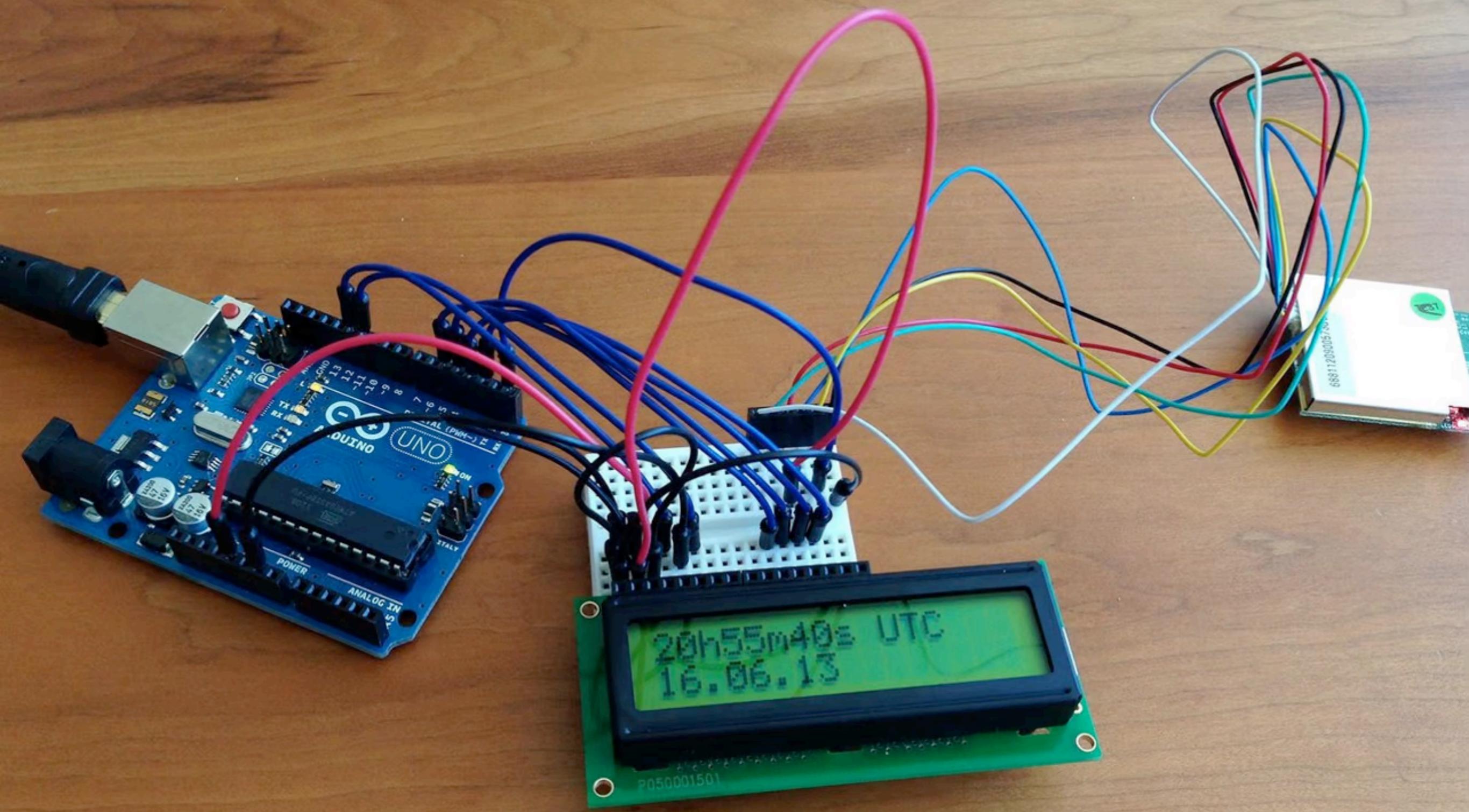


Let's Build a Thing

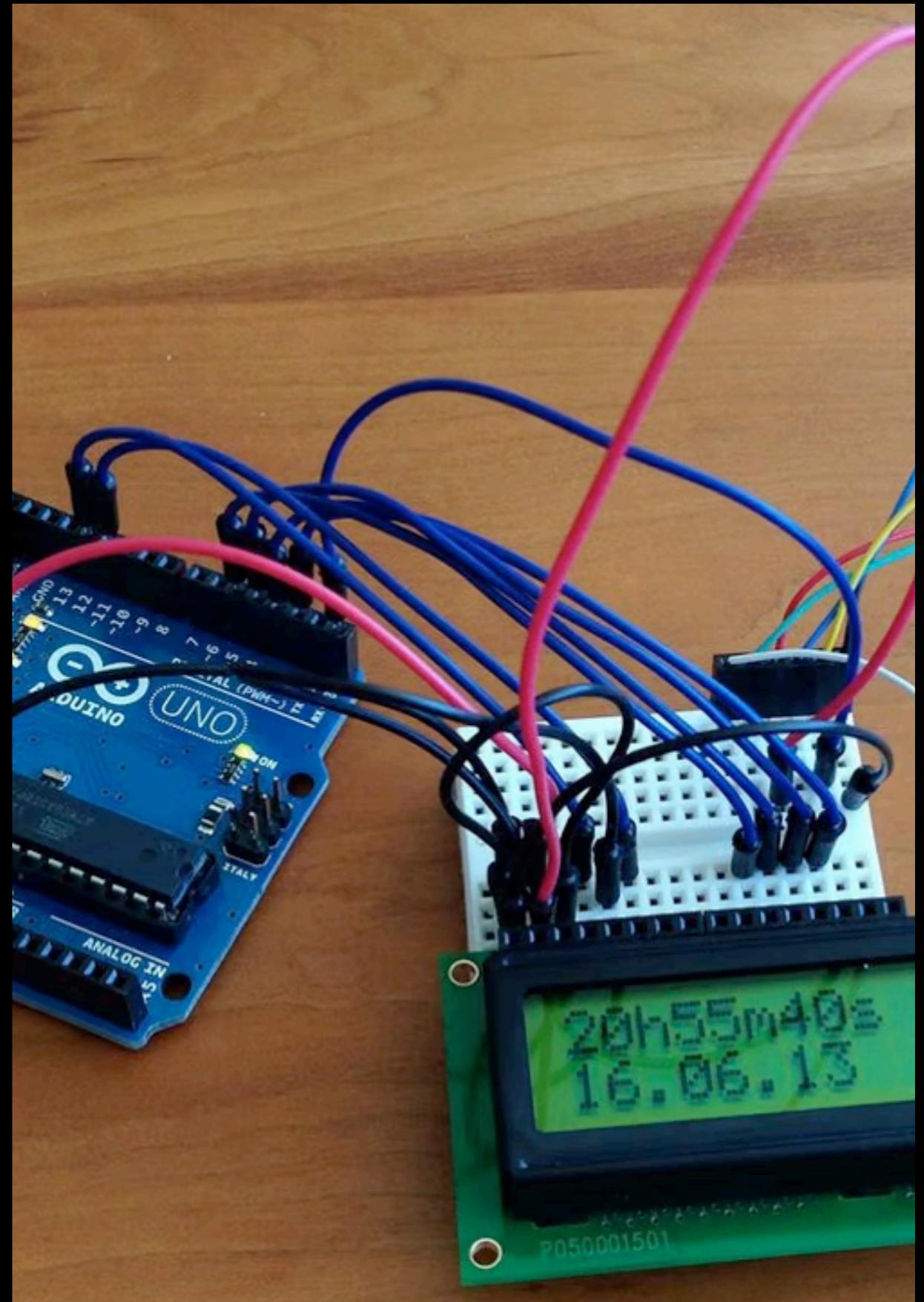
This can't be too difficult right?

Things



A Thing

- Does things
- By measuring things
- And activating things
- Somehow power supply
- Prototyping on Breadboard
- Doing a Circuit Board
- Assembly

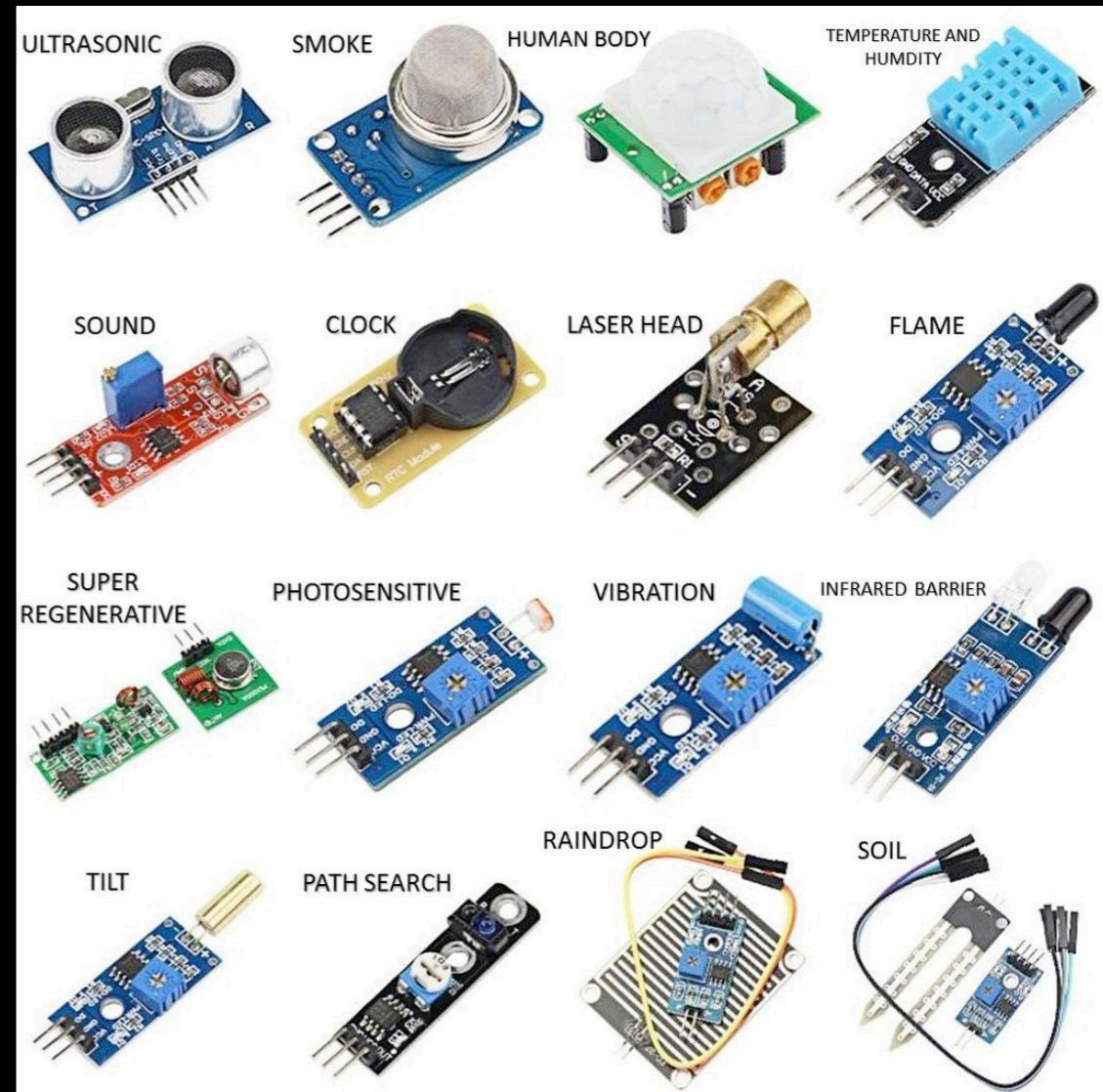


Does Things

- You have an idea of some device that serves some purpose
- “The Thing shows me the moisture of my favourite house plant”
- “The Thing changes the color randomly through a button press”
- “The Thing has 3 sliders to set the RGB values of a lamp”
- “The Thing does BEEEP if I press the button”
- “The Thing shows the current temperature on a display”
- “The Thing prints the CO₂ level in a room”

By Measuring Things

- Sensors are physical devices that are able to measure physical properties
- Usually I2C, SPI, UART, digital or analog input
- Sometimes configuration needed
- Usually low cost

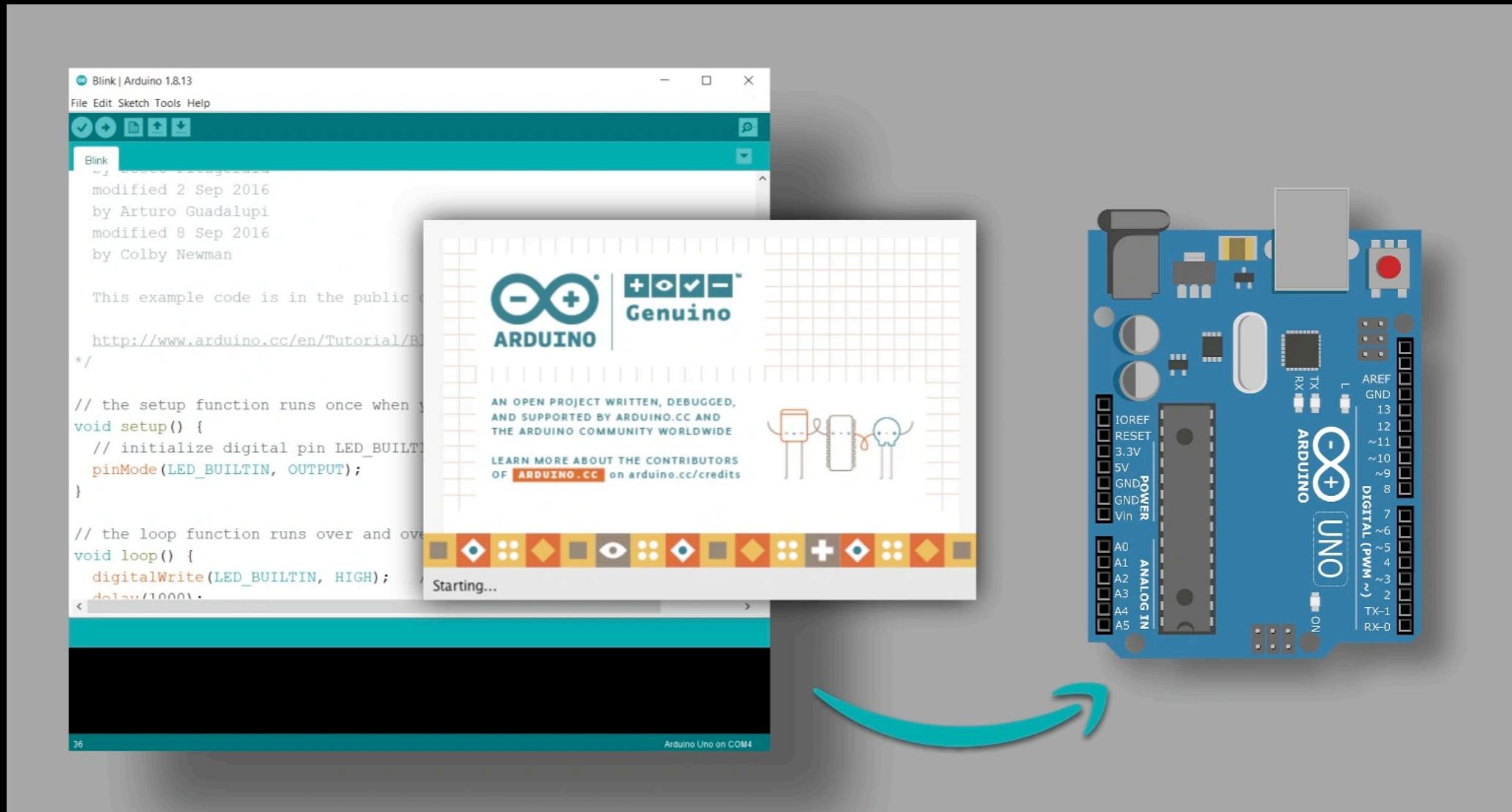


And Activating Things

- SPI, I2C, UART, digital or analog write
- Usually libraries available for every common actuator



Programming a Thing



Somehow Power Supply

- As of now, electronic devices require energy to function
- You need to think of how you want to power your Thing

- From the wall power outlet?



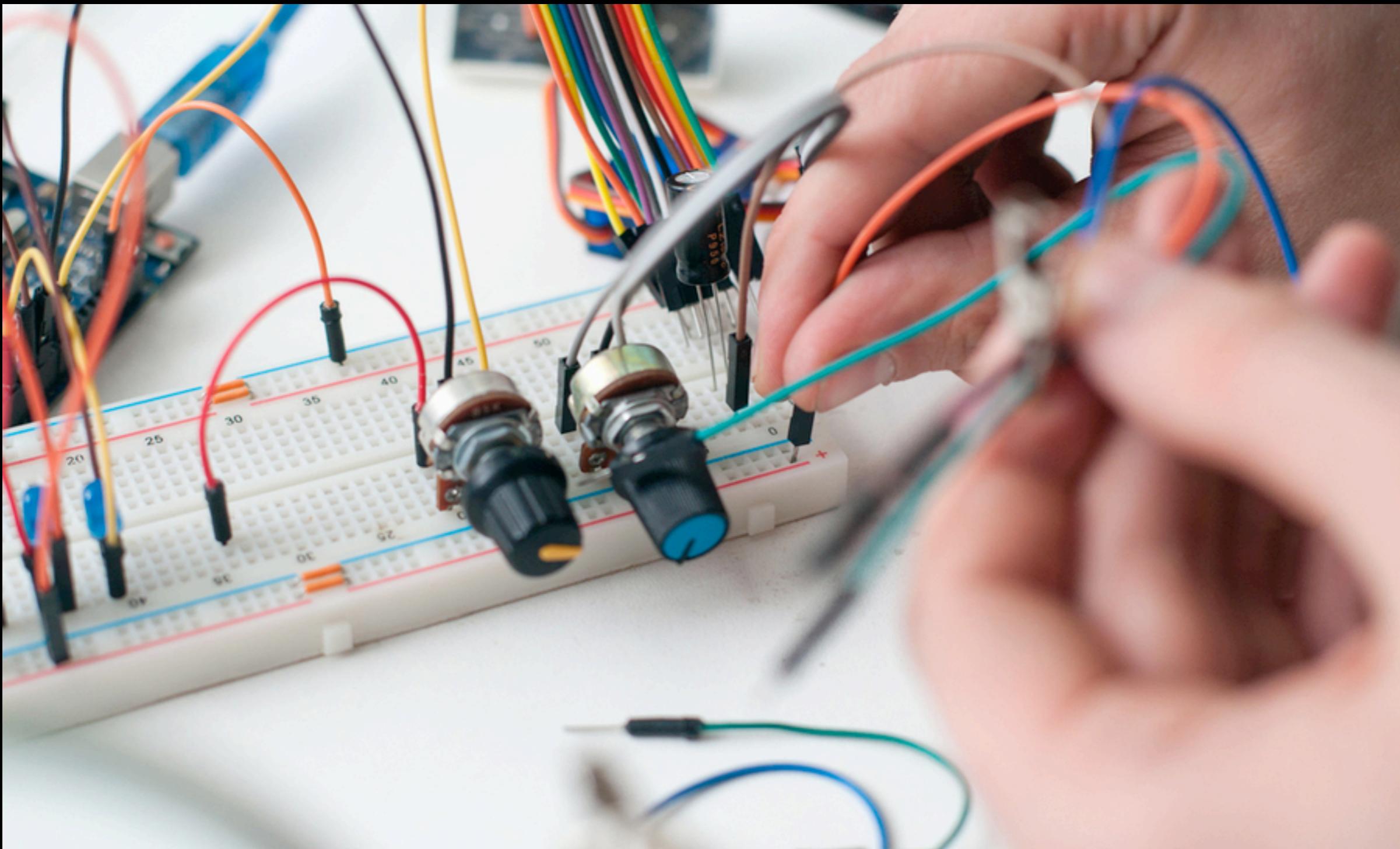
- Batteries?



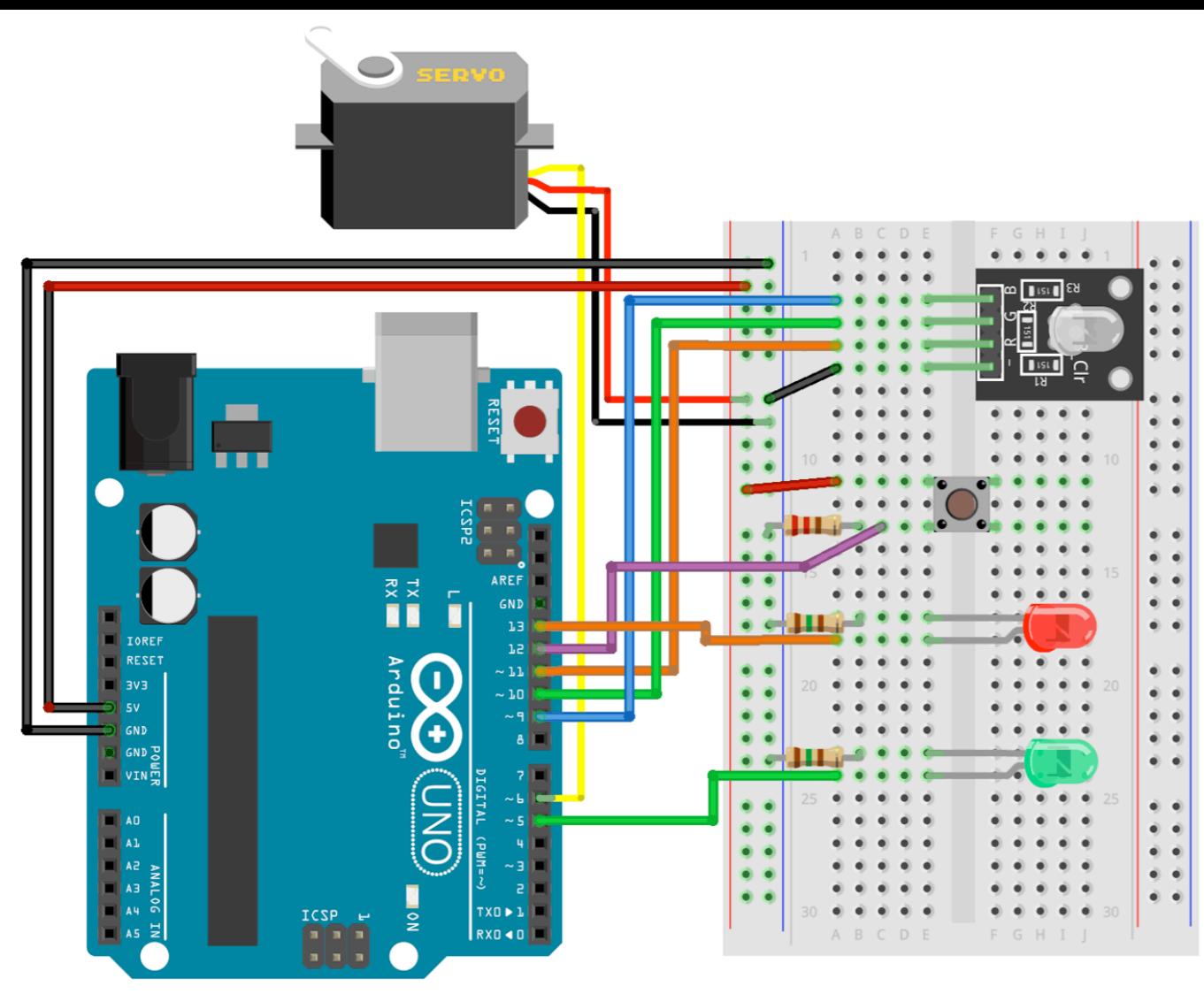
- Li-Ion Battery?



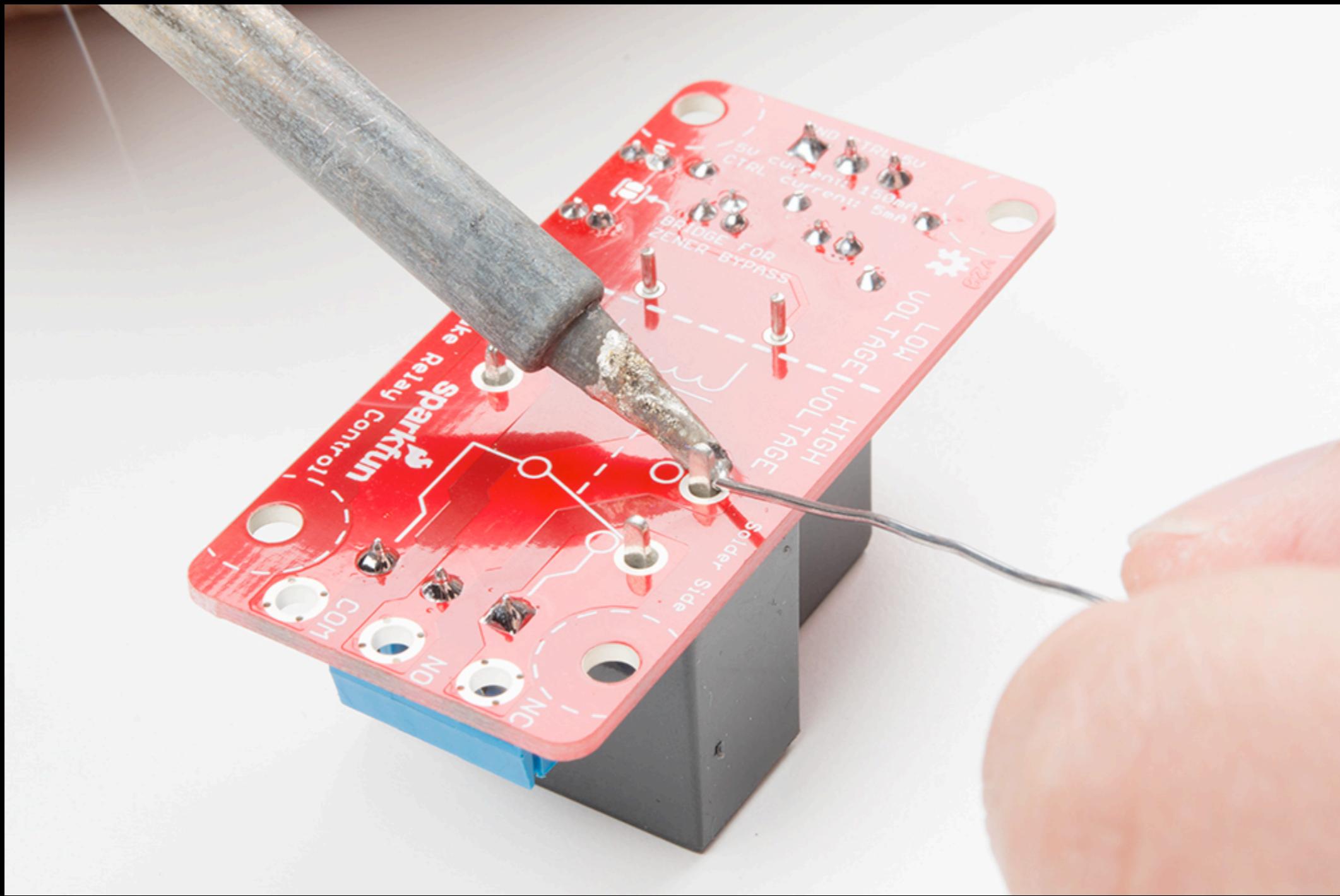
Prototyping on Breadboard



Doing a Circuit Board



Assembly



Step 1:

- Find out WHAT you want your thing to do
- It can be something simple!
- Let's go!