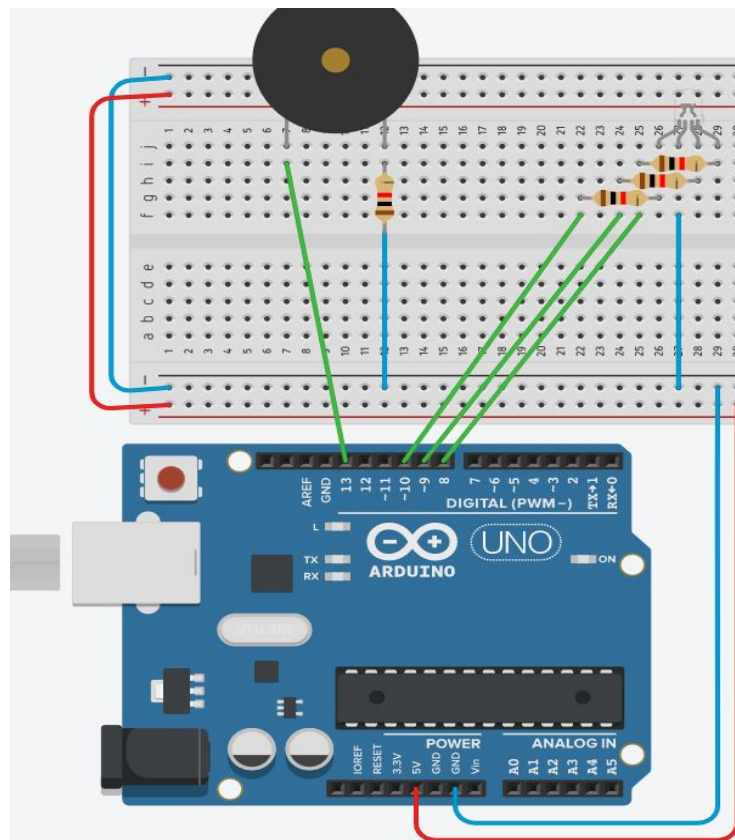
Addendum: Realizing that it would be easier from a UX perspective to just type in the word, I changed the if else statements to accept letters instead of the original “123” system. Of course,

this would require the use of a keyboard to input items rather than 3 distinct buttons, now.

Interaction Map

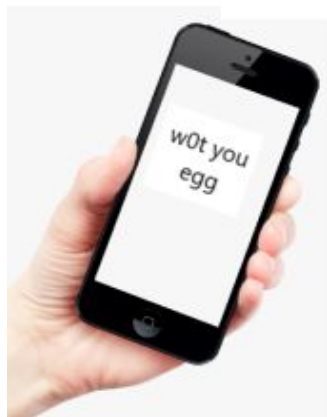


Schematics Map (Via TinkerCad)



Hand-drawn sketches

Morse Code Encoder



Type it in

Play it out
in Morse!