

Project Description

This is a ESP32 project that controls an LED with a pushbutton.

⋮

When the ESP32 powers up, it should:

1. Configure the button pin as INPUT
2. Configure the LED pin as OUTPUT
3. Continuously monitor the button state
4. Turn the LED ON when the button is pressed (reads LOW)
5. Turn the LED OFF when the button is released (reads HIGH)

Code

```
#include <Arduino.h>

...

void loop() {
  int buttonState =
  digitalRead(BUTTON_PIN);

  if (buttonState == LOW) {
    digitalWrite(LED_PIN, HIGH);
  }
  else {
    digitalWrite(LED_PIN, LOW);
  }
}
```

Test Procedure

Press Button

-> Check if LED is on

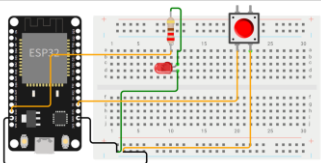
Release Button

-> Check if LED is off

Success or Failure

Evaluation

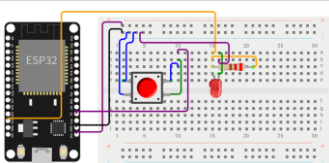
o3-Mini



✗ Failure

Redundant Connection	0
Extraneous Component	0
Missing Component	0
Isolated Component	0
Pin Conflict	5
Breadboard Bypass	0

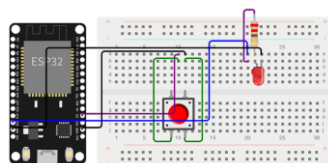
Claude Haiku 4.5



✓ Success

Redundant Connection	0
Extraneous Component	0
Missing Component	0
Isolated Component	0
Pin Conflict	0
Breadboard Bypass	0

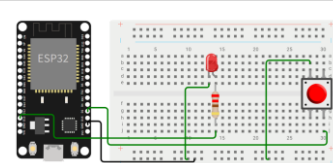
Gemini 3.1-Flash-Lite



✗ Failure

Redundant Connection	0
Extraneous Component	0
Missing Component	0
Isolated Component	0
Pin Conflict	0
Breadboard Bypass	0

Reference



✓ Success

Redundant Connection	0
Extraneous Component	0
Missing Component	0
Isolated Component	0
Pin Conflict	0
Breadboard Bypass	0

Physical Circuit