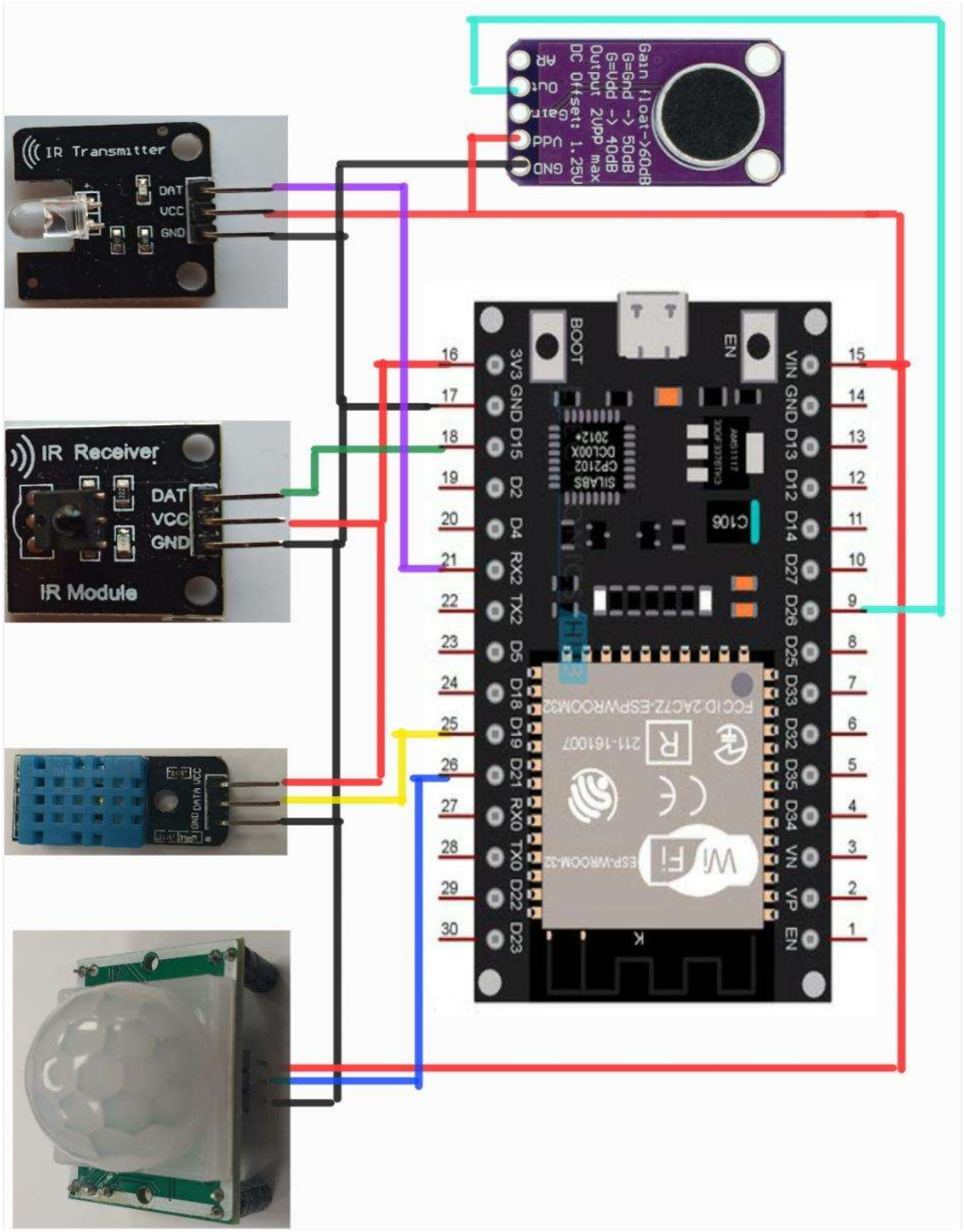
Project Activation Documentation

Connection Diagram:



Install and Set Up Home Assistant on Raspberry Pi:

- Install and Set Up Home Assistant on Raspberry Pi following the instruction in this link:
  https://www.makeuseof.com/how-to-install-and-setup-home-assistant-on-raspberry-pi-for-home-automation/

  Note: If you encounter problem with connecting the raspberry to the internet, you might try to manual configure your network https://github.com/home-assistant/operating-system/blob/dev/Documentation/network.md

  In our case, we solved the problem with one of the two options:

  1. Connecting to the internet wirelessly using the command:
     `network update wlan0 --wifi-ssid YOURSSID --wifi-auth wpa-psk --wifi-psk YOURPASSWORD --ipv4-method auto --ipv6-method auto`

  2. Connecting to the internet via the ethernet cable and configured the network manually using usb in the following way:
     Inside the \CONFIG\network\ directory on the USB drive or SD card, create a file called my-network and add the content below:

```
[connection]
id=my-network
uuid=d55162b4-6152-4310-9312-8f4c54d86afa
type=802-3-ethernet
llmnr=2
mdns=2

[ipv4]
method=auto

[ipv6]
addr-gen-mode=stable-privacy
method=auto
```

In HomeAssistant do the following:

Add the ESPHome and File editor add ons:

- Go to Settings -> Add-ons -> ADD-ON-STORE -> ESPHome
  Install, turn on the "show in sidebar" option and start the ESPHome

- Go to Settings -> Add-ons -> ADD-ON-STORE -> File editor
  Install, turn on the "show in sidebar" option and start the File editor

Add and link esp32 device:

- Choose ESPHome from the sidebar:
  - Add new device and choose it's type to be ESP32

  - Click on "edit" delete the "logger:" line, change the board type to "esp32doit-devkit-v1" and add the code from the file "energysaverb.yaml" to the existing code (below the "captive_portal:" line)

  - Click on the "SECRETS" and put the following code:
    ```
    # Your Wi-Fi SSID and password
    wifi_ssid: "Your-network"
    wifi_password: "Your-password"
    ```

- Connect your esp32 board to your computer

- Install the code on your esp32 board: Install -> Manual download -> Modern format and wait for the download of the file, then in the Manual download choose "Open ESPHome Web", press connect and choose the appropriate port, click Install and choose the downloaded file

- Go to settings -> Devices & Services -> ADD INTEGRATION -> ESPHome then type "name.local" while name is your ESPHome device's name and enter the api key appearing in the ESPHome device code

Add helpers:

- Go to settings -> Devices & Services -> Helpers-> Create Helper then add all the following:

Name	Type	Minimum Value	Maximum Value
AC Temperature	Number	18	29
AC_On_Off_helper	Toggle	-	-
Check sleep mode is off	Date and/or time	-	-
Cool	Toggle	-	-
Decrease_fan_speed	Button	-	-
Heat	Toggle	-	-
Increase_fan_speed	Button	-	-
itag_button_counter	Number	0	2
Minus	Button	-	-
Mode	Button	-	-
Motions Number	Number	0	100
Plus	Button	-	-
Shabbat entrance	Date and/or time	-	-
Shabbat exit	Date and/or time	-	-
Shabbat Shalom	Toggle	-	-
Sleep Mode	Toggle	-	-
Sounds Number	Number	0	100

Copy the dashboard.yaml file:

- Go to Overview -> Edit Dashboard -> Raw configuration editor then put the dashboard.yaml code.

Copy the automations:

- To create a new automation go to Settings -> Automations & Scenes -> CREATE AUTOMATION then click on “Start with an empty automation”, then click on menu -> Edit in YAML and put the automation’s code. Do this for all the automations files from the automations folder
  Note:
  - For automation “Automation 8_ wifi phone detecting.yaml”, in addition for creating the automation, go to File editor from the sidebar, click on Browse Filesystem, choose “configuration.yaml” and add the following code:

```
device_tracker:
  - platform: ping
  hosts:
 your_phone_ name: x.y.z.w (x.y.z.w = your phone’s ip)
  other_phone_ name: x.y.z.w (x.y.z.w = other phone’s ip) if you need another phone
```

- For automation “Automation 4_ Itag button on + off.yaml”, in addition for creating the automation, go to ESPHome -> device -> edit, search for “Replace with the MAC address of your device” in the code and replace the “mac_address” with your itag’s mac address

Install ESPHome code on your device:

- Make sure your esp32 board is connected to your computer
- Install the code on your esp32 board: Install -> Manual download -> Modern format and wait for the download of the file, then in the Manual download choose “Open ESPHome Web”, press connect and choose the appropriate port, click Install and choose the downloaded file

HomeAssistant app:

- Download the HomeAssistant application on your phone
- Connect your phone to the same wifi of your Raspberry pi
- Enter “http://homeassistant:8123/” and enter your username and password
  In case it failed to connect, try typing “http://your-homeassistant-ip:8123/”
  To find your-homeassistant-ip there is two ways:
  1. Downlaod Terminal add on, then go to Terminal and get the ip
  2. Connect your Raspberry pi to a monitor and get the ip