




# Button and LED

📅 Date	@September 29, 2021
☰ 單元主題	Raspberry Pi GPIO 使用初體驗

## 參考資料

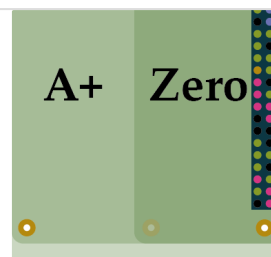
gpiozero - GPIO Zero 1.6.2 Documentation

 <https://gpiozero.readthedocs.io/en/stable/index.html>

## Raspberry Pi Pinout

This GPIO Pinout is an interactive reference to the

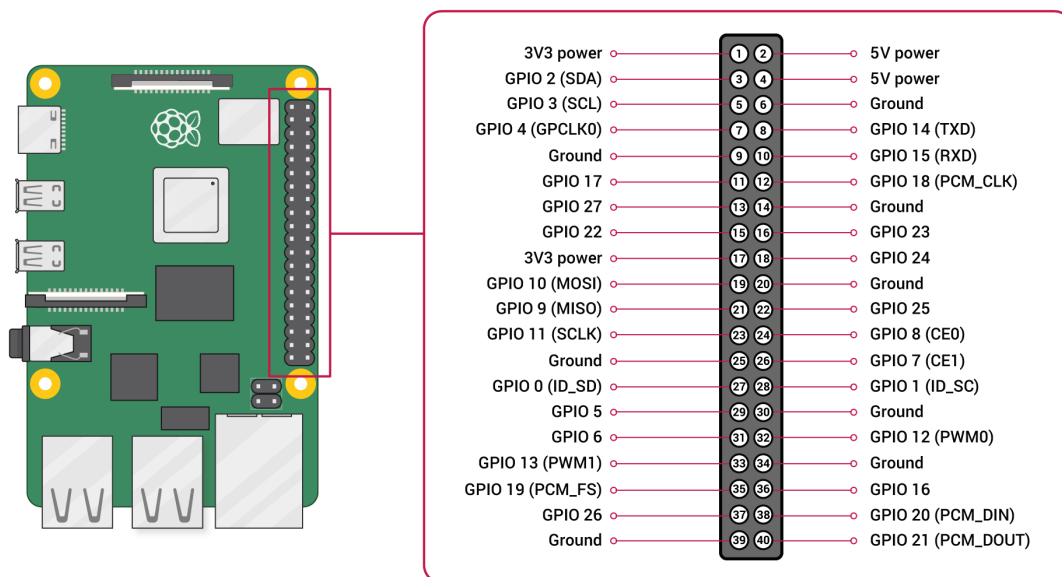
 <https://pinout.xyz/>



<https://pinout.xyz/>

## Raspberry Pi 4 Pinout

<https://www.raspberrypi.org/documentation/computers/os.html>

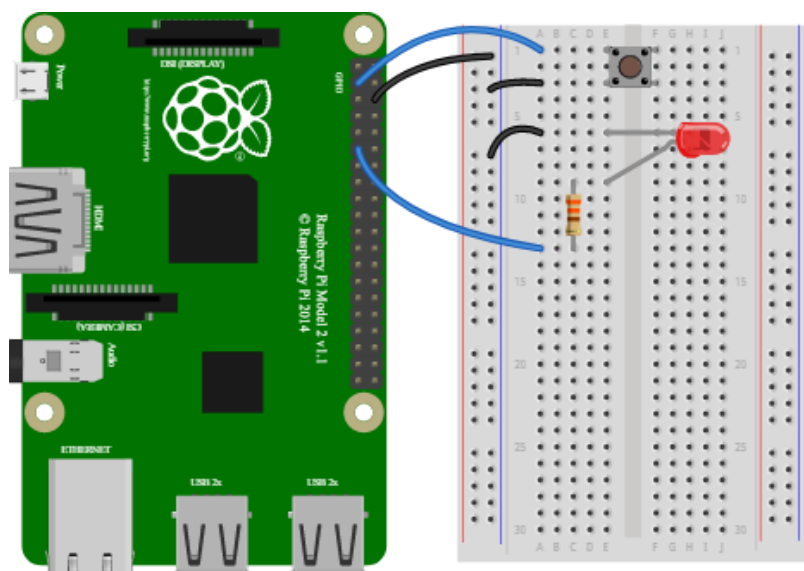


## 課堂練習 1 - Simple Button Control LED

<https://gpiozero.readthedocs.io/en/stable/recipes.html#button-controlled-led>

### RPi GPIO 使用

- Button (GPIO2/BCM2)
- LED (GPIO17/BCM17)



#RPi.GPIO : Turn on an LED when a Button is pressed

```
import RPi.GPIO as GPIO
```

RPi.GPIO 線上模擬器

```

from time import sleep


GPIO.setmode(GPIO.BCM)
GPIO.setup(2, GPIO.IN)
GPIO.setup(17, GPIO.OUT)

while True:
    sleep(0.5)
    GPIO.output(17, GPIO.input(2))

```

Create python code

Write, run debug and  
share python code in  
your browser

 <https://create.withcode.uk/python/A3>



<https://create.withcode.uk/python/A3>

## #gpiozero : Turn on an LED when a Button is pressed

```

from gpiozero import LED, Button
from signal import pause

led = LED(17)
button = Button(2)

button.when_pressed = led.on
button.when_released = led.off

pause()

```

```

from gpiozero import LED, Button
from signal import pause

led = LED(17)
button = Button(2)

led.source = button

pause()

```