This our My IoT Project

Hello!

I am Matheus Garcia

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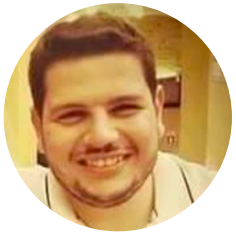

And I am Pedro Abrahão

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The Project

What we did ?

The project is based in a raspberry unity connected to an micro servo motor used to press a button, as an light switch

Items used

- Raspberry pi 3
- Micro servo motor
- 3 jumpers

How we did ?

What anything do ?

Python

The code part is very simple, we need just to connect on the specific gpio from raspberry and send a electric pulse to make the micro servo execute

Raspberry

We need to connect the jumpers to micro servo and to specifical gpio.

We need to use linux and start the application with python.

Micro Servo

Is used to push the switch button.

Homebridge

Homebridge is a lightweight NodeJS server that emulates the iOS HomeKit API.

We need to install homebridge on raspberry, and start the listener.

The homebridge allow us to connect our raspberry with the Apple Siri.

MQTT

MQTT is a machine-to-machine (M2M)/"Internet of Things" connectivity protocol. It was designed as an extremely lightweight publish/subscribe messaging transport.

We used MQTT in the project to sent messages from WEB to raspberry to execute the specific action.

Using : https://www.cloudmqtt.com/ to send messages

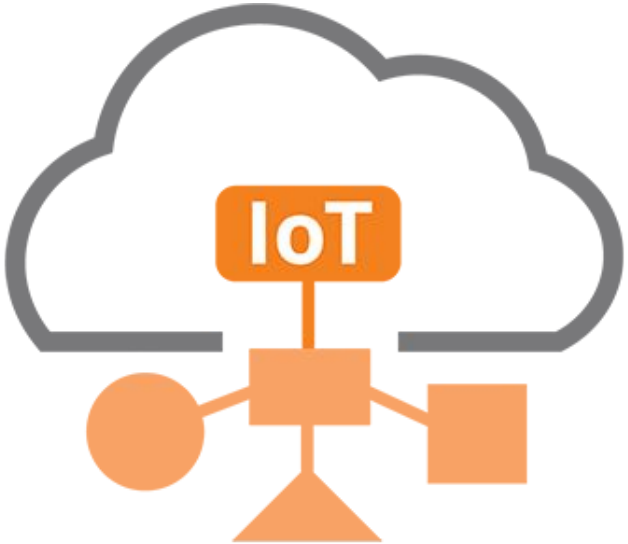
The code

The code is written in python, we need to open topics to read mqtt messages, and based on the topic and the message himself, do something.

And we need to connect with the GPIO from raspberry, to send electromagnetic pulses to the micro servo.

This was only a test

We used to test this project to see how the technology interact with electronic devices.



Thanks!

Any questions?

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