Title: ESP8266 LED and Motor Control Circuit (Without Diodes)

Components:

- ESP8266 NodeMCU

- LED

- Resistor (220-330 ohms)

- NPN Transistor (e.g., 2N2222)

- DC Motor

- Resistor (1k ohm)

- Breadboard and jumper wires

Connections:

1. Connect the positive (longer) leg of the LED to a digital pin (e.g., D2) of the ESP8266 via a resistor (220-330 ohms).

2. Connect the negative (shorter) leg of the LED to the GND (Ground) pin of the ESP8266.

3. Connect the emitter of the NPN transistor to the GND pin.

4. Connect the base of the NPN transistor to a digital pin (e.g., D3) of the ESP8266 via a resistor (1k ohm).

5. Connect the collector of the NPN transistor to the positive terminal of the motor.

6. Connect the negative terminal of the motor to the GND rail on the breadboard.

7. Connect the GND pin of the ESP8266 to the GND rail on the breadboard.

8. Connect the VIN pin of the ESP8266 to the positive supply voltage (e.g., 5V) rail on the breadboard.

9. Connect the VCC pin of the motor to the positive supply voltage (e.g., 5V) rail on the breadboard.

Power:

- Connect a 5V power supply to the VIN and GND pins of the ESP8266.

- Connect a separate 5V power supply to the motor.

Note:

- Make sure to connect the grounds of both power supplies together.

- Use appropriate power sources and voltage levels based on your components.