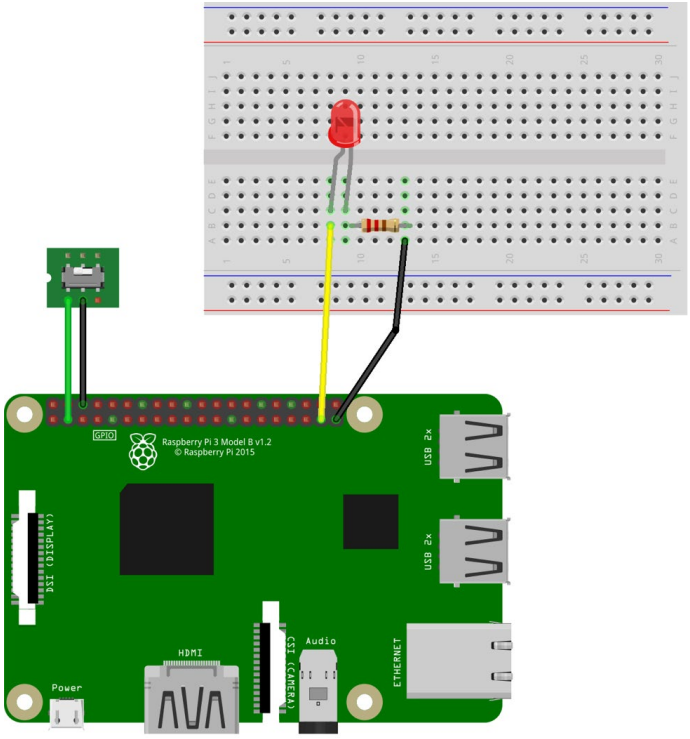
Make an LED Echo a Button



This really simple project demonstrates how to connect a button and an LED to the Raspberry Pi through the Raspberry Pi GPIO. With software, the LED turns on when the switch is flipped.

This project will give you a chance to learn three things:

1. How to connect electronics to the Raspberry Pi GPIO
2. How to control the GPIO with software
3. The difference between GPIO input and output

Ingredients

- Any Raspberry Pi
- An LED
- A switch
- A 220-ohm resistor
- A breadboard
- Jumper wires

Connections

1. Connect a green jumper wire to one side of the switch.
2. Connect that green jumper wire to GPIO board pin 3 (GPIO2).
3. Connect a black jumper wire to the other side of the switch.
4. Connect that black jumper wire to GPIO board pin 6 (ground).
5. Connect a yellow wire from board pin 37 (GPIO26).
6. Connect that yellow wire to the long leg of the LED.
7. Connect one end of the 220-ohm resistor to the short leg of the LED.
8. Connect a black wire to the other end of the 220-ohm resistor.
9. Connect the other end of the black wire to board pin 39.

Code

```
from gpiozero import LED, Button
from signal import pause

mySwitch = Button(2)
myLED = LED(26)

# test the connections
# myLED.blink()

myLED.source = mySwitch

pause()
```