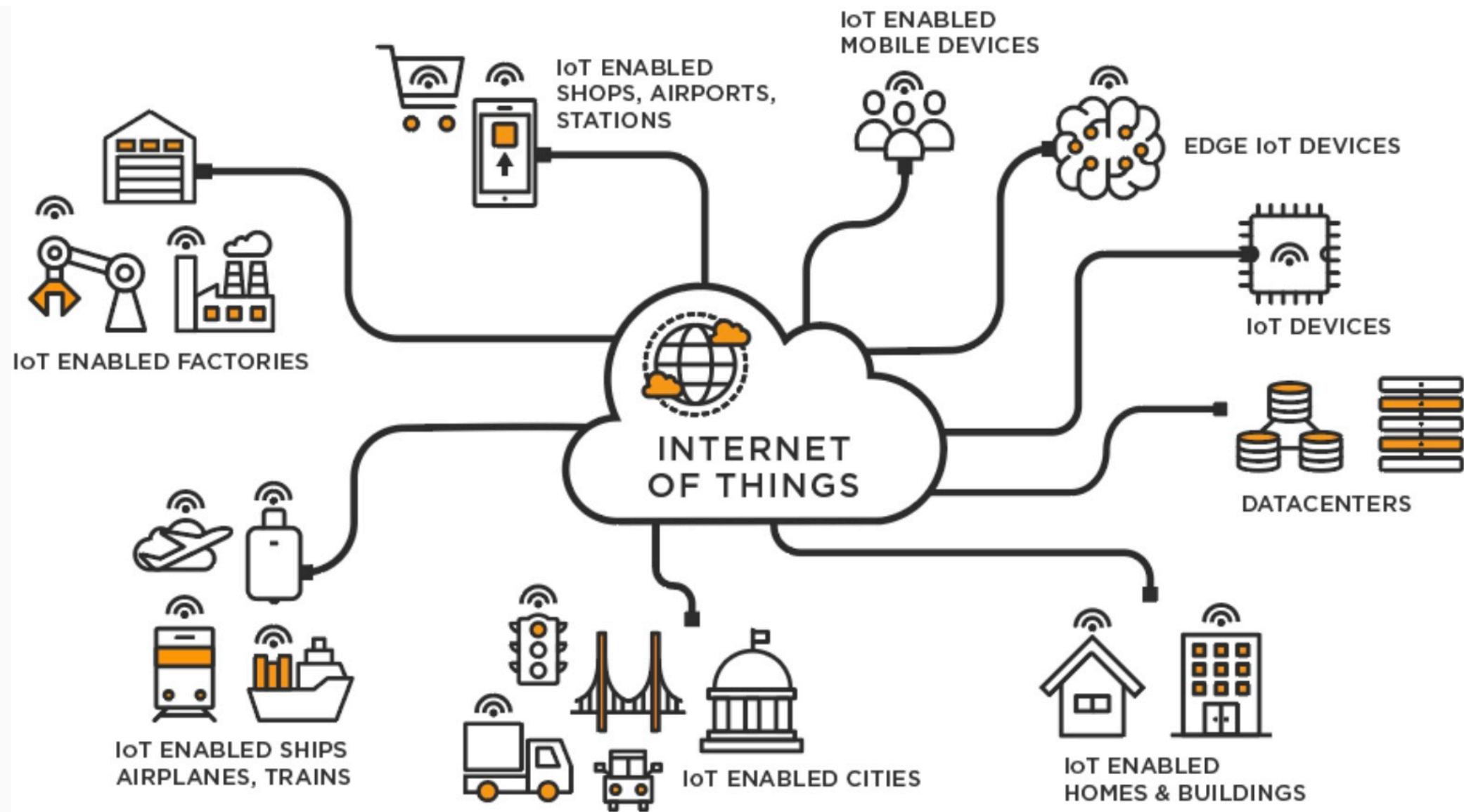


Internet Of Things

Micro-python - IoT



IoT Startup

- IoT Startup in Indonesia
 - eFishery (<https://efishery.com>)

IoT Startup

- My Startup - Blissfull Singapore - Health & Wellness Technology
 - <https://blissfull.sg>
- Our clients
 - JSW Pasific (<https://www.jswpac.com/>)
 - Zero2.5 (<https://negativeairion.com/>)

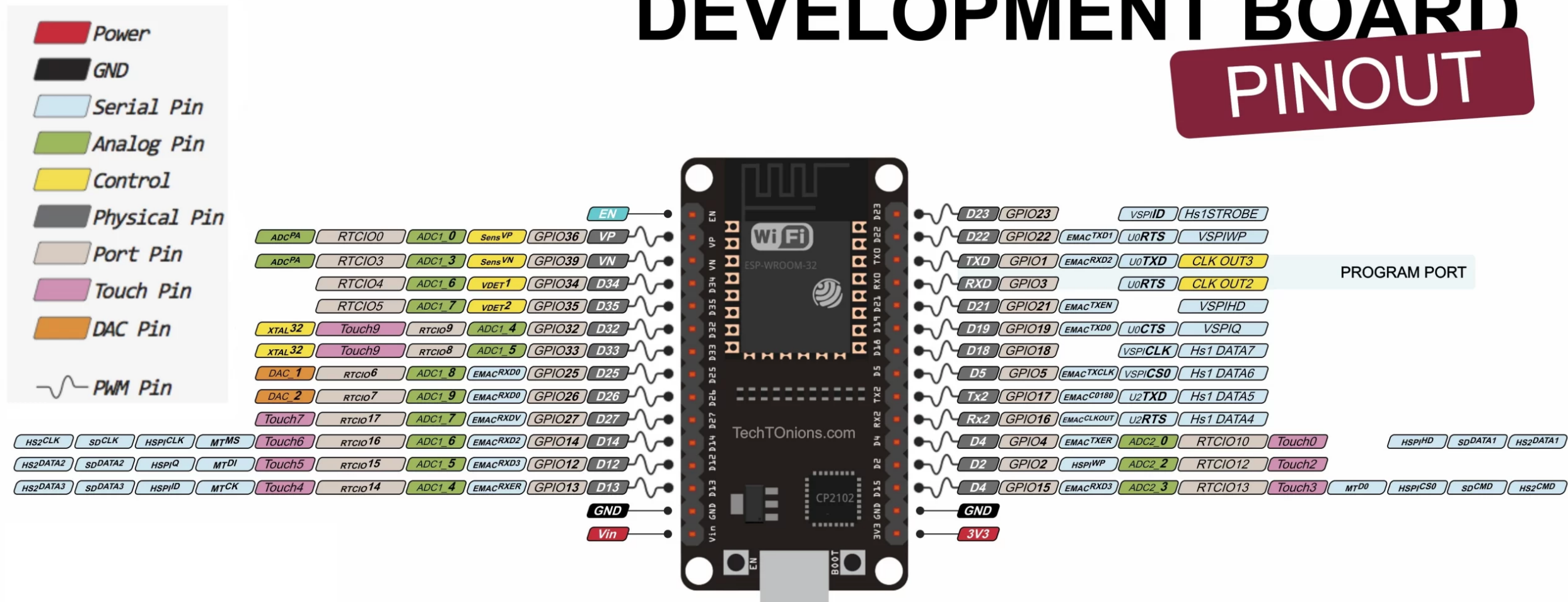
IoT Core

- Embedded CPU
 - Mostly use ARM-architecture CPU
- One of Them
 - ESP32

ESP32

- A feature-rich MCU with integrated Wi-Fi and Bluetooth connectivity for a wide-range of applications
- Reference:
 - <https://www.espressif.com/en/products/socs/esp32>

ESP32-WROOM-DA DEVELOPMENT BOARD PINOUT



Micro-Python

- Python for Embedded device
- Micro-Python IDE
 - Thonny (<https://thonny.org/>)
- USB - UART Driver
 - <https://www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers?tab=downloads>

Download Firmware

- <https://micropython.org/download/esp32/>

- **Firmware**

Releases

v1.19.1 (2022-06-18) .bin [.elf] [.map] [Release notes] (latest)

v1.18 (2022-01-17) .bin [.elf] [.map] [Release notes]

v1.17 (2021-09-02) .bin [.elf] [.map] [Release notes]

v1.16 (2021-06-23) .bin [.elf] [.map] [Release notes]

v1.15 (2021-04-18) .bin [.elf] [.map] [Release notes]

v1.14 (2021-02-02) .bin [.elf] [.map] [Release notes]

v1.13 (2020-09-02) .bin [.elf] [.map] [Release notes]

v1.12 (2019-12-20) .bin [.elf] [.map] [Release notes]

Nightly builds

v1.19.1-661-gdbb001966 (2022-11-14) .bin [.elf] [.map]

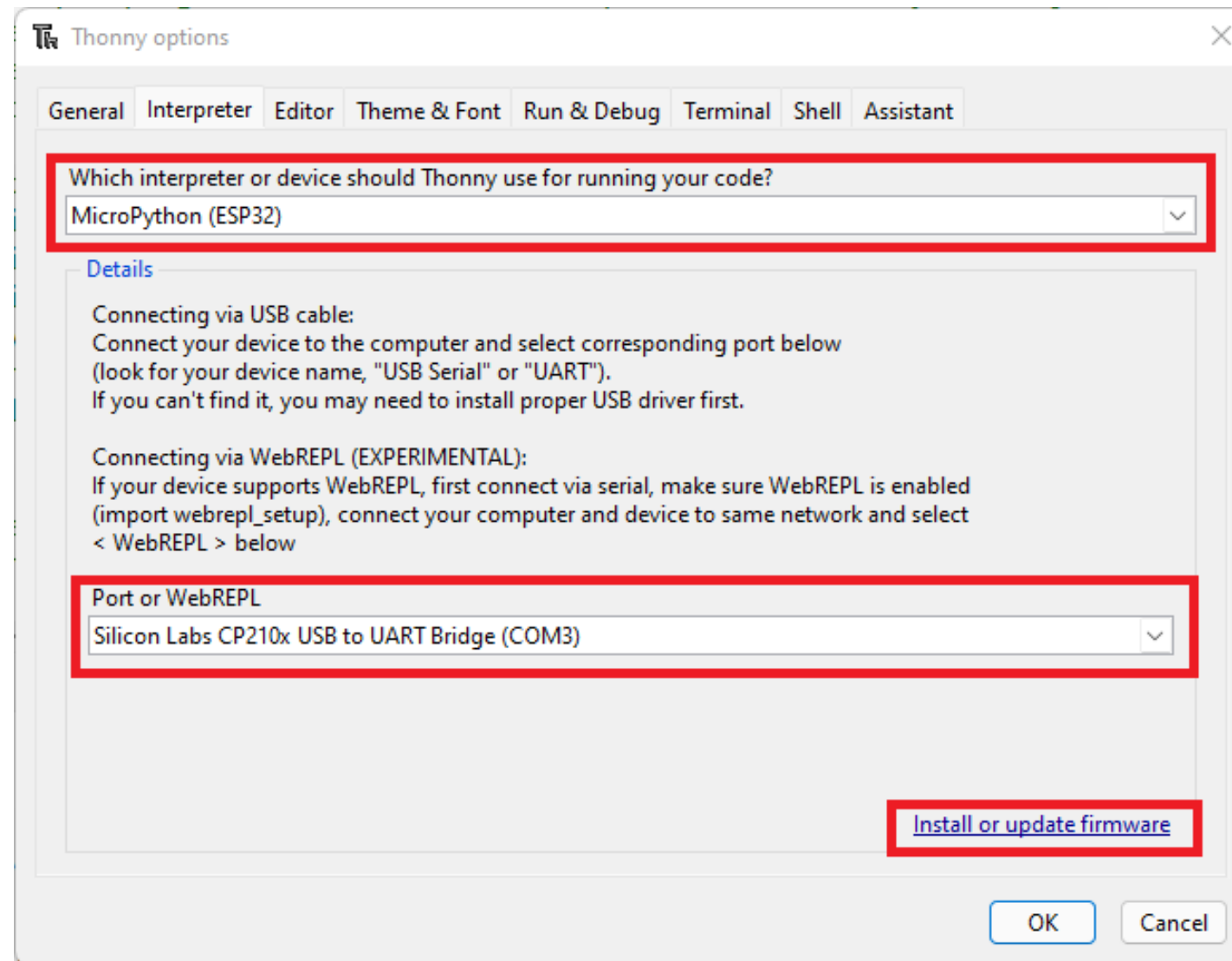
v1.19.1-660-gc8913fdbf (2022-11-11) .bin [.elf] [.map]

v1.19.1-646-g0698dd72e (2022-11-11) .bin [.elf] [.map]

v1.19.1-645-g451ded8d7 (2022-11-10) .bin [.elf] [.map]

Upload / Burn Firmware

- Menu Tools -> Options



Sample code

```
from machine import Pin  
from time import sleep
```

```
led = Pin(2, Pin.OUT)  
led.value(1)
```

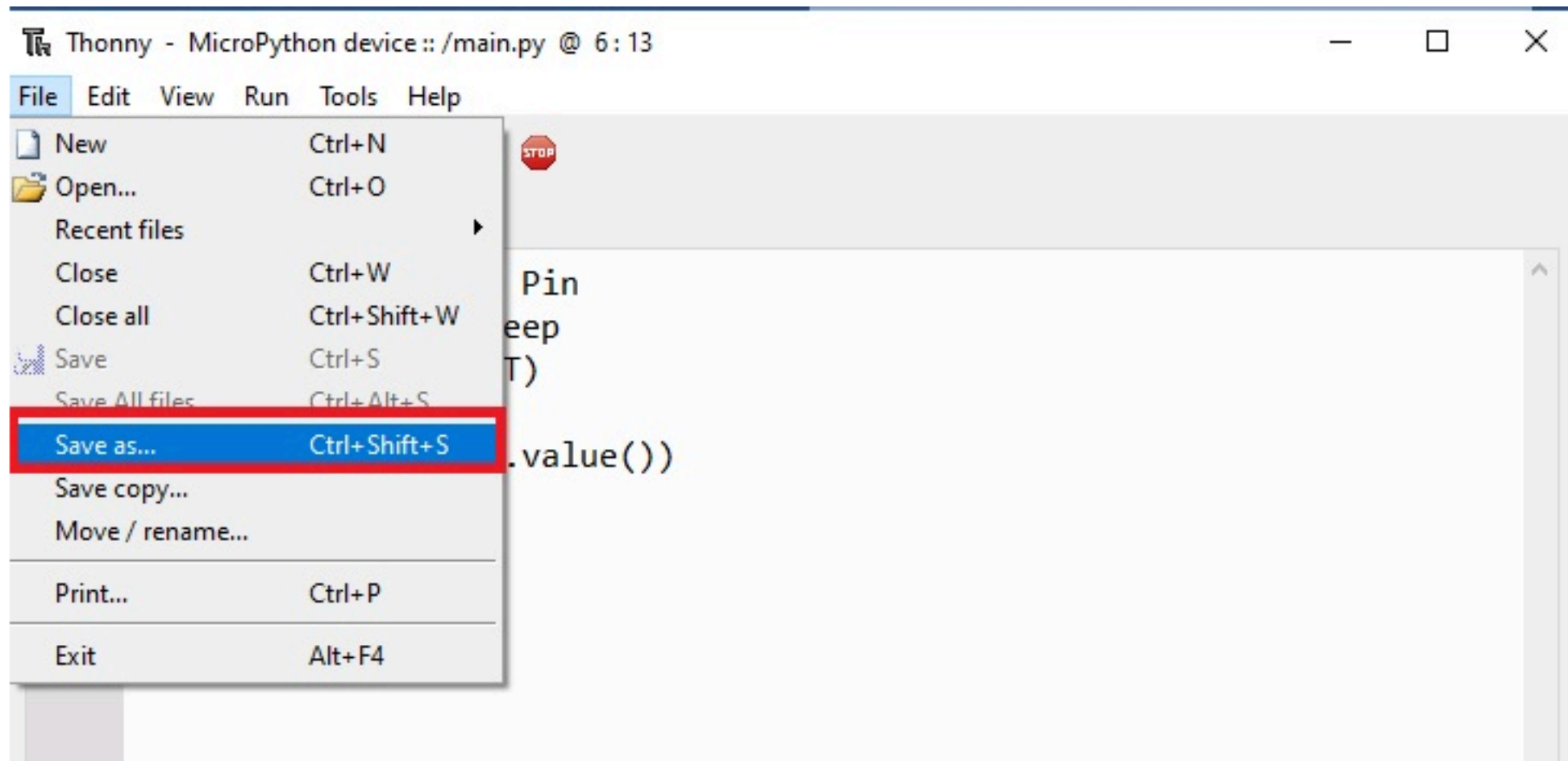
`variable = Pin(<port number> , <IN or OUT>)` is to get one Pin object from ESP32

- OUT : Control the pin as output (control on/off)
- IN : Get data from sensor

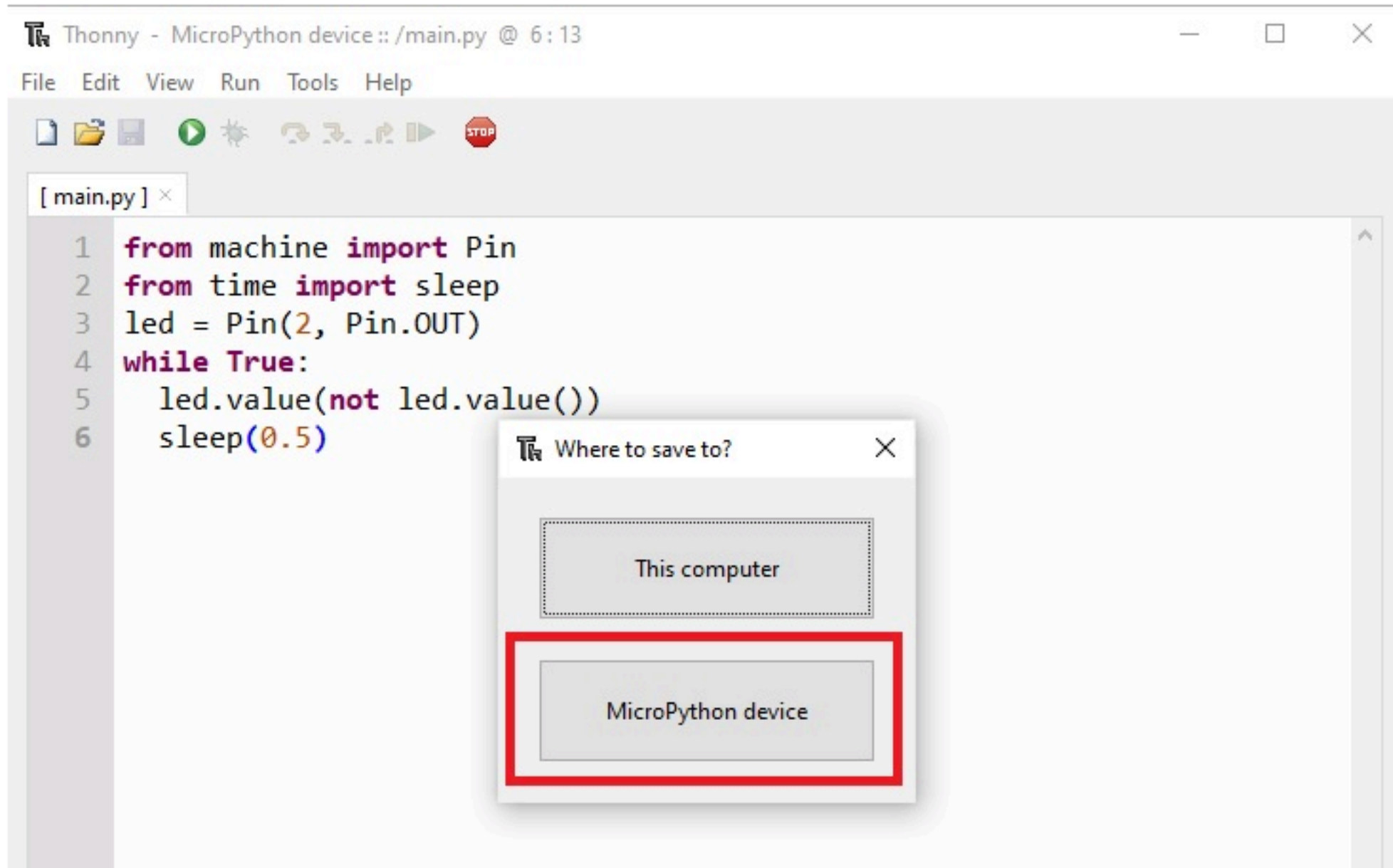
`led.value(1)` : set value 1 into the Pin (ON)

`led.value(0)` : set value 0 into the Pin (OFF)

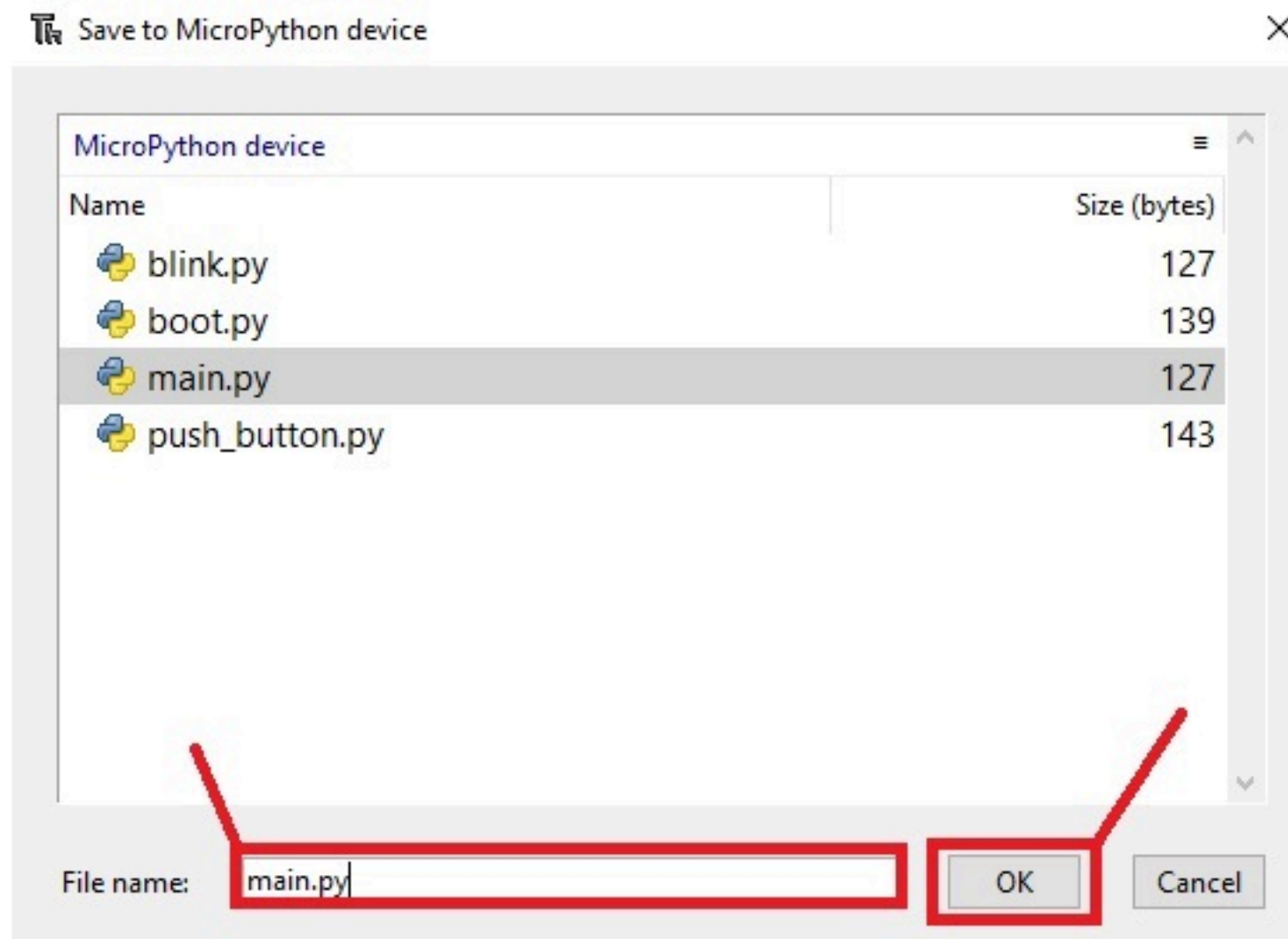
Upload Code



Upload Code



Upload Code



Upload Code

Press Enable/Reset
Button

