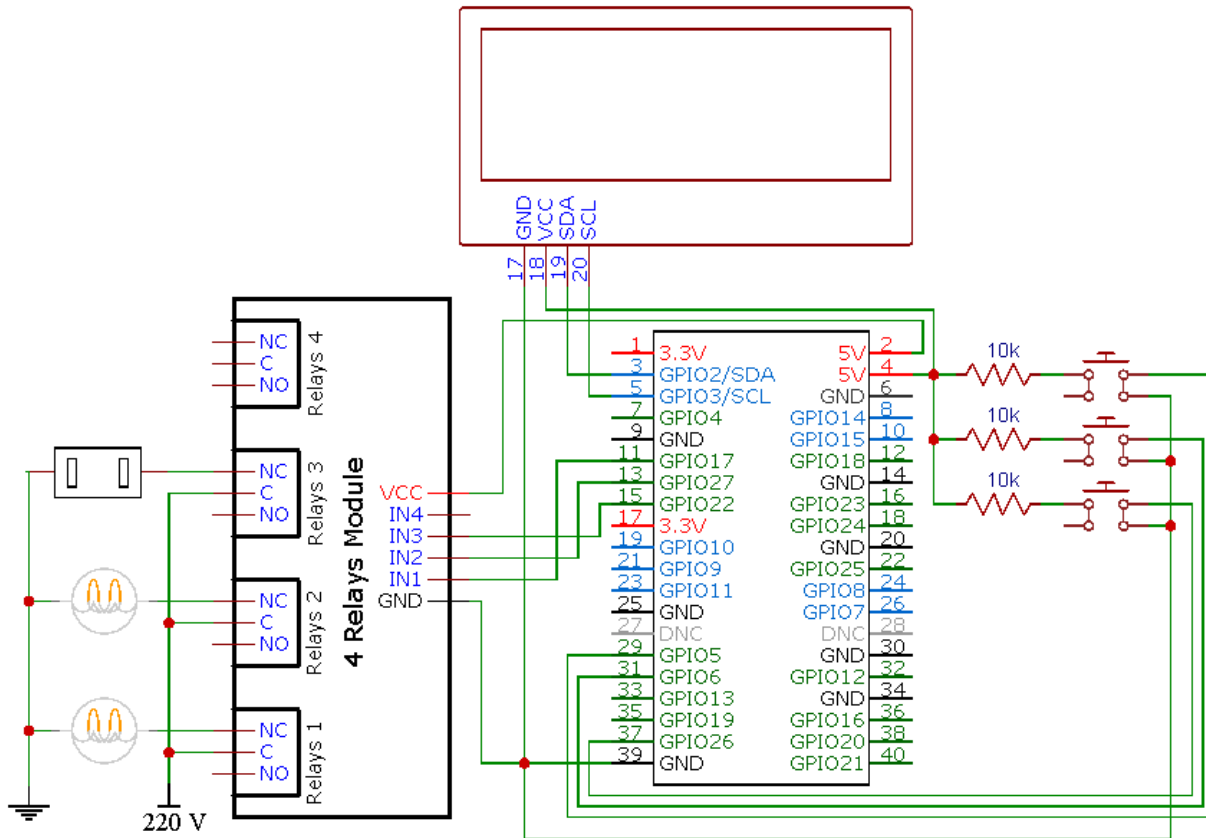


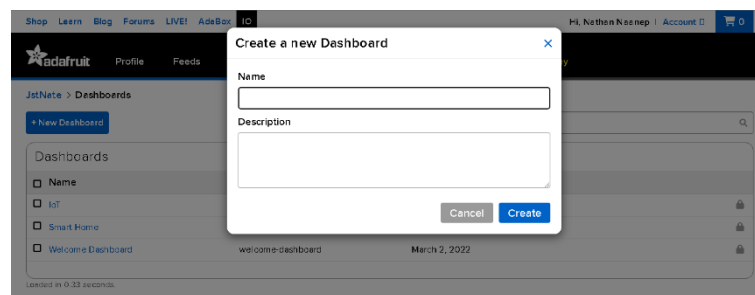
A. Schematic Diagram



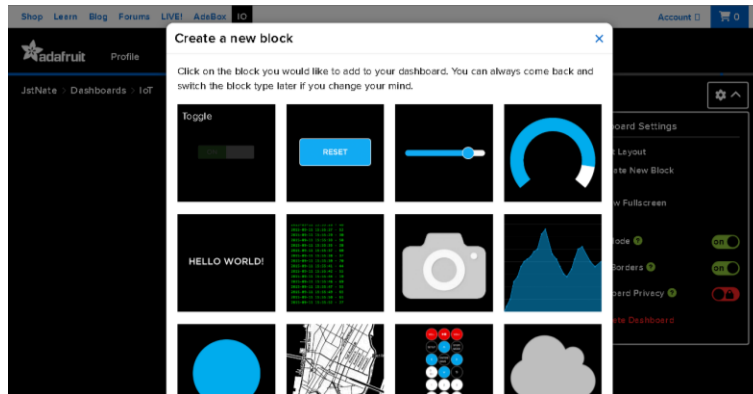
B. API Integration

a. Adafruit

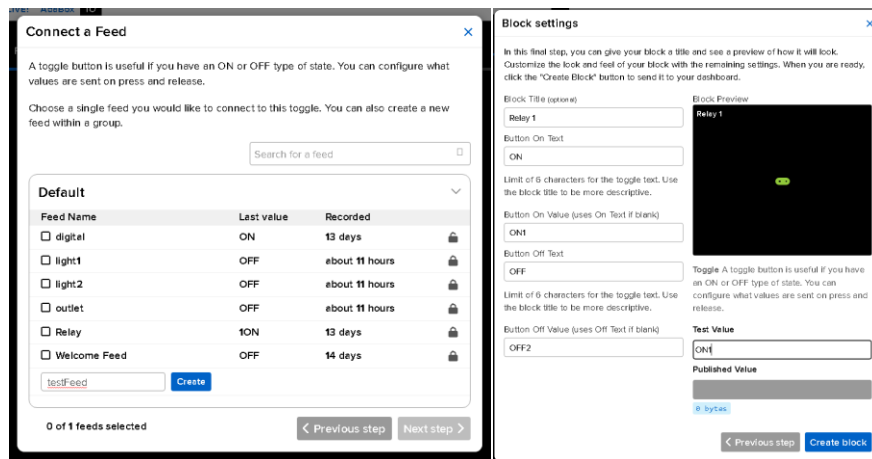
1. Log-in or create Adafruit Account and create dashboard at <https://io.adafruit.com>



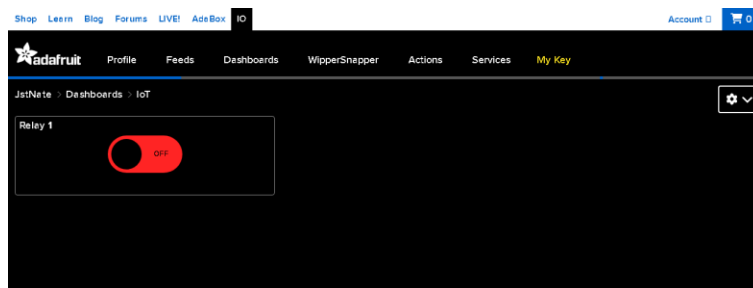
2. Insert toggle or preferred widget to the dashboard



3. Assign Feed and set the block setting

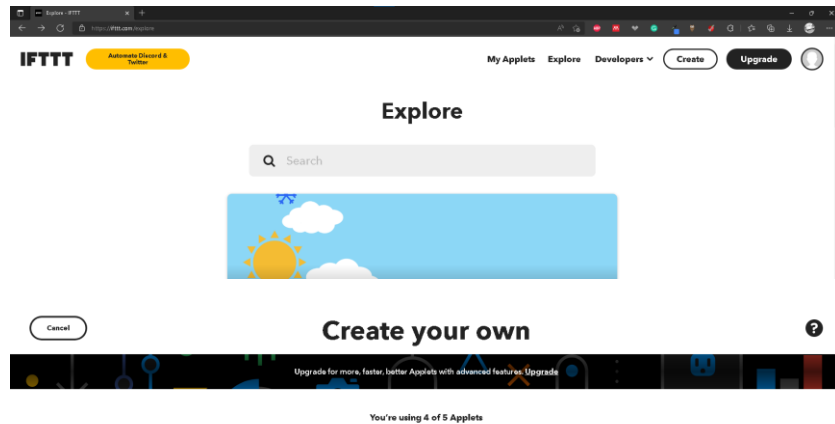


4. The block has been created

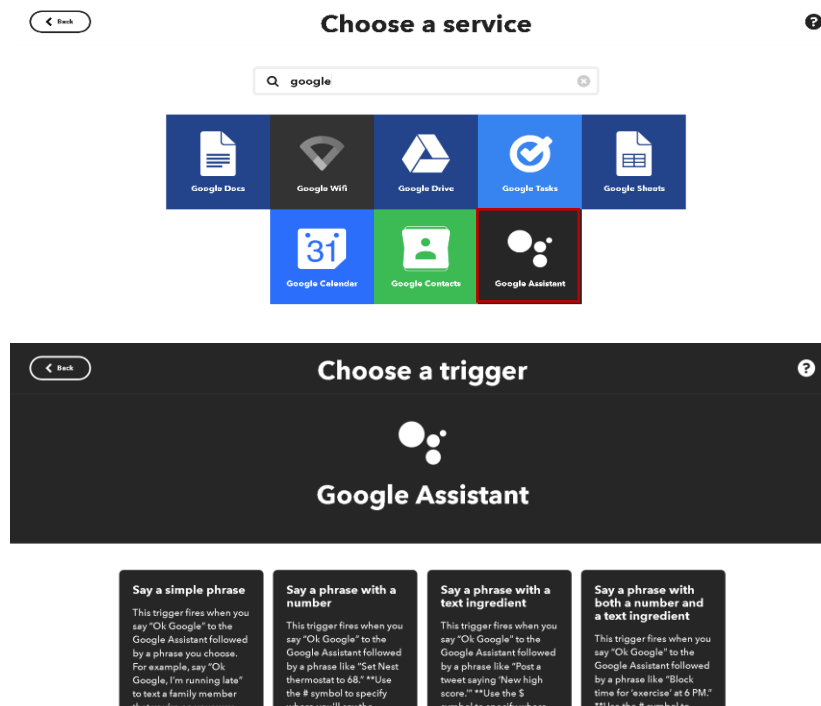


b. IFTTT

1. Log-in or create IFTTT account at <https://ifttt.com/explore> and create an Applet



2. Assign the Google Assistant for If This and choose trigger



3. Complete the trigger field

Complete trigger fields

Say a simple phrase

The trigger phrase structure: "On Google" is the trigger, followed by a phrase you choose. For example, say "On Google, I'm coming home" to turn on a smart light.

What do you want to say?

turn on relay

What's another way to say it? (optional)

And another way? (optional)

What do you want the Assistant to say in response?

turning on relay

Language

English

Create trigger

4. Then select "Then That" and select Adafruit service and select "Send data to Adafruit IO"

Choose a service

Search services

(more:trees) abode AC Cloud Control Adafruit ERIA Ai-Sync AICO AiDot Almos Smart AirPetrol WiFi

Choose an action

Adafruit

Send data to Adafruit IO

This Action will send data to a feed in your Adafruit IO account.

5. Connect the Adafruit Account created earlier. Select the feed and set the value that "Data to save" to trigger the block in the Adafruit Dashboard

Complete action fields

Send data to Adafruit IO

This Action will send data to a feed in your Adafruit IO account.

Adafruit account

Nathan Naanop

Feed name

Relay

The name of the feed to save data to.

Data to save

ON1

The data to be saved to your feed.

Create action

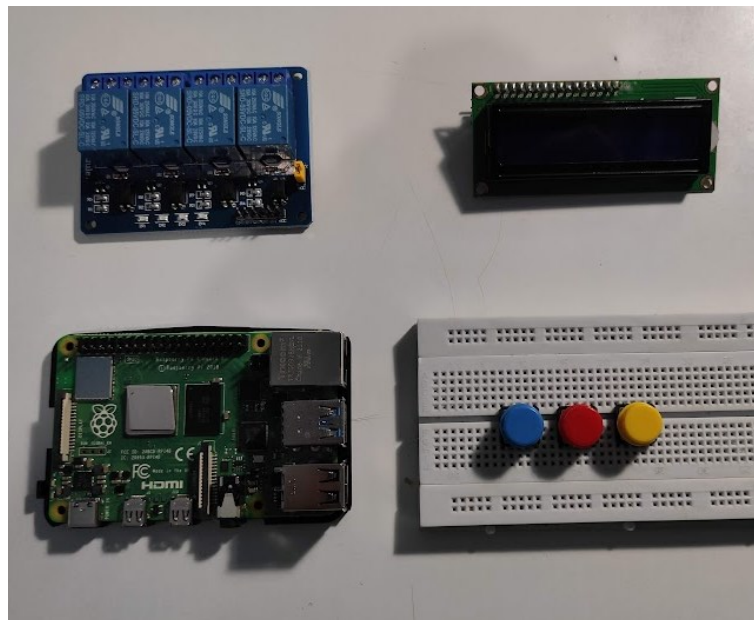
C. Hardware Requirements & Bill of materials

| ITEM | QTY | COST |
|---------------------|-----|-----------------|
| LCD I2C 16x2 | 1 | ₱ 112.00 |
| Relay Module | 1 | ₱ 159.00 |
| Push Button | 3 | ₱ 16.00 |
| Resistor | 3 | ₱ 20.00 |
| Light Receptacle | 2 | ₱ 100.00 |
| Outlet | 1 | ₱ 80.00 |
| AC Wire | 1 | ₱ 100.00 |
| Electric Plug | 1 | ₱ 70.00 |
| Jumper Cable | Set | ₱ 200.00 |
| Raspberry Pi 3B Set | Set | Provided |
| Breadboard | 1 | ₱ 49.00 |
| TOTAL | | ₱ 906.00 |

D. Software requirements

- Thonny Python IDE
- Adafruit IO
- IFTTT
- Google Assistant

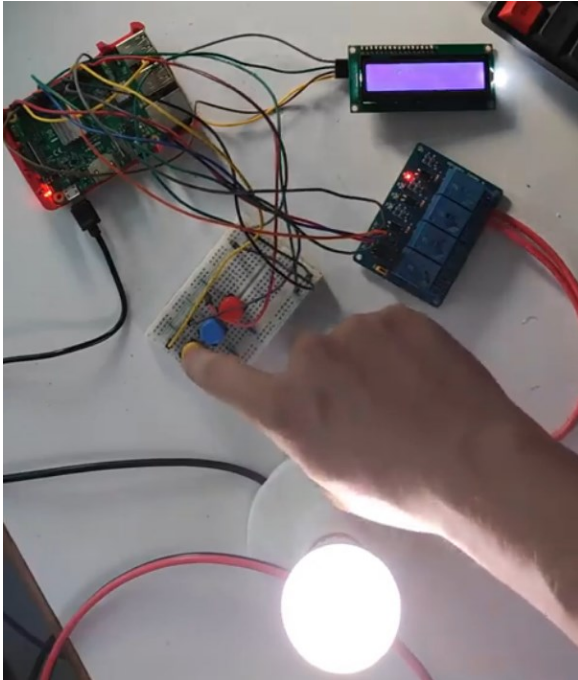
E. Project design



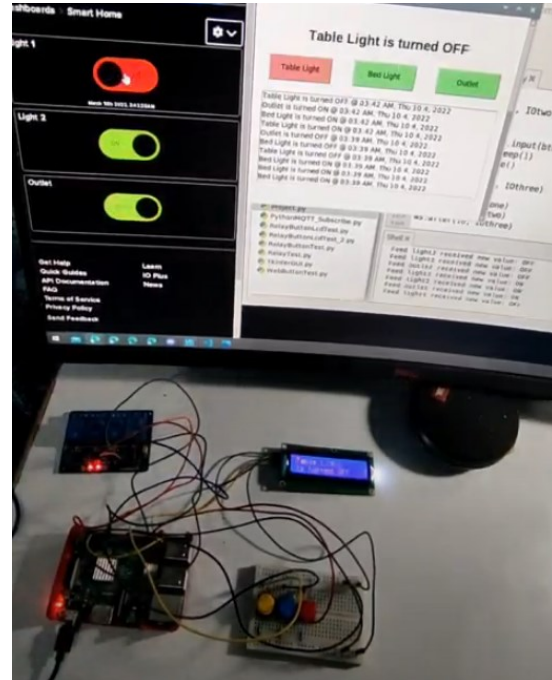
The initial component placement of the project

F. Project Progress Documentation

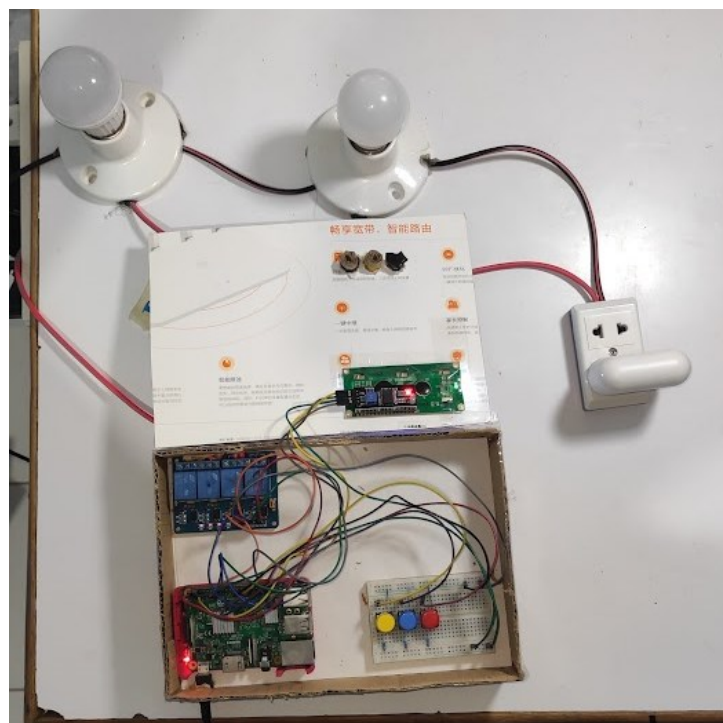
a. Project creation



GPIO connection and electrical circuitry

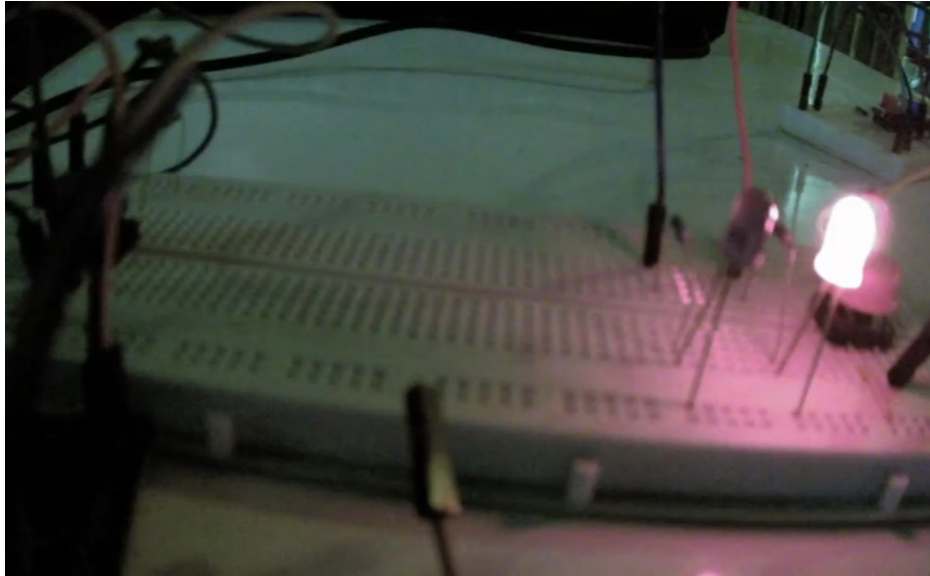


UI integration

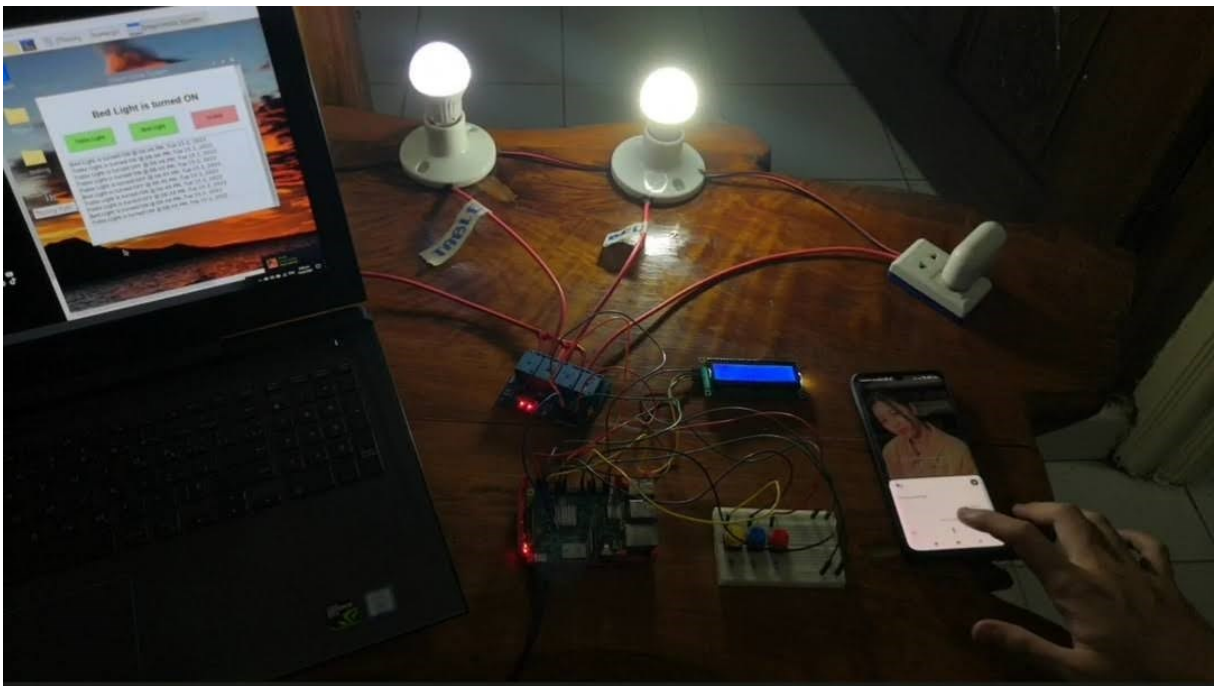


Enclosure Assembly

b. Project testing & debugging



Google assistant test using led



Components assembly and testing

c. Finished Project for Presentation

