

# GPIO python examples

## Project configuration

Give access to gpio

```
chmod 777 -R /sys/class/gpio
```

Install prerequisite packages

```
apt-get install python3-venv
```

Create new python environment

```
mkdir pin_blink  
cd pin_blink  
python3 -m venv  
source bin/activate
```

Install required library called *gpio*

```
python3 -m pip install gpio
```

## 1. Blink led

```
import time  
import gpio  
GPIO_PINS = {  
    "GPIO1_B1": 41,  
    "GPIO4_C3": 147,  
    "GPIO0_A0": 0,  
    "GPIO0_B7": 15,  
    "GPIO0_C4": 20,
```

```
"GPIO0_C7": 23,  
"GPIO1_B2": 42  
}  
# GPIO pin number  
pin = GPIO_PINS['GPIO1_B1']  
blink_time = 0.5  
  
# Set pin as output  
pin_obj = gpio.GPIOPin(pin, gpio.OUT)  
  
# Blink LED  
while True:  
    pin_obj.write(gpio.HIGH)  
    time.sleep(blink_time)  
    pin_obj.write(gpio.LOW)  
    time.sleep(blink_time)
```

## 2. Read button state

```
import time  
import gpio  
  
GPIO_PINS = {  
    "GPIO0_A6": 6,  
    "GPIO1_B1": 41,  
    "GPIO4_C3": 147,  
    "GPIO0_A0": 0,  
    "GPIO0_B7": 15,  
    "GPIO0_C4": 20,  
    "GPIO0_C7": 23,  
    "GPIO1_B2": 42  
}  
# GPIO pin number  
pin = GPIO_PINS['GPIO0_A6']  
polling_time = 0.5  
  
# Set pin as input  
pin_obj = gpio.GPIOPin(pin, gpio.IN)  
last_state = pin_obj.read()
```

```
while True:
    current_state = pin_obj.read()
    if(current_state != last_state):
        last_state = current_state
        print("State changed to: " + str(current_state))
    time.sleep(polling_time)
```

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