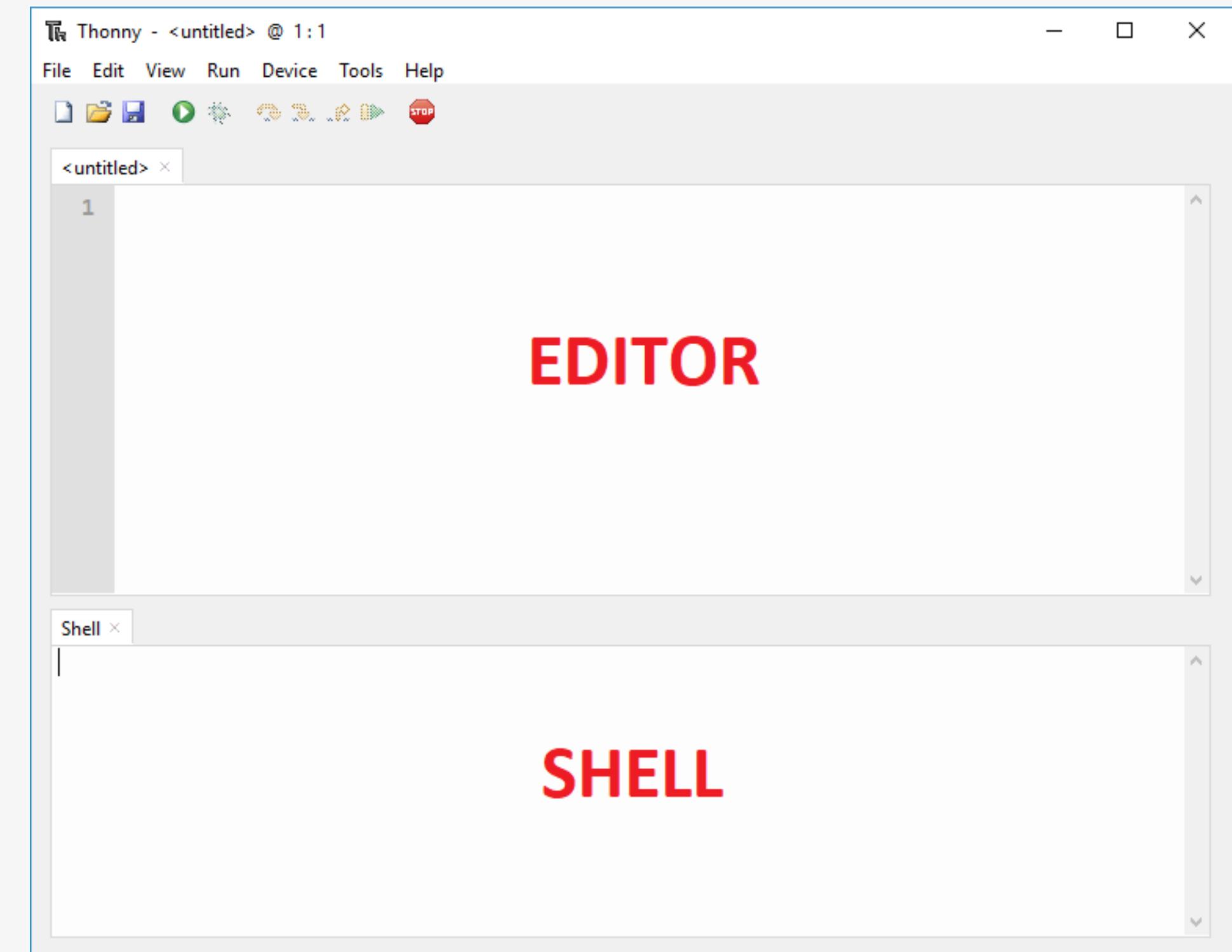




TINKERING

Thonny IDE

Installation Overview



Thonny IDE overview



- The Editor section is where you write your code and edit your .py files. You can open more than one file, and the Editor will open a new tab for each file.
- On the MicroPython Shell you can type commands to be executed immediately by your ESP board without the need to upload new files. The terminal also provides information about the state of an executing program, shows errors related with upload, syntax errors, prints messages, etc...

MicroPython Programming



Micro Python is used on constrained devices so should be simple



- Mathematical operators
- Relational operators
- Data types
- print() function
- Conditional statements
- While and for loops
- User defined functions
- Classes and objects
- Modules

Inputs - feeds esp boards with data to be interpreted and processed

Outputs - Actuates the processed data from the esp boards to perform required actions

Inputs

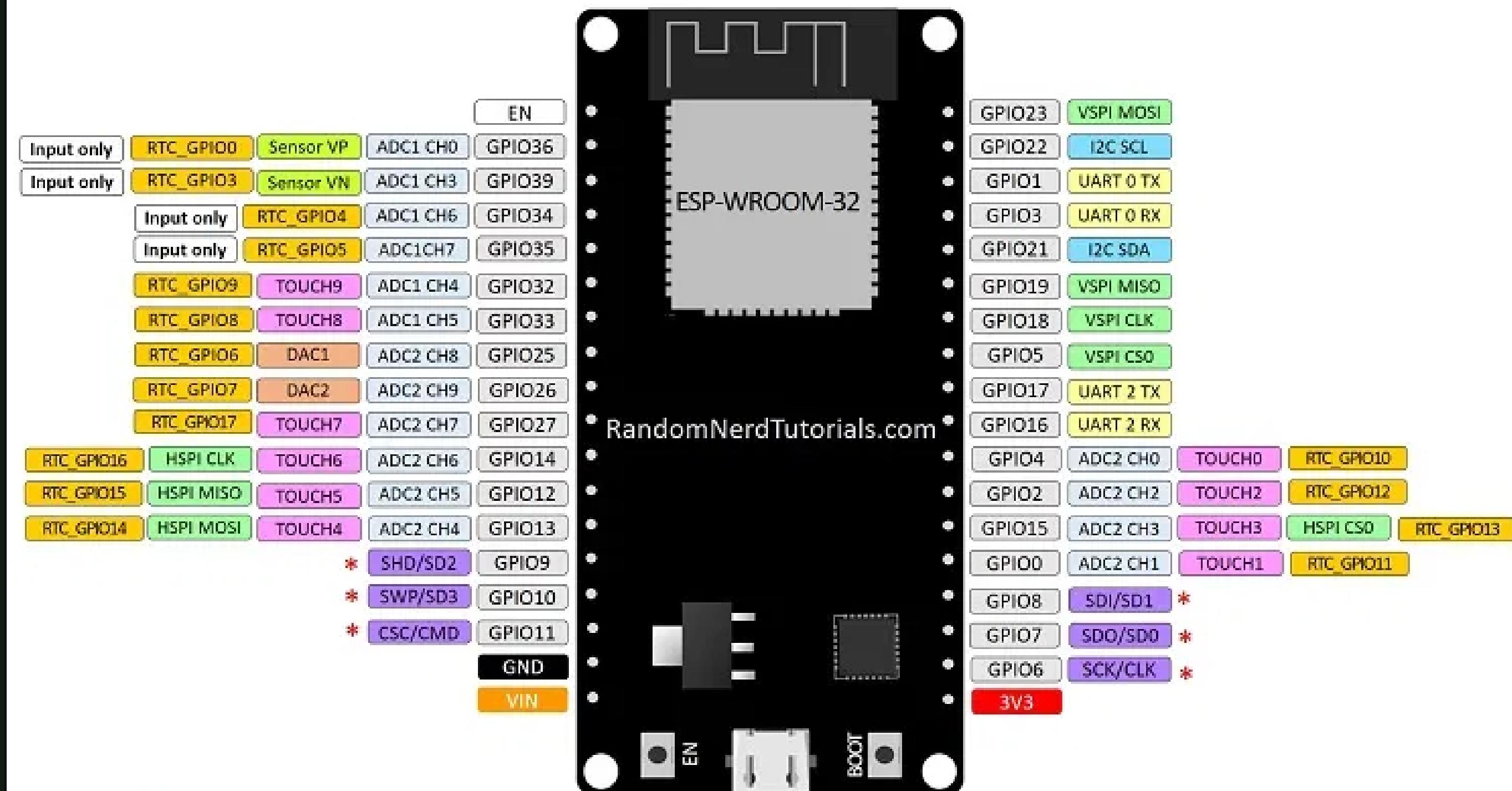
- Analog inputs
- Digital inputs
- HCSR04,IR,Potentiometers & buttons

Outputs

- Digital outputs
- Analog outputs - PWM
- Motors,LEDs

ESP32 DEVKIT V1 – DOIT

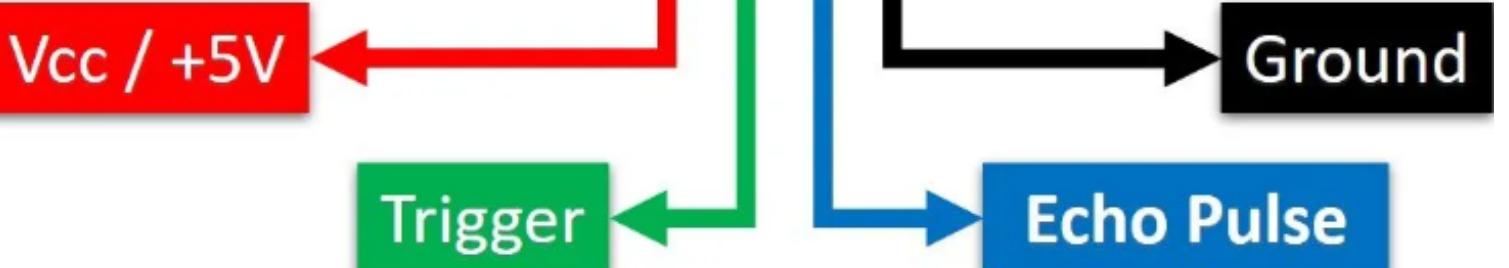
version with 36 GPIOs



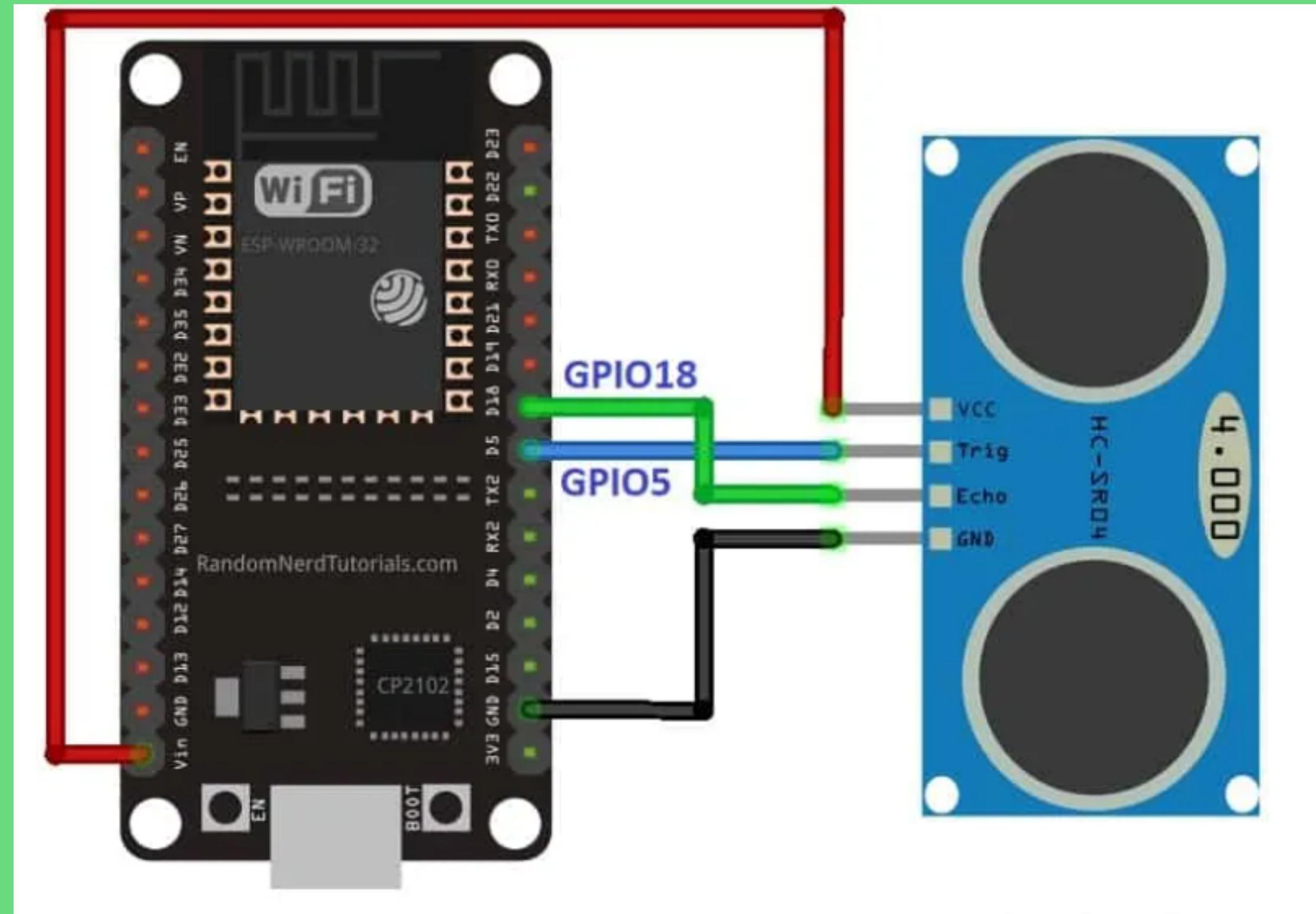
* Pins SCK/CLK, SDO/SD0, SDI/SD1, SHD/SD2, SWP/SD3 and SCS/CMD, namely, GPIO6 to GPIO11 are connected to the integrated SPI flash integrated on ESP-WROOM-32 and are not recommended for other uses.

HCSR04

ULTRASONIC SENSOR PINOUT



HCSR04 interfacing with ESP32



HCSR04 interfacing with ESP8266

