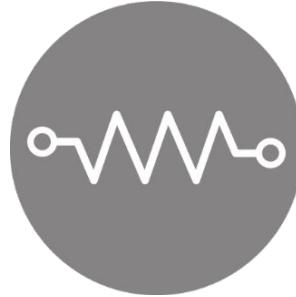


# Build Your Own Love Messengers

**Today,  
7:00PM - 10:00PM**

**Connect to Wifi:**  
Username: NYCR24  
Password: clubmate





**Thanks NYC Resistor for hosting**

And for all our helpers that made this workshop possible,  
especially Aiyo, Grace, Kari, Guillaume, Winston!



## ♥ Introductions ♥

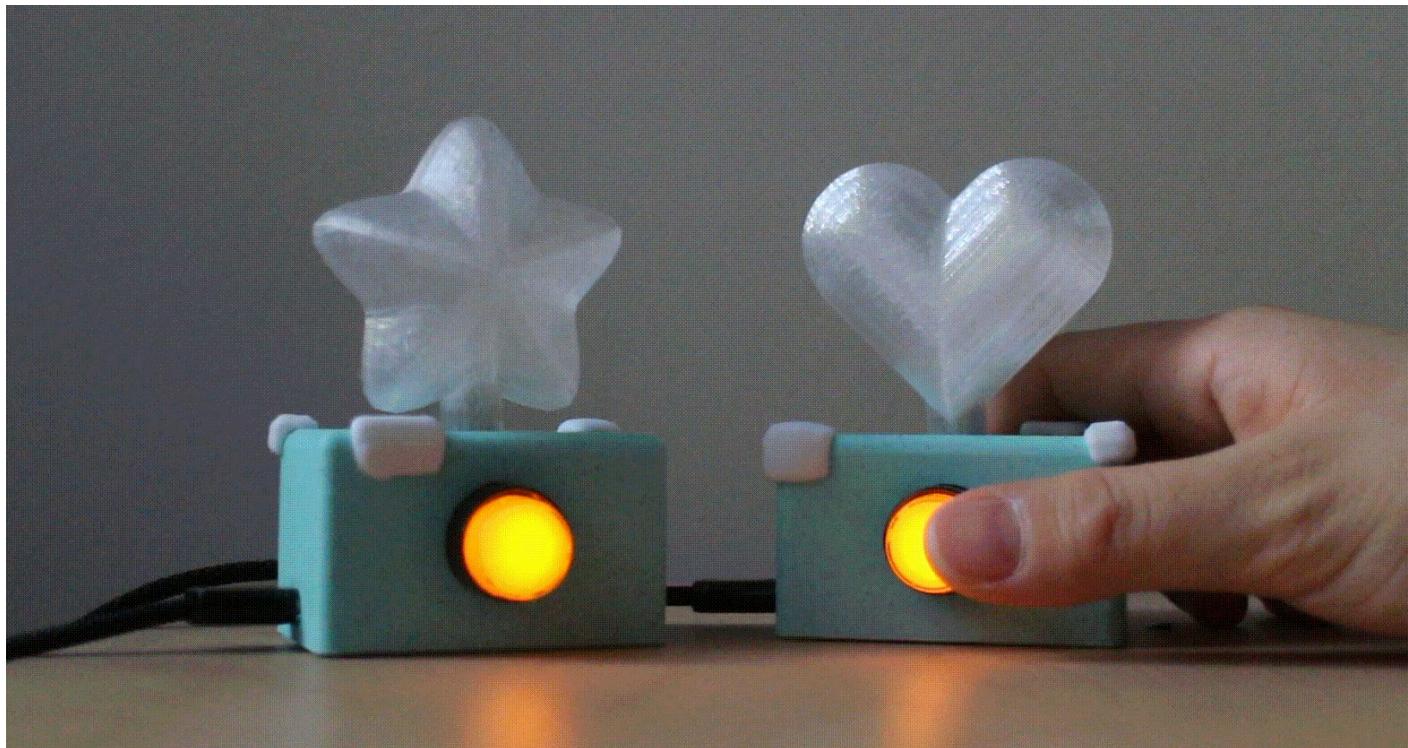
- Name
- Pronouns
- Who are you giving your Love Messenger to?



This updates our real-time database!



**You don't need a computer for  
Love Messengers to work!**





**Download Arduino IDE:**

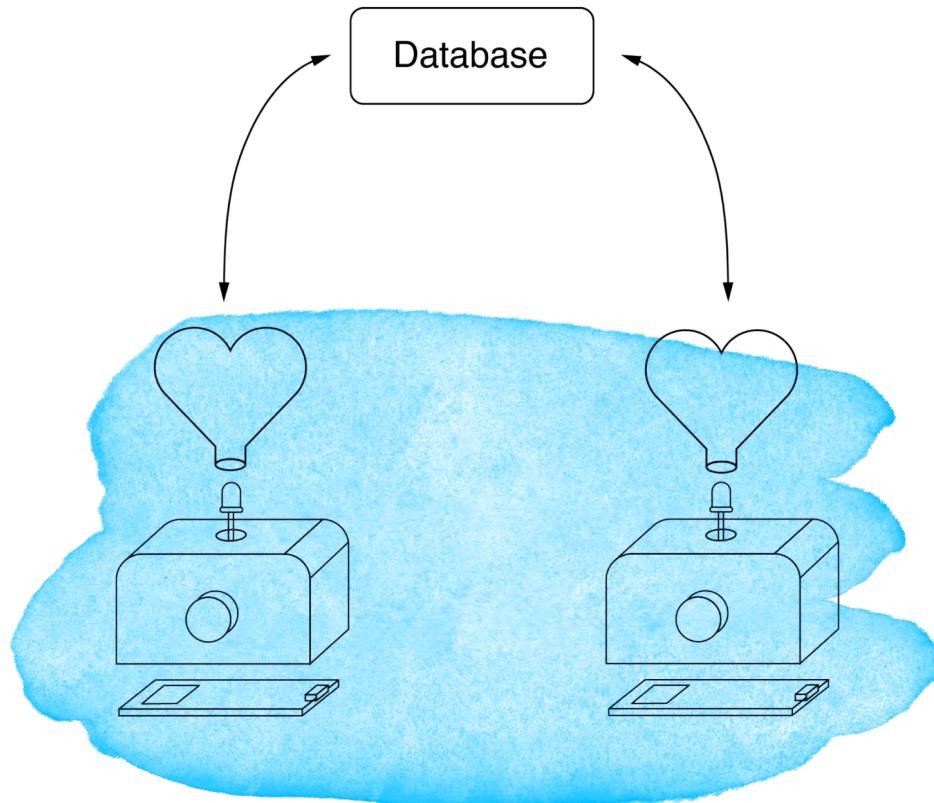
[www.arduino.cc/en/software](http://www.arduino.cc/en/software)



Download microcontroller board:

<https://shorturl.at/7kVAl>

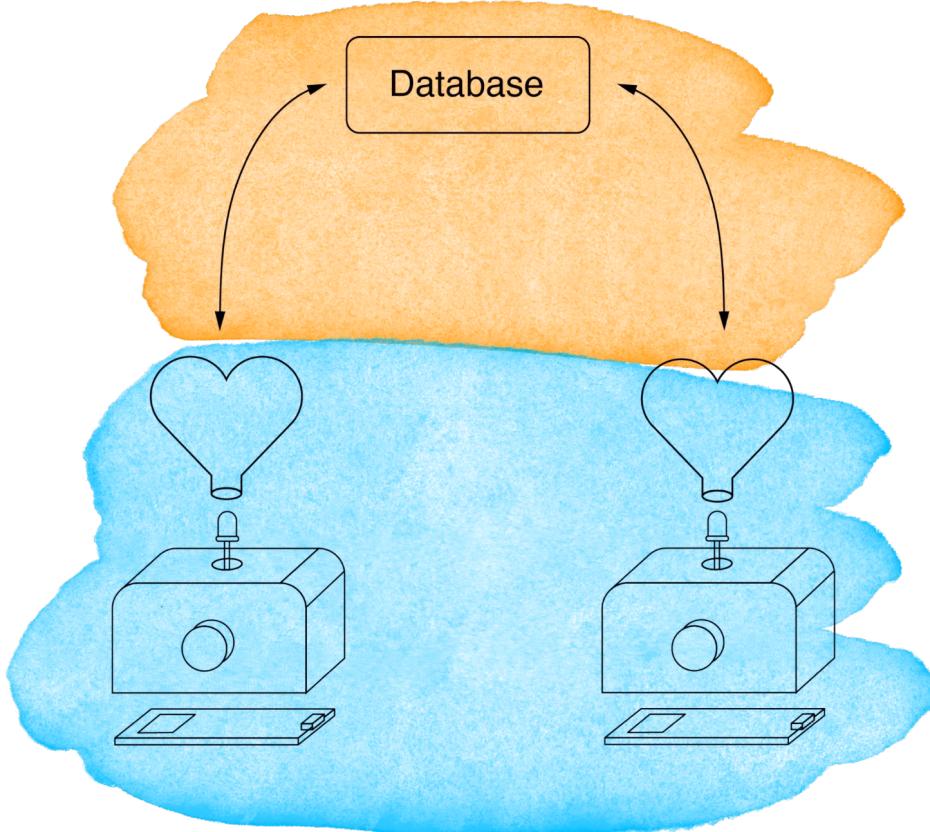
# Schedule:



## Physical Segment (1.5hr)

- Soldering
- Assembling

# Schedule:

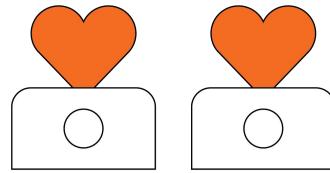


## Digital Segment (1.5hr)

- Database
- Code

## Physical Segment (1.5hr)

- Soldering
- Assembling



We will now give out the base material kit!

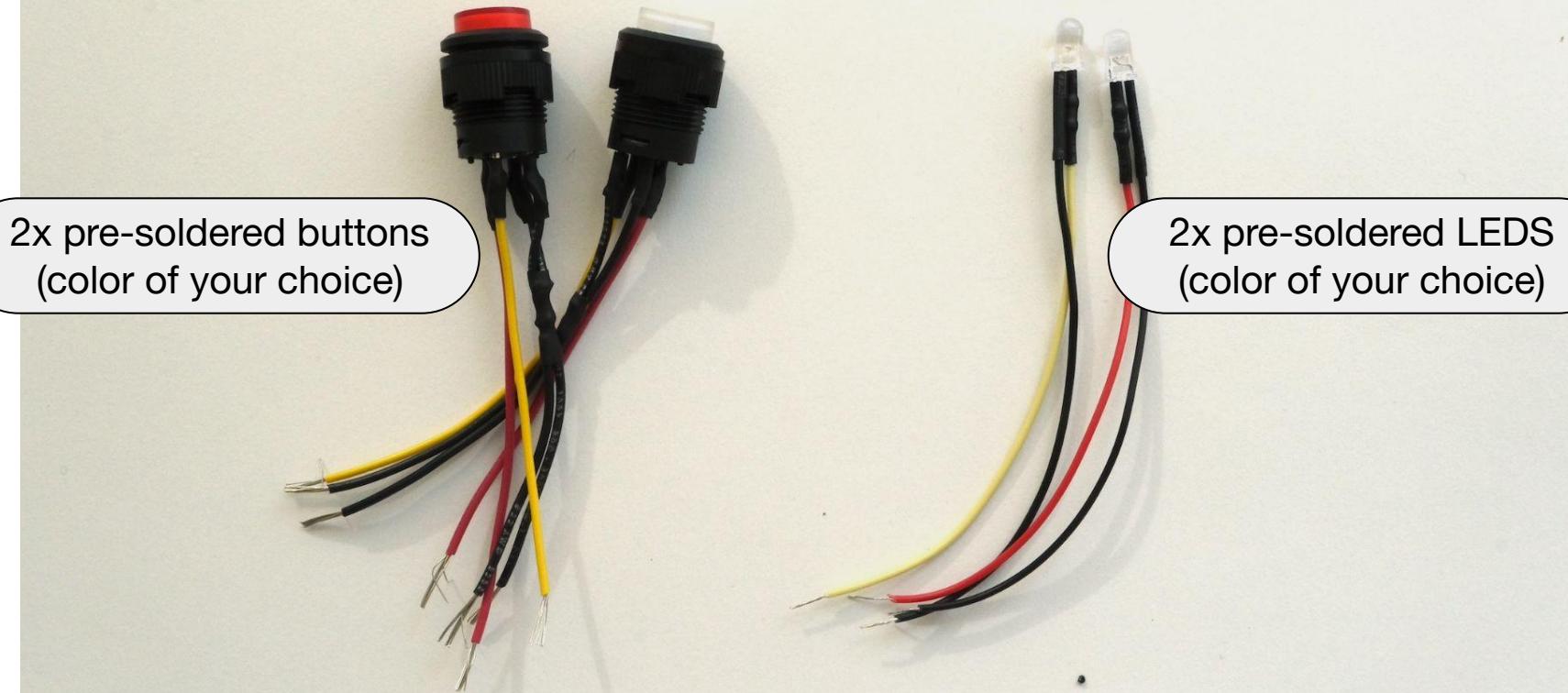
# Materials provided in your base materials kit

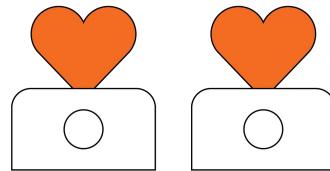


We have **USB-C Wires** and **USBA-USBC adapters**



# Items to customize!





Come to the front to customize your own Love Messengers!

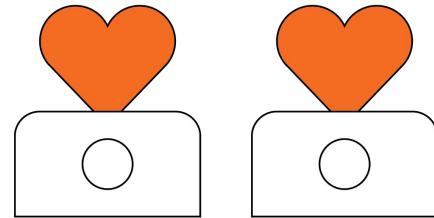
Settle at the front soldering station



Who here has soldered before?



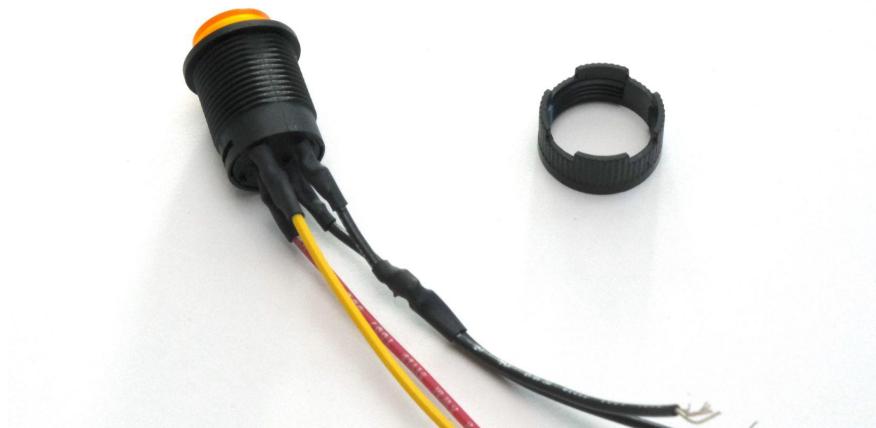
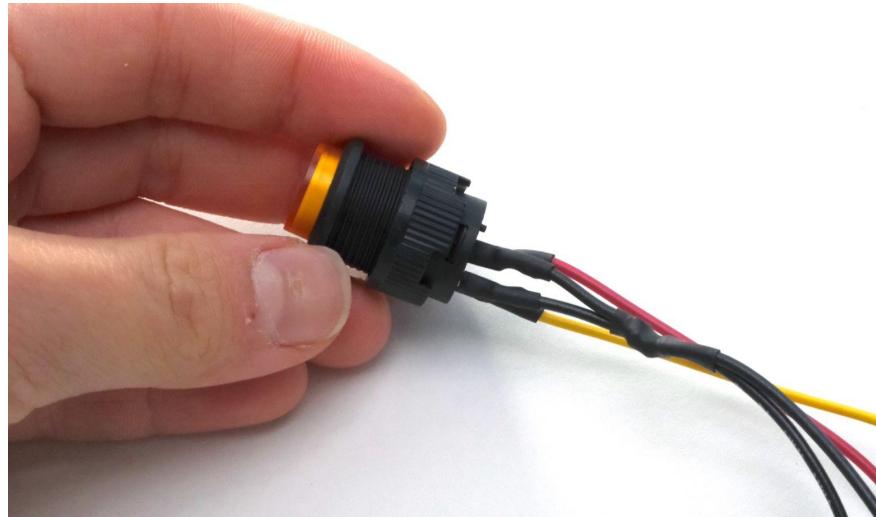
**Live demo of soldering** 



Let's start!

## Part 1: Pre-assembly

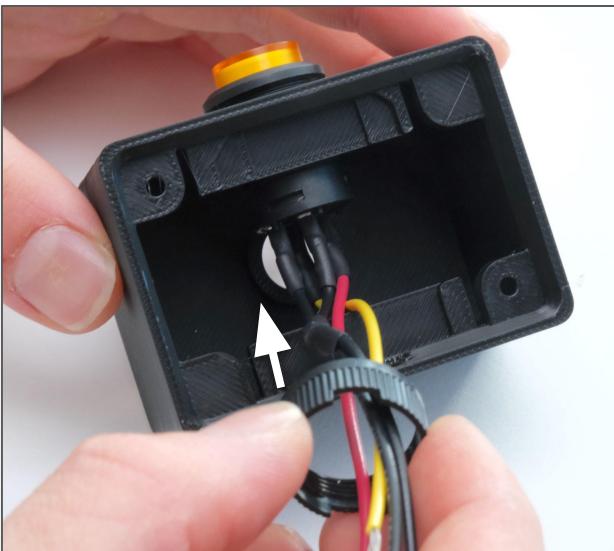
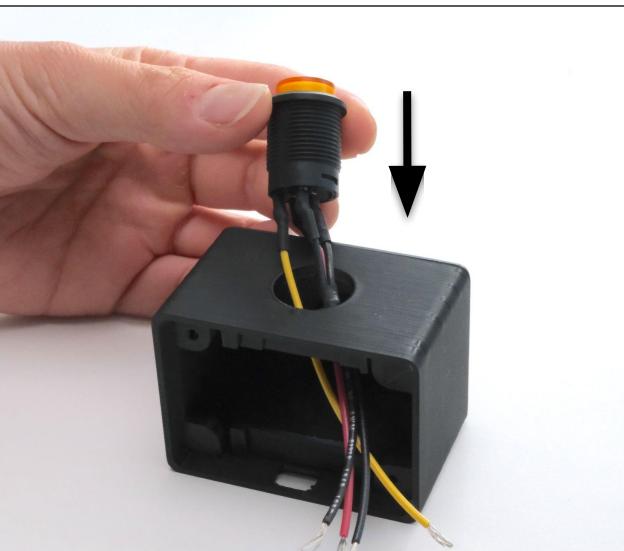
Unscrew the plastic piece from  
the back of the button



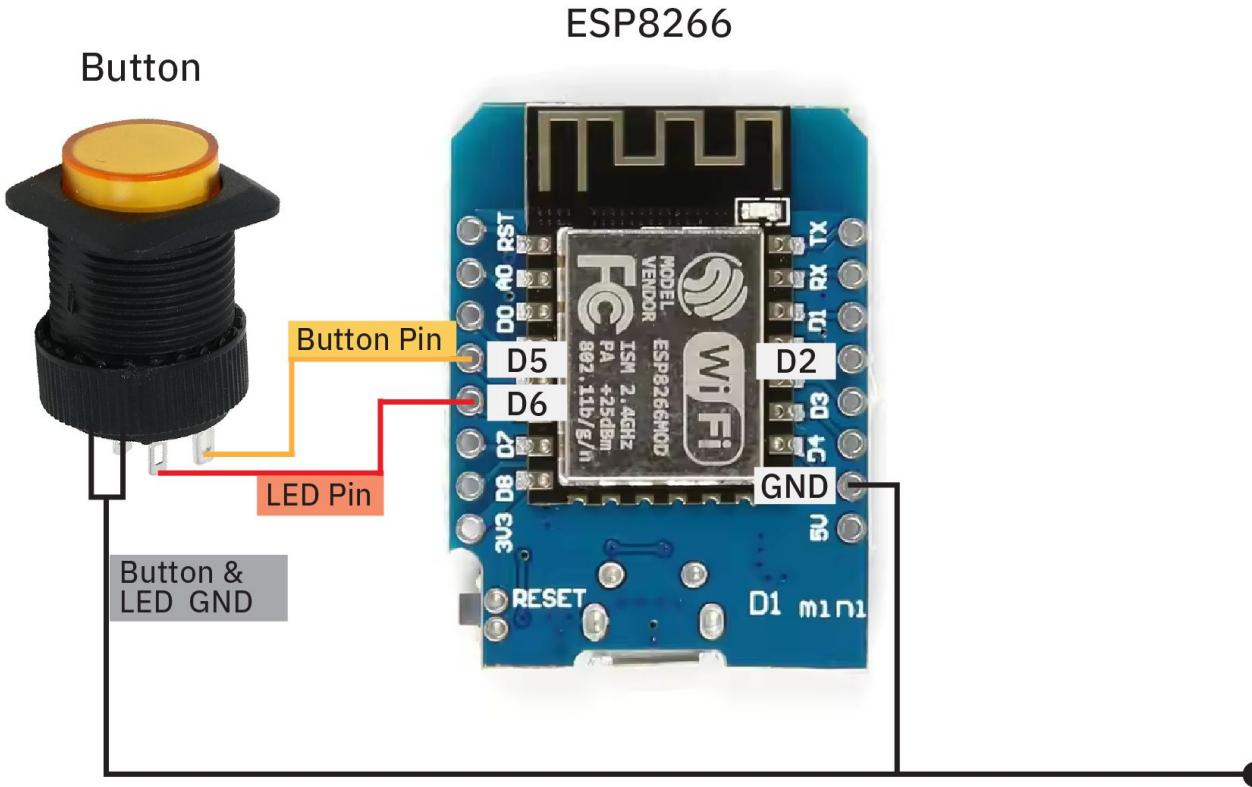
# Part 1: Pre-assembly

Insert button

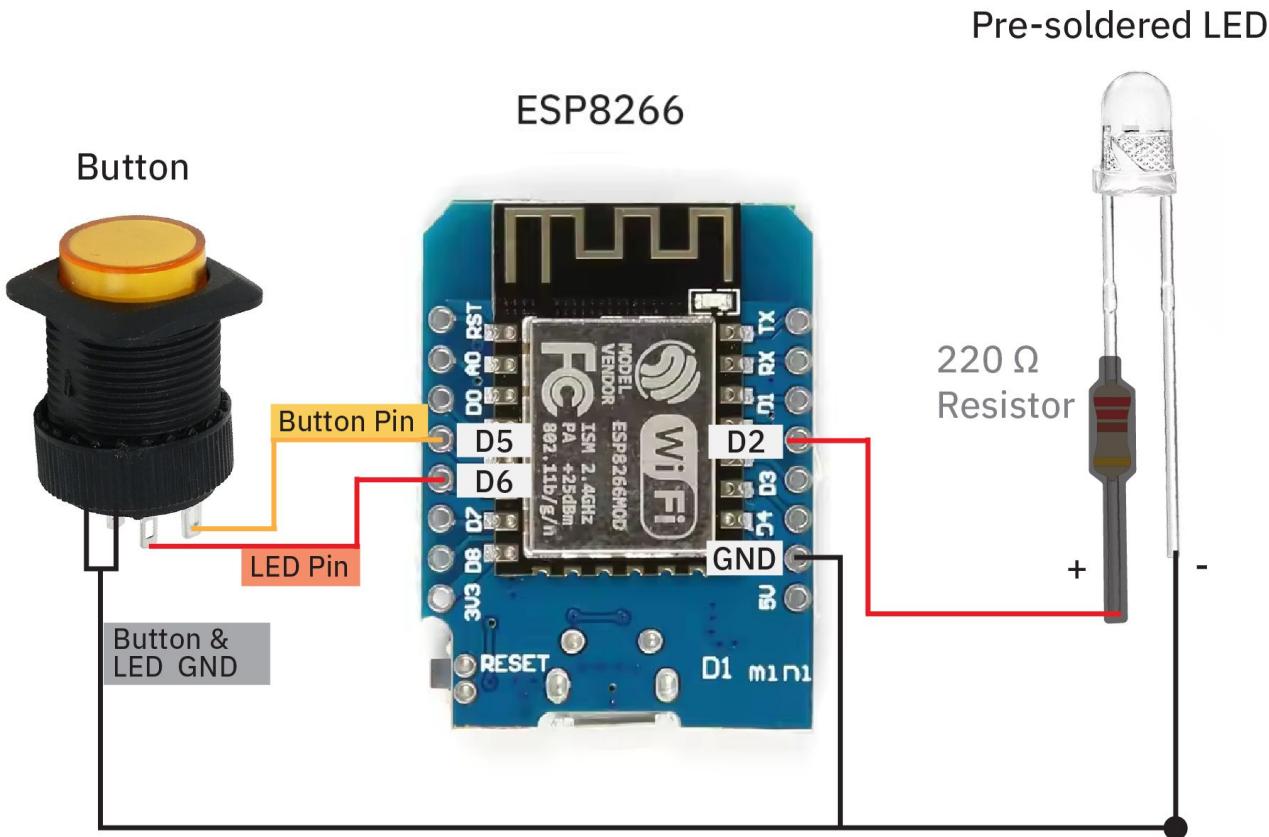
Screw button into the encasing



# Solder both buttons first



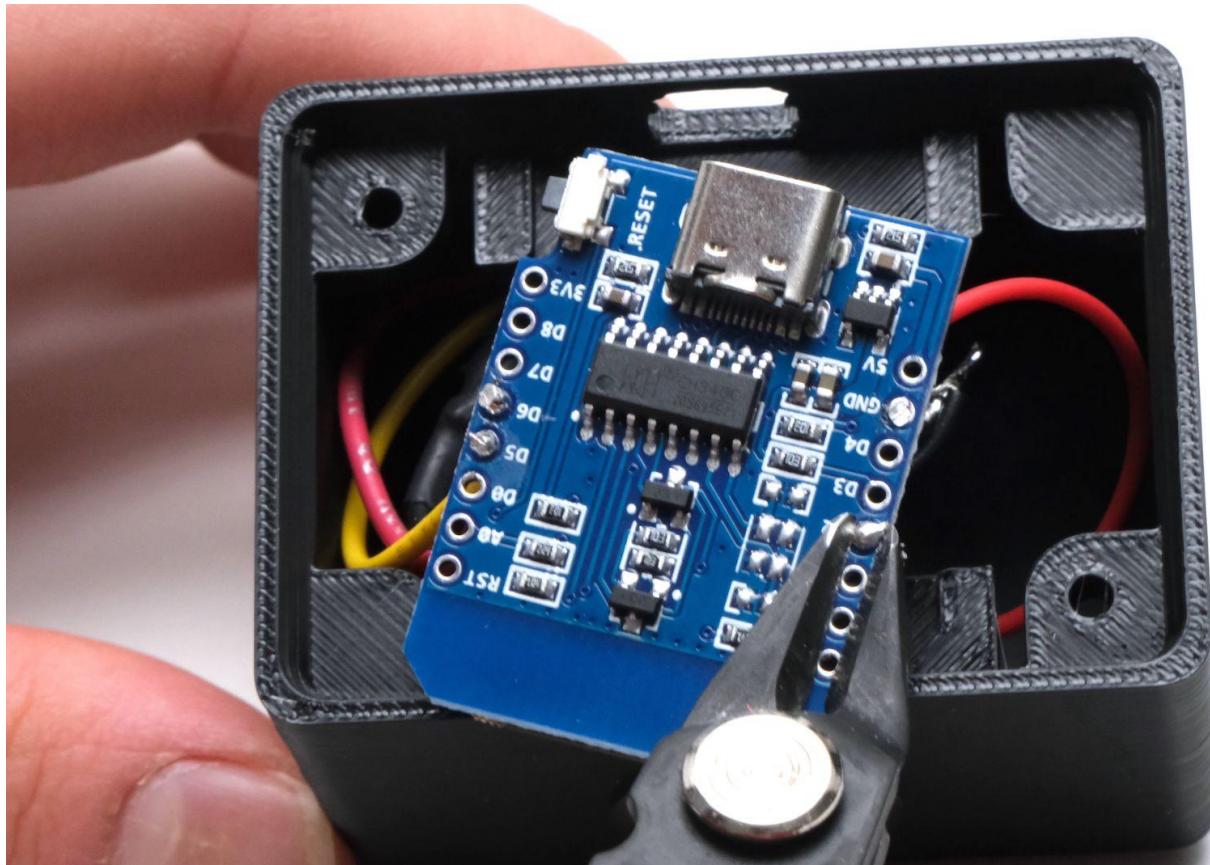
# Solder both LEDs next



Pre-soldered LED

**NOTE:**  
Your LED wire color  
might be different  
depending on which  
color you chose!

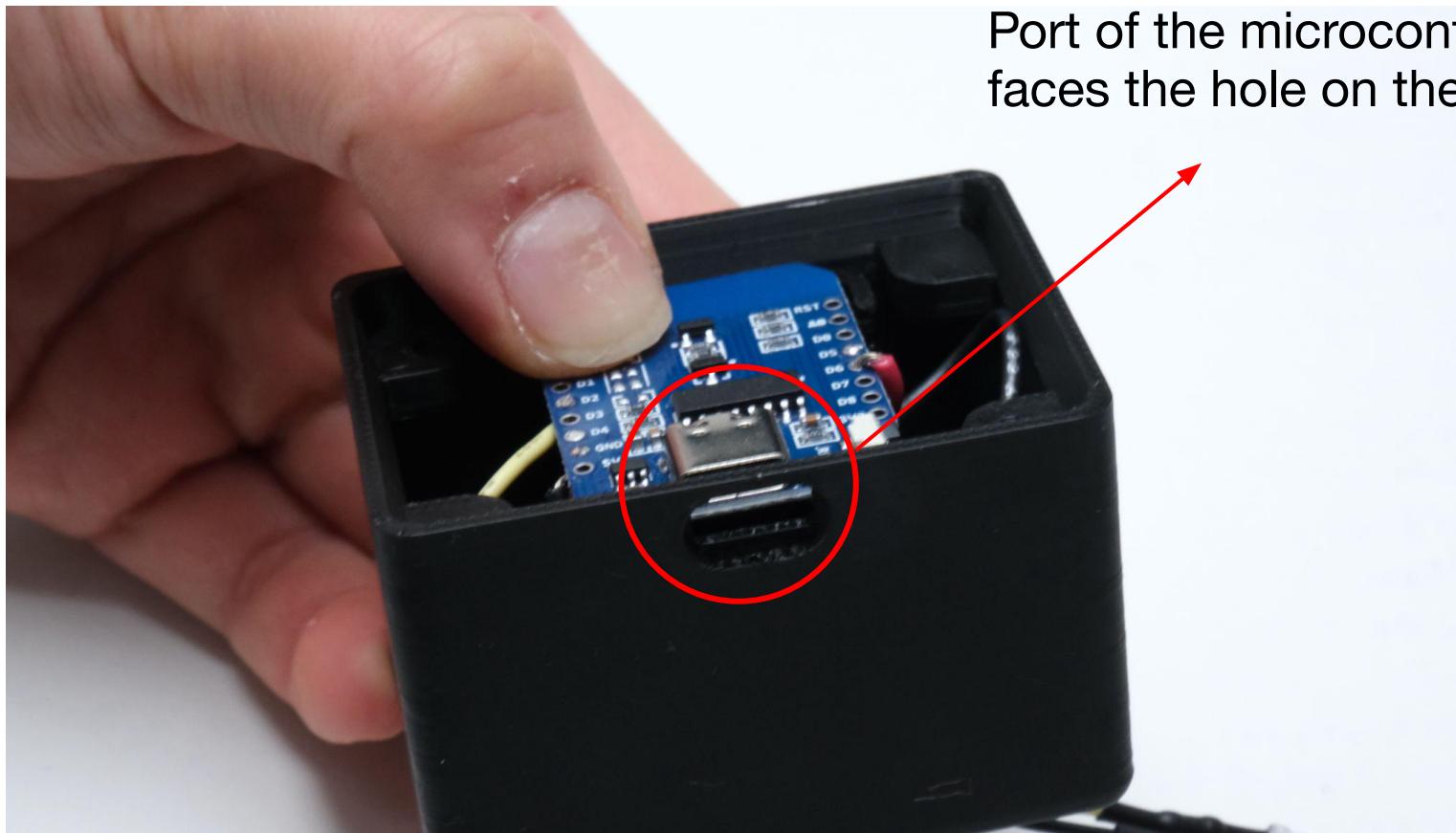
Use pliers to cut off any excess wires



# Finally: Putting everything together! 😊



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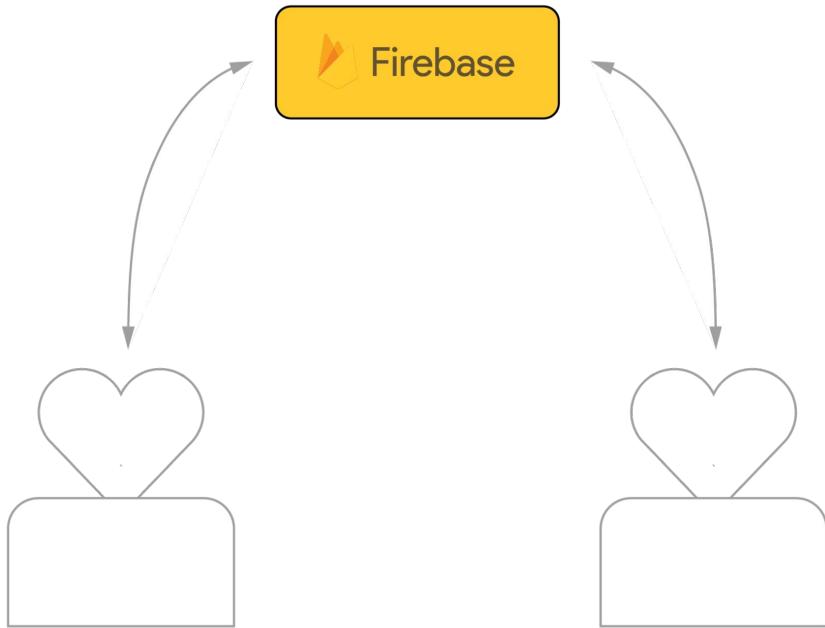
The floors labelled “1” and “2” are handy for uploading the code later!

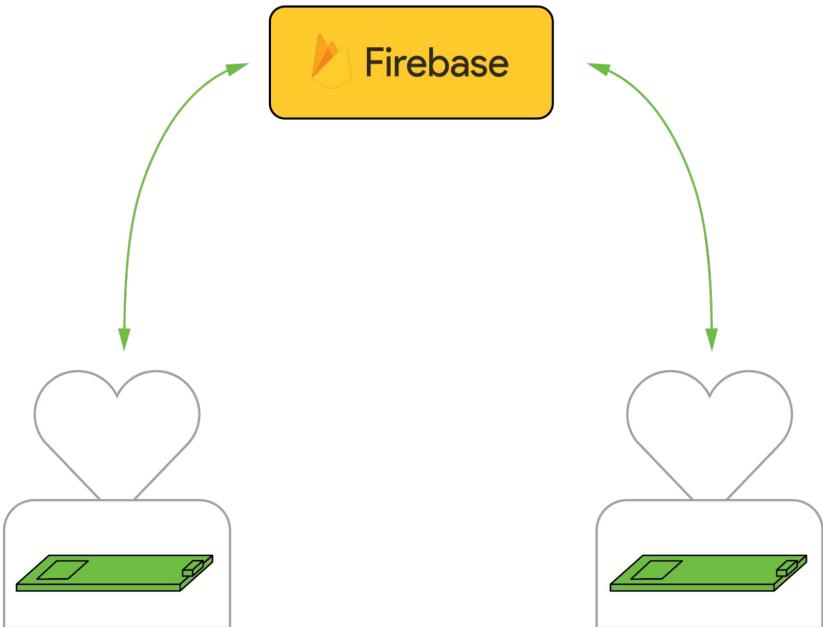




# Digital Segment

# Step 1: Set up Database





**Step 1: Set up Database**

**Step 2: Upload Code**

**Instructions:** [shorturl.at/uTL9u](https://shorturl.at/uTL9u)

We will regroup when everyone is done!



Who has written Arduino code before?



# Pseudo Code

Setup-code:

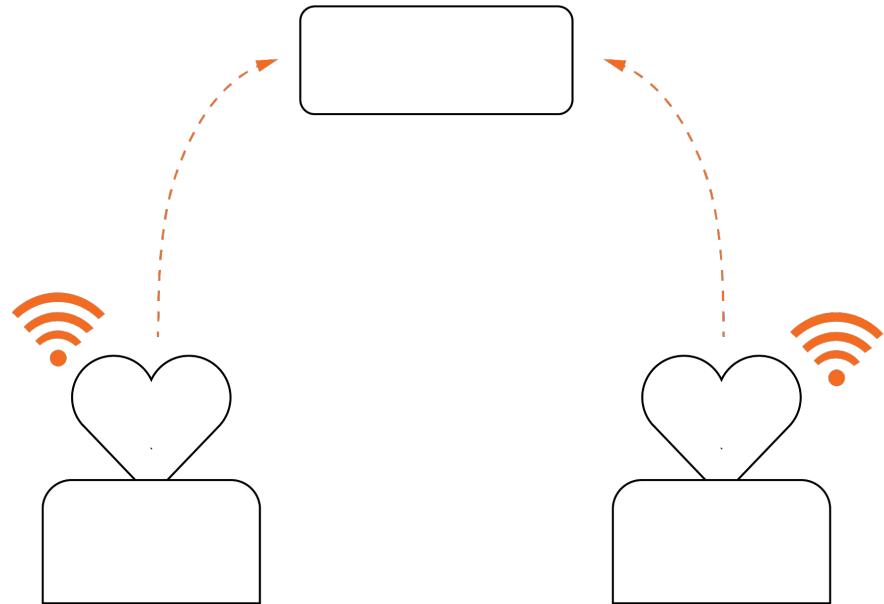
Main Code (runs in a loop):

# Pseudo Code

Setup-code:

1. Connecting to **Wifi**
2. Connecting to **Firebase**

Main Code (runs in a loop):



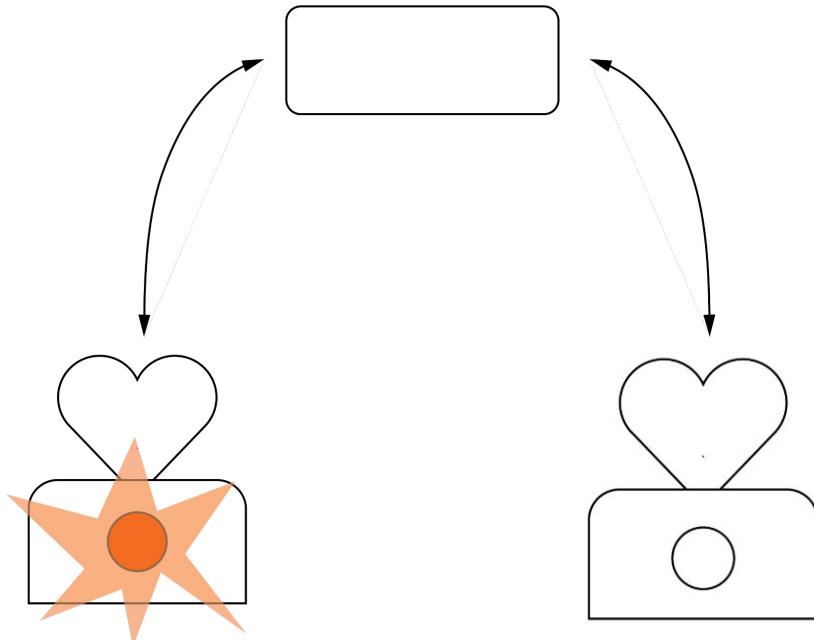
# Pseudo Code

Setup-code:

1. Connecting to **Wifi**
2. Connecting to **Firebase**

Main Code (runs in a loop):

1. Reading the **Button State**



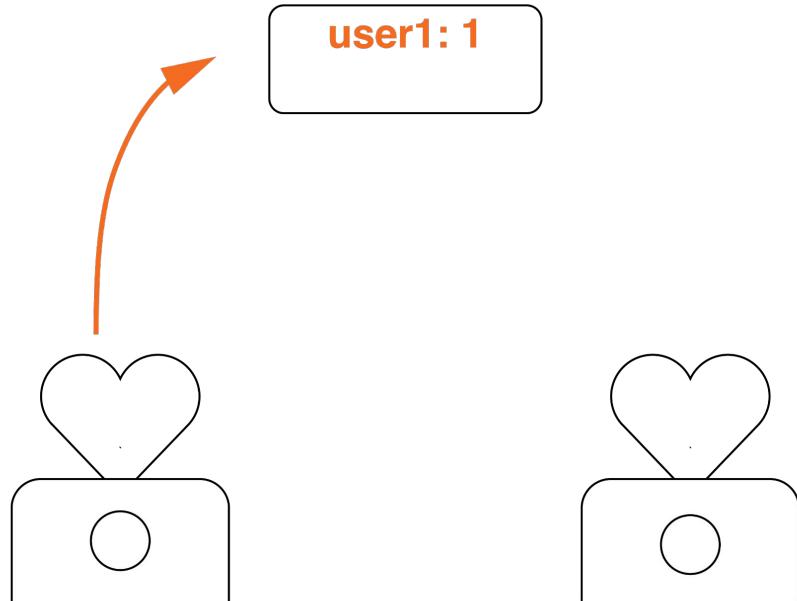
# Pseudo Code

Setup-code:

1. Connecting to **Wifi**
2. Connecting to **Firebase**

Main Code (runs in a loop):

1. Reading the **Button State**
2. **Uploading** Data to Firebase



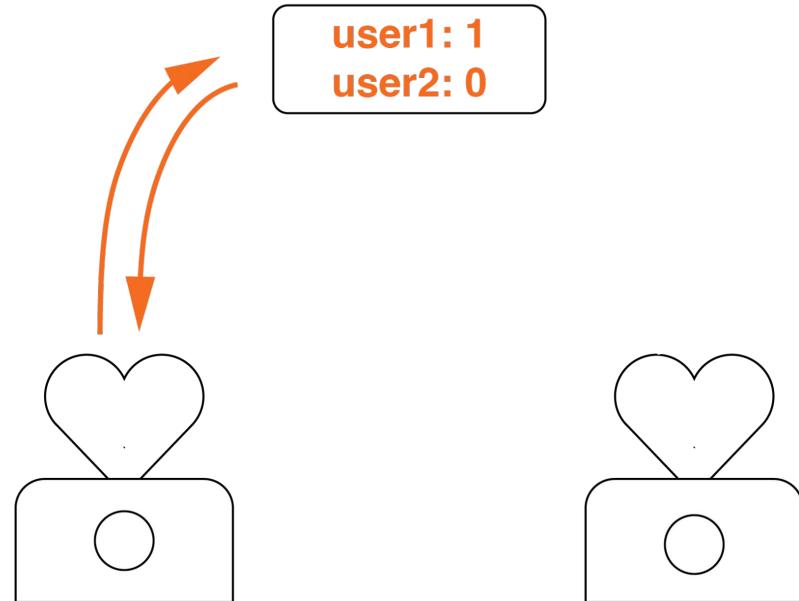
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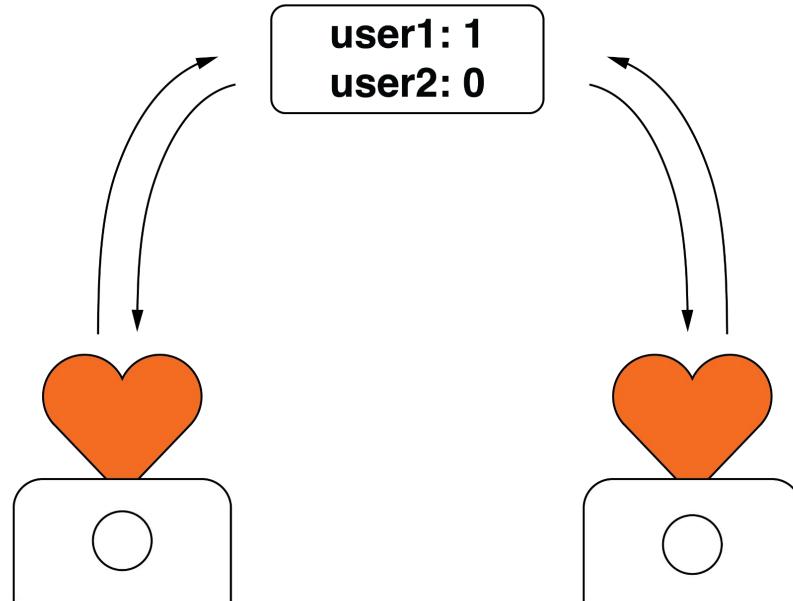
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4. Manage **LED** (turn on/off)



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# Arduino Code (C++)

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void setup() {  
    Serial.begin(115200);  
  
    pinMode(ledPin, OUTPUT);  
    pinMode(buttonPin, INPUT_PULLUP);  
  
    connectWiFi();  
    connectFirebase();  
}  
  
void loop() {  
    if (Firebase.ready() && signupOK && (millis() -  
lastFirebaseUpdate > 1000)) {  
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        downloadData();  
        manageLED(buttonState, firebaseData);  
  
    }  
    delay(5);  
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```

# Let's Upload the Code!



Access Code from Github:

<https://shorturl.at/MyVV6>

# Everything is in our GitHub page!

[shorturl.at/V8nCA](https://shorturl.at/V8nCA)

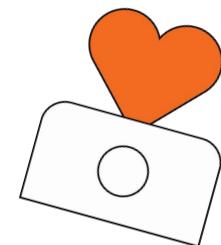
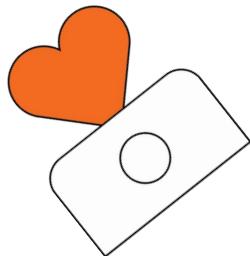
 3D Models	Add files via upload	3 hours ago
 Media	Add files via upload	53 minutes ago
 Slides	Delete Feb 2025/Slides/Screenshot 2025-01-08 at 16...	1 hour ago
 README.md	Update README.md	1 hour ago
 code.ino	Add files via upload	3 hours ago

README.md



## February 2025 Edition of NYC Resistor Workshop!

# Help us fill out this feedback form!



# Open to Questions!

 @wormicollective

**Access the Github:**

[shorturl.at/V8nCA](https://shorturl.at/V8nCA)

**Contact us:**

yiqing.ng@gmail.com

