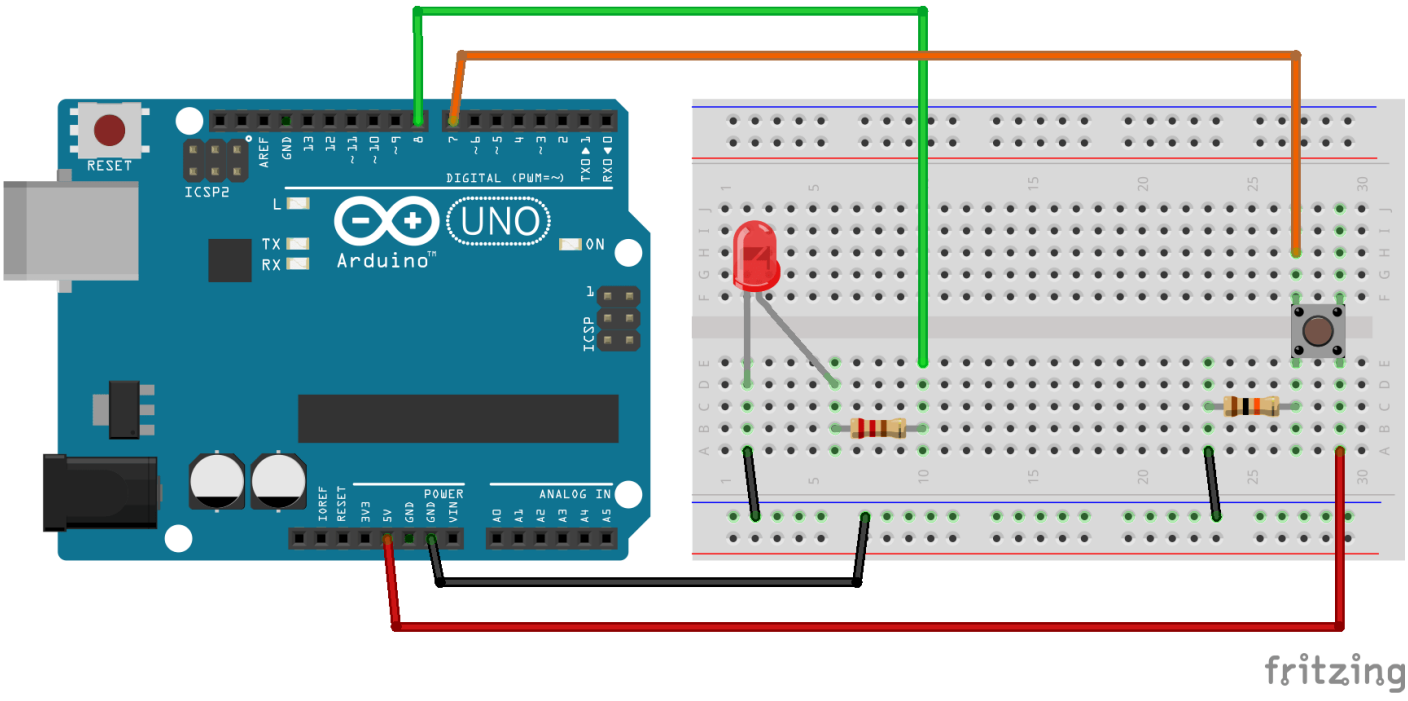
3. Arduino - Turn LED ON and OFF With Button

Turn LED ON and OFF With Button Tutorial

Equipment

- 1x Arduino Uno
- 1x USB 2.0 cable type A/B (for USB-A PC)
- 1x USB 2.0 cable type C/B (for USB-C PC)
- 1x Push Button
- 1x Push Button Module
- 1x breadboard
- 6x Jumper wires
- 1x LED
- 1x 220 Ohm resistor
- 1x 10k Ohm resistor

Project Set-up



Code to turn light on when button is held:

```
#define LED_PIN 8
#define BUTTON_PIN 7

void setup() {
  pinMode(LED_PIN, OUTPUT);
  pinMode(BUTTON_PIN, INPUT);
}

void loop() {
  if (digitalRead(BUTTON_PIN) == HIGH) {
    digitalWrite(LED_PIN, HIGH);
  }
  else {
    digitalWrite(LED_PIN, LOW);
  }
}
```

Code to turn button on and off LED with button:

```
#define LED_PIN 8
#define BUTTON_PIN 7

byte lastButtonState = LOW;
byte ledState = LOW;

void setup() {
  pinMode(LED_PIN, OUTPUT);
  pinMode(BUTTON_PIN, INPUT);
}

void loop() {
  byte buttonState = digitalRead(BUTTON_PIN);
  if (buttonState != lastButtonState) {
    lastButtonState = buttonState;
    if (buttonState == LOW) {
      ledState = (ledState == HIGH) ? LOW: HIGH;
      digitalWrite(LED_PIN, ledState);
    }
  }
}
```

Revision #2
Created 2026-06-11 16:22:06 UTC by Mariah
Updated 2026-06-11 17:22:52 UTC by Mariah