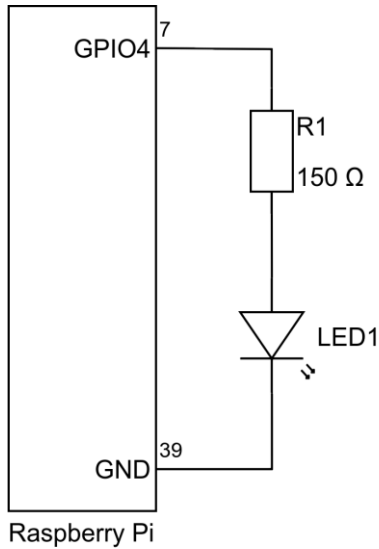
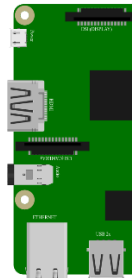


Raspberry Pi CheatSheet

LED-Schaltung



Pinout



3.3V PWR	1	2	5V PWR
GPIO2 (SDA1, I2C)	3	4	5V PWR
GPIO3 (SCL1, I2C)	5	6	GND
GPIO4 (GPIO_GCLK)	7	8	(UART_TXD0) GPIO14
GND	9	10	(UART_RXD0) GPIO15
GPIO17 (GPIO_GEN0)	11	12	(GPIO_GEN1) GPIO18
GPIO27 (GPIO_GEN2)	13	14	GND
GPIO22 (GPIO_GEN3)	15	16	(GPIO_GEN4) GPIO23
3.3V PWR	17	18	(GPIO_GEN5) GPIO24
GPIO10 (SPI0_MOSI)	19	20	GND
GPIO9 (SPI0_MISO)	21	22	(GPIO_GEN6) GPIO25
GPIO11 (SPI0_CLK)	23	24	(SPI_CE0_N) GPIO8
GND	25	26	(SPI_CE1_N) GPIO7
ID_SD (I2C EEPROM)	27	28	ID_SC (I2C EEPROM)
GPIO5	29	30	GND
GPIO6	31	32	GPIO12
GPIO13	33	34	GND
GPIO19	35	36	GPIO16
GPIO26	37	38	GPIO20
GND	39	40	GPIO21

Informationen zu den Pins: <https://pinout.xyz>

Blinkende LED

```
#blink.py

# Bibliotheken importieren
from gpiozero import LED
import time

# Objekt der Klasse LED
led = LED(4) # GPIO4 (Pin 7)

while True:
    led.on() # LED an
    print("blink")
    time.sleep(0.5)
    led.off() # LED aus
    time.sleep(1)
```

Weitere gpiozero-Rezepte

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

Programm starten

```
$ python3 dateiname.py
```

Taster betätigt?

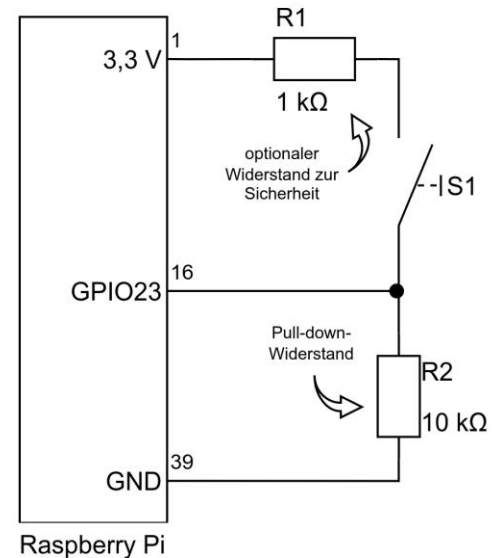
```
#taster.py

# Bibliotheken importieren
from gpiozero import Button
import time

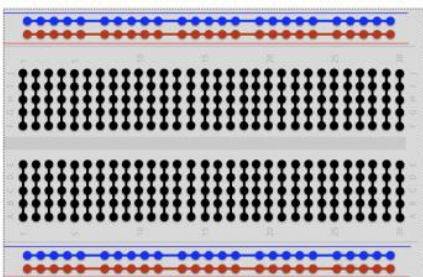
# Objekt der Klasse Button erzeugen
button = Button(23, pull_up=None, active_state=True)
# GPIO23 (Pin 16)

while True:
    if button.is_pressed: # Taster betätigt?
        print("Der Taster ist betätigt.")
    else:
        print("Der Taster ist nicht betätigt")
    time.sleep(0.5)
```

Taster-Schaltung



Breadboard



Weitere Links

Beschaffung und Installation:

https://it.tbs1.de/itawiki/index.php/Raspberry_Pi

Ansteuerungen grundlegender Hardwarebausteine:

<https://hw101.tbs1.de>

Einfache Softwarelösungen für verschiedene Probleme:

<https://sw101.tbs1.de>