



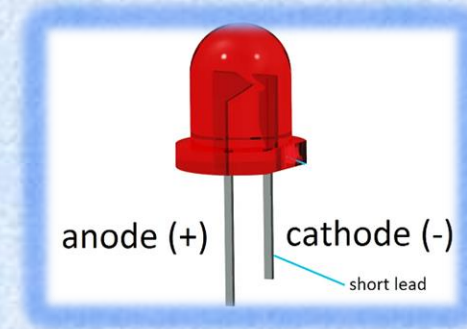
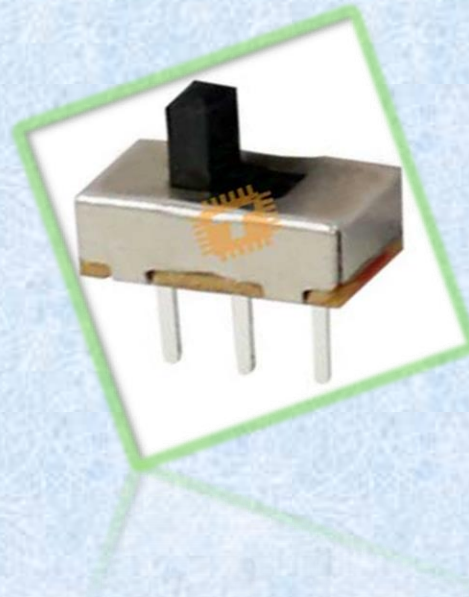
TANSAM

Powered by **SIEMENS**

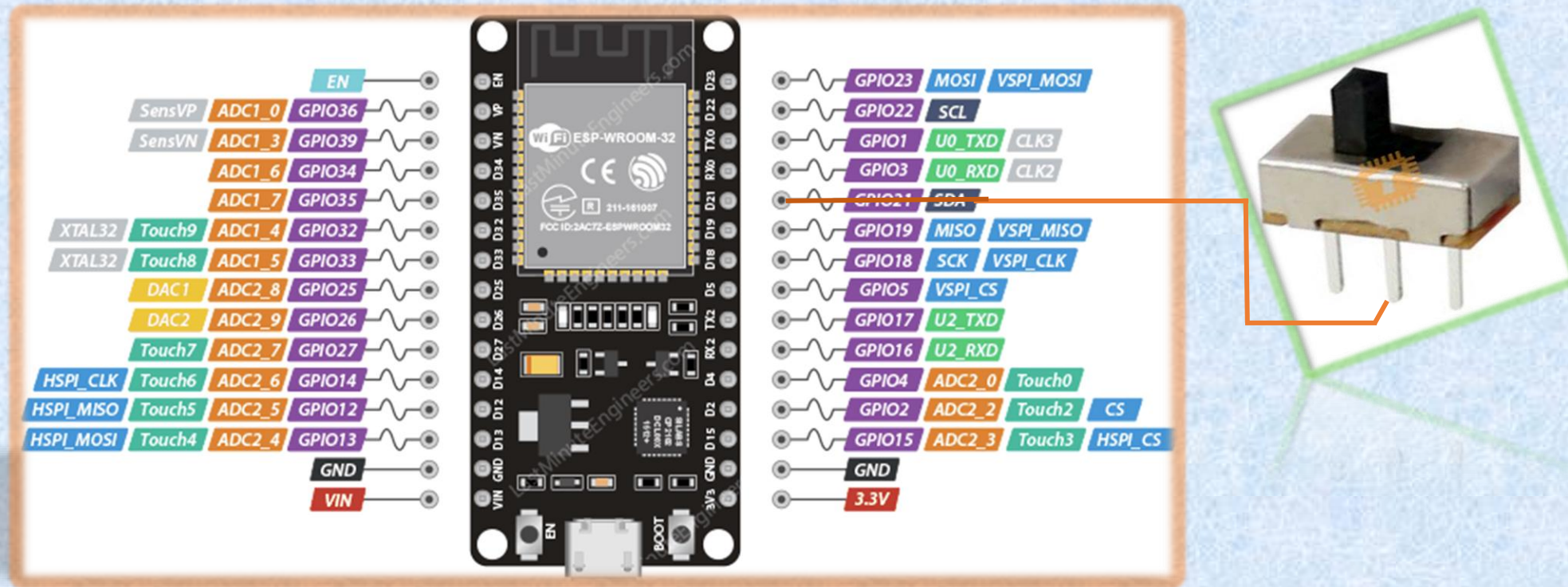
Empower Your Interaction with Button Press Detection

LIST OF COMPONENTS:

1. **ESP32 MICROCONTROLLER**
2. **LED**
3. **JUMPER WIRES**
4. **BREAD BOARD**
5. **SWITCH**

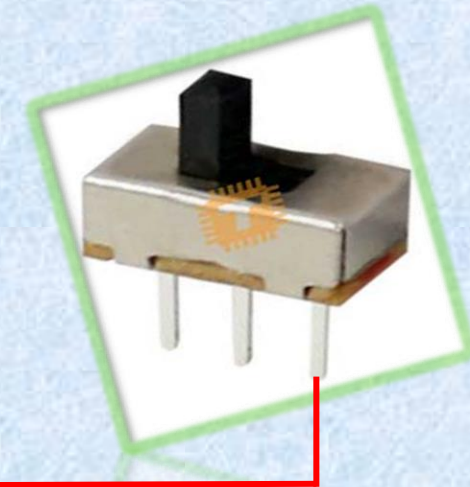
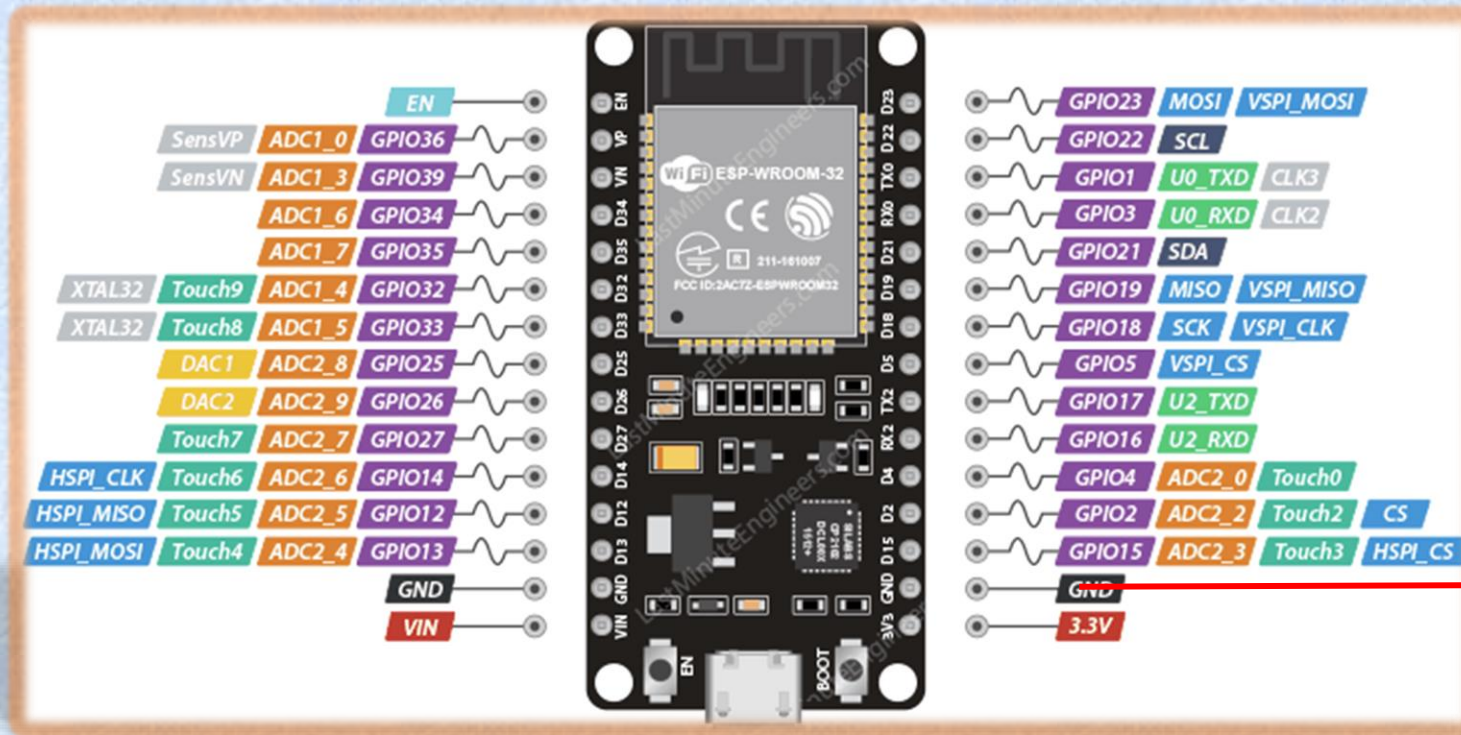


CIRCUIT DIAGRAM

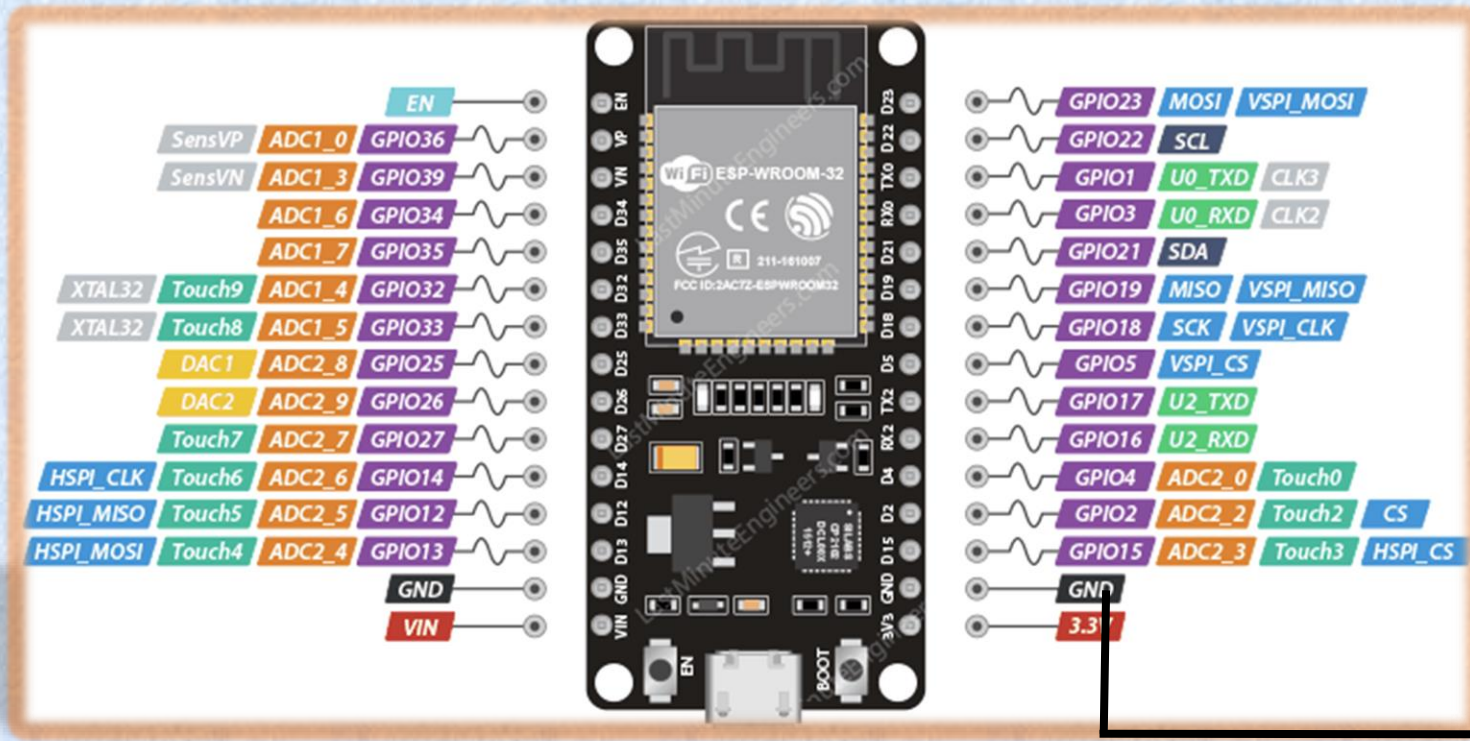


Connect Center Pin - D21

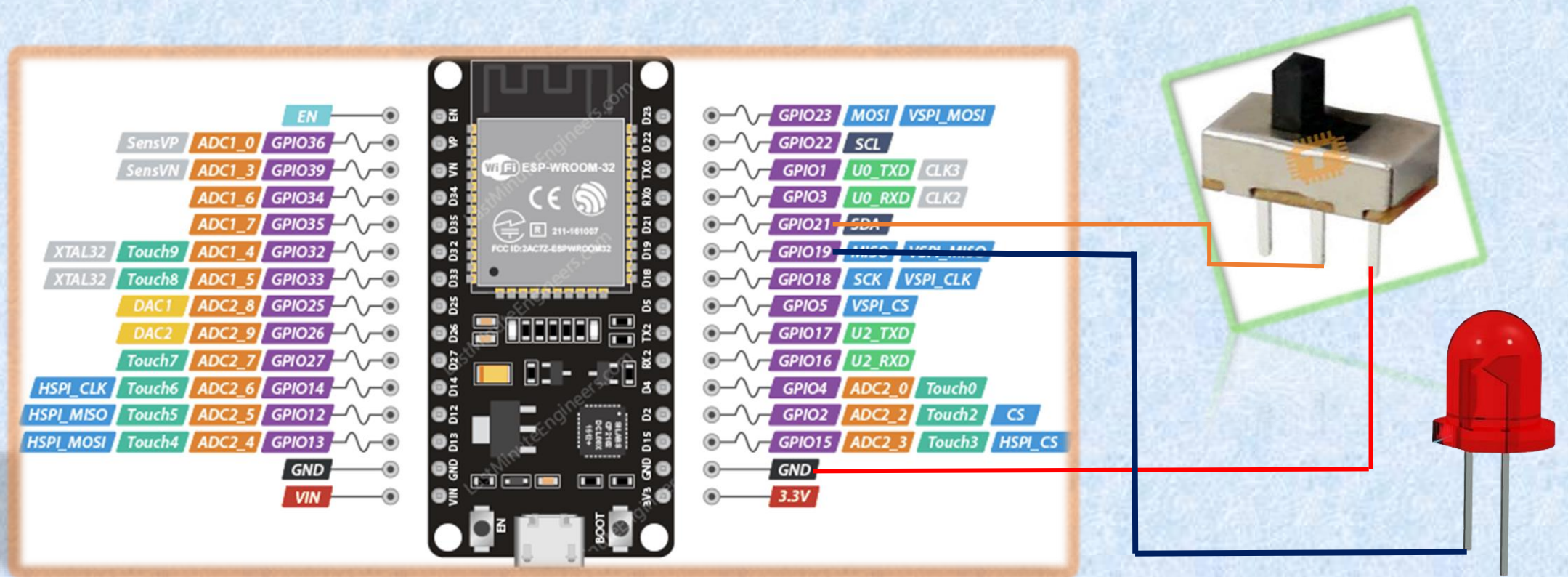
CIRCUIT DIAGRAM



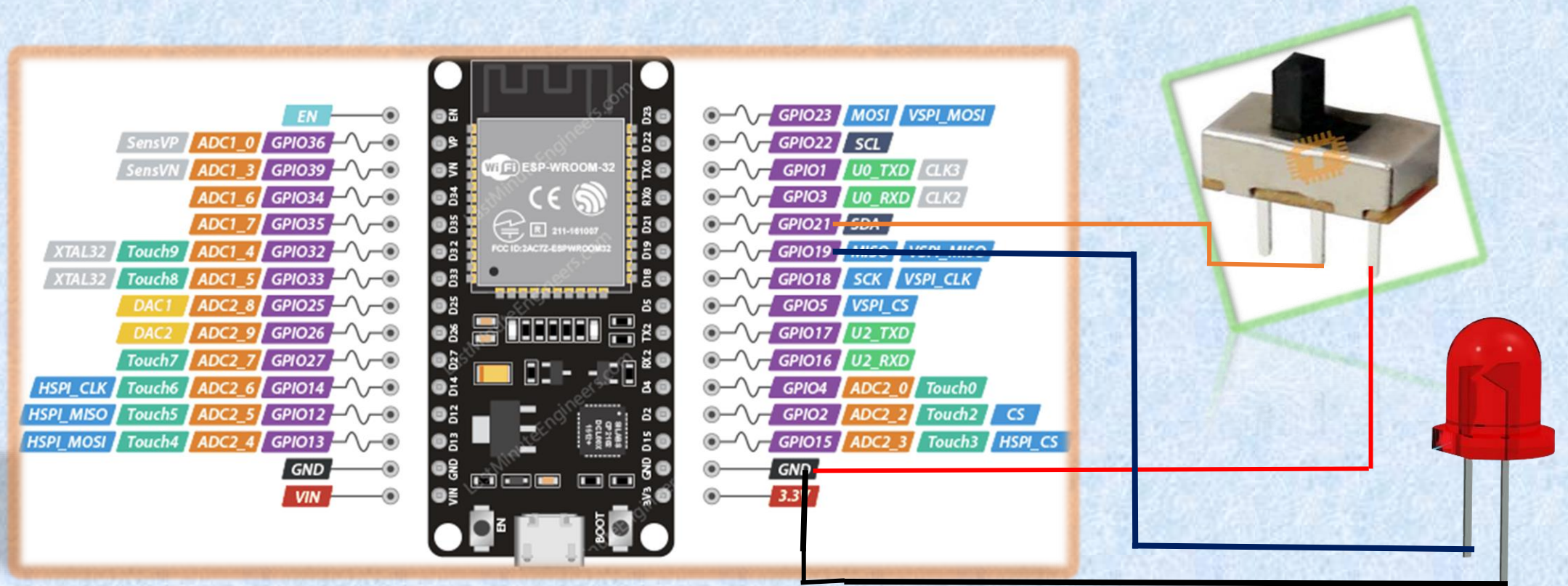
connect 3rd pin-GND



CONNECT CENTER PIN-D21
 3rd PIN-GND
 ANODE-D19
 CATHODE-GND



CONNECT CENTER PIN-D21
 3rd PIN-GND
 ANODE-D19
 CATHODE-GND



CONNECT CENTER PIN-D21
 3rd PIN-GND
 ANODE-D19
 CATHODE-GND

CODE :-

```
const int switchPin = 21;
const int ledPin = 19;
void setup() {
    pinMode(switchPin, INPUT_PULLUP);
    pinMode(ledPin, OUTPUT);
    digitalWrite(ledPin, LOW);
    Serial.begin(115200);
}
void loop() {
    int switchState = digitalRead(switchPin);
    if (switchState == LOW) {
        digitalWrite(ledPin, HIGH);
        Serial.println("Switch is ON, LED is ON");
    }
    else {
        digitalWrite(ledPin, LOW);
        Serial.println("Switch is OFF, LED is OFF");
    }
    delay(3000);
}
lastButtonState =buttonState;
}
```


STEP 1:

Copy code paste in Arduino new Sketch



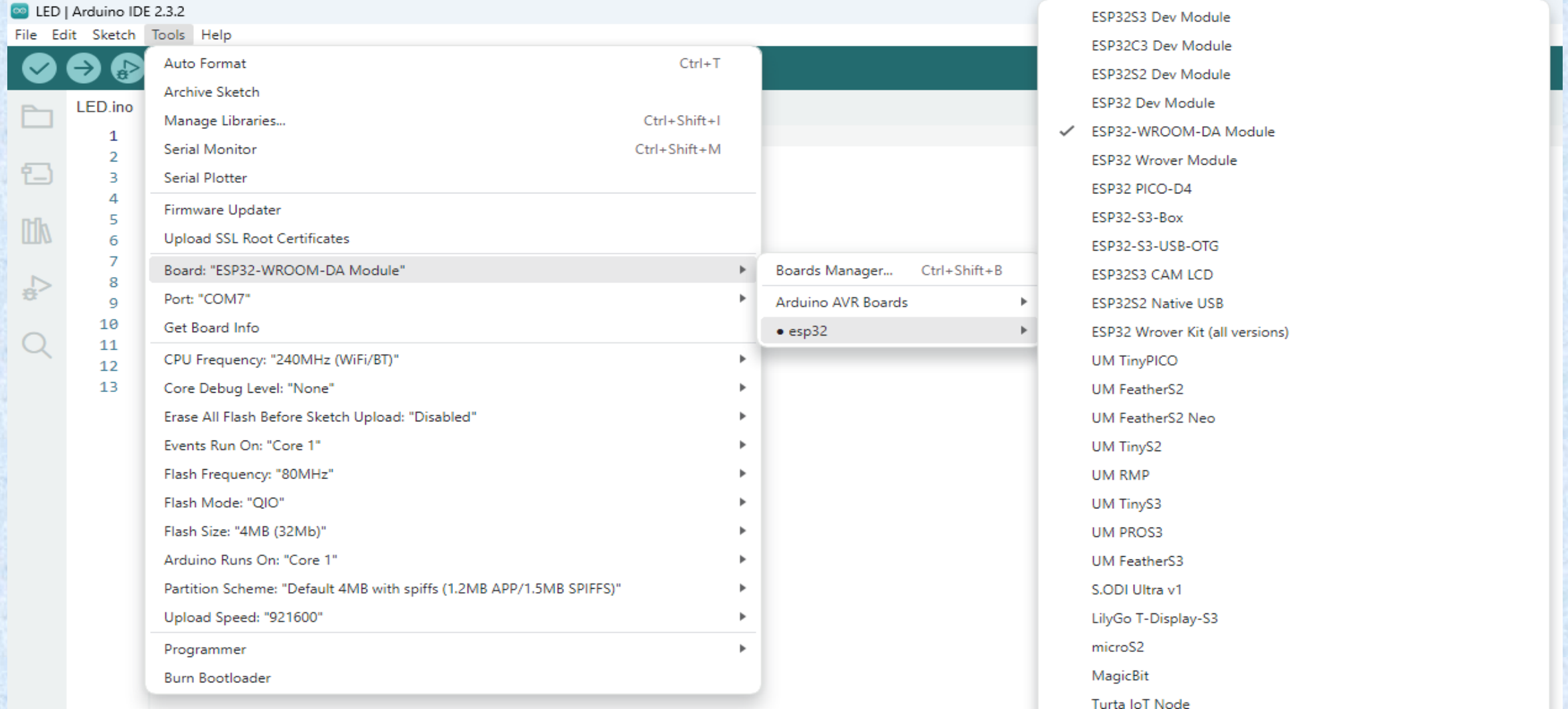
```
LEDSWITCH | Arduino IDE 2.3.2
File Edit Sketch Tools Help

ESP32-WROOM-DA M...

LEDSWITCH.ino
1  const int switchPin = 21;
2  const int ledPin = 19;
3  void setup() {
4      pinMode(switchPin, INPUT_PULLUP);
5      pinMode(ledPin, OUTPUT);
6      digitalWrite(ledPin, LOW);
7      Serial.begin(115200);
8  }
9  void loop() {
10     int switchState = digitalRead(switchPin);
11     if (switchState == LOW) {
12         digitalWrite(ledPin, HIGH);
13         Serial.println("Switch is ON, LED is ON");
14     } else {
15         digitalWrite(ledPin, LOW);
16         Serial.println("Switch is OFF, LED is OFF");
17     }
18     delay(3000);
19 }
20 lastButtonState =buttonState;
21 }
```

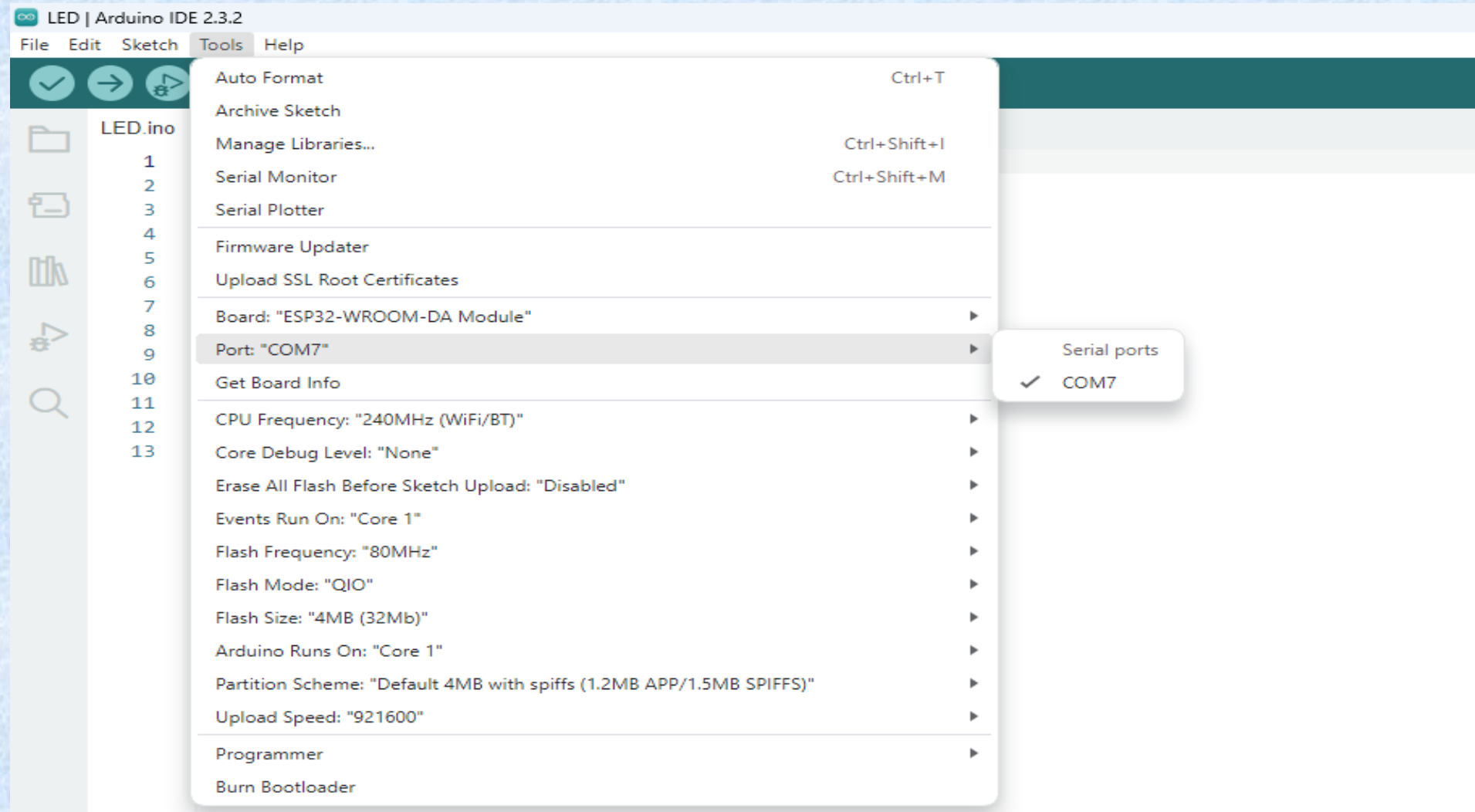
STEP 2 :

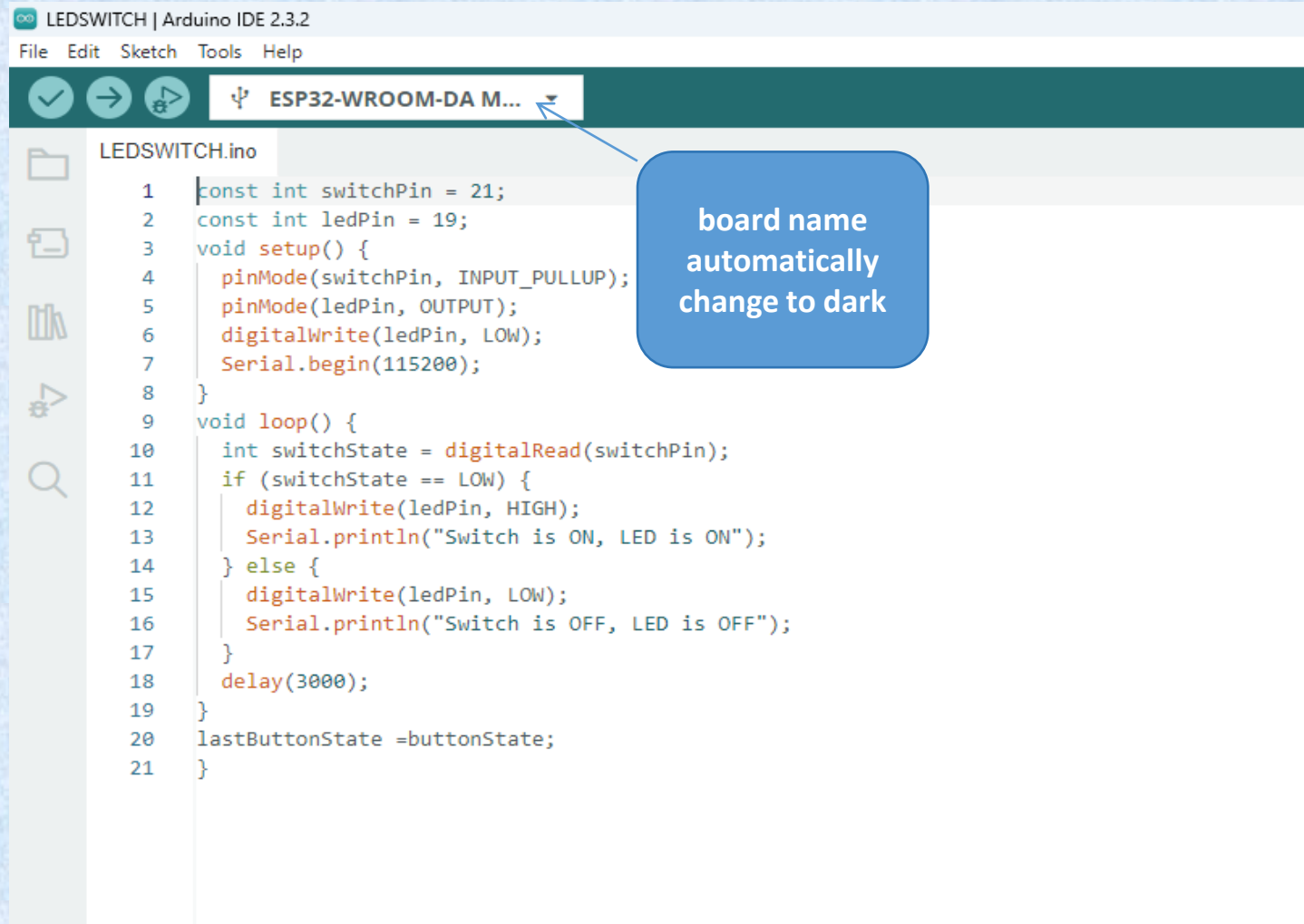
Board---->esp32---->esp32-wroom-DA module

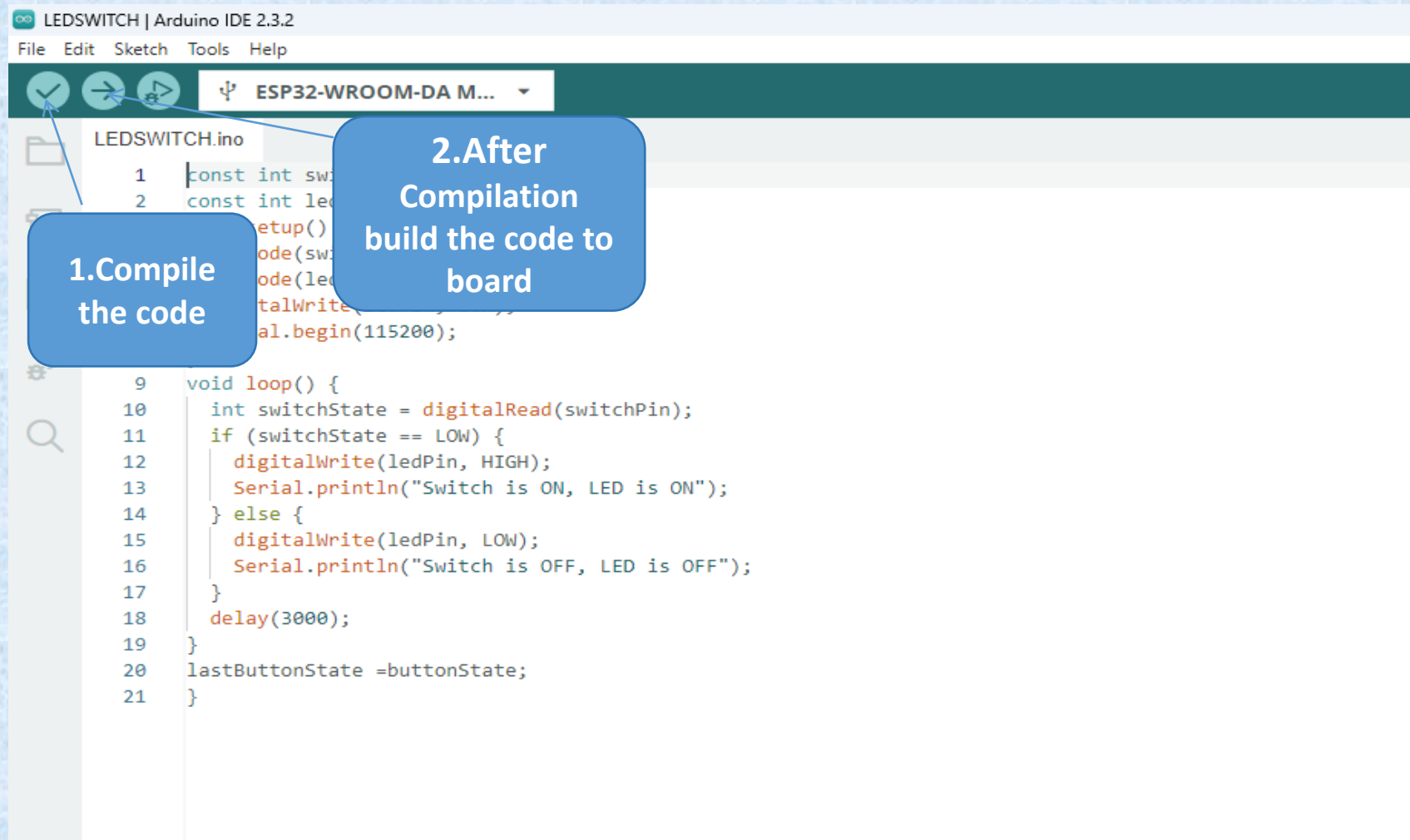


STEP 3:

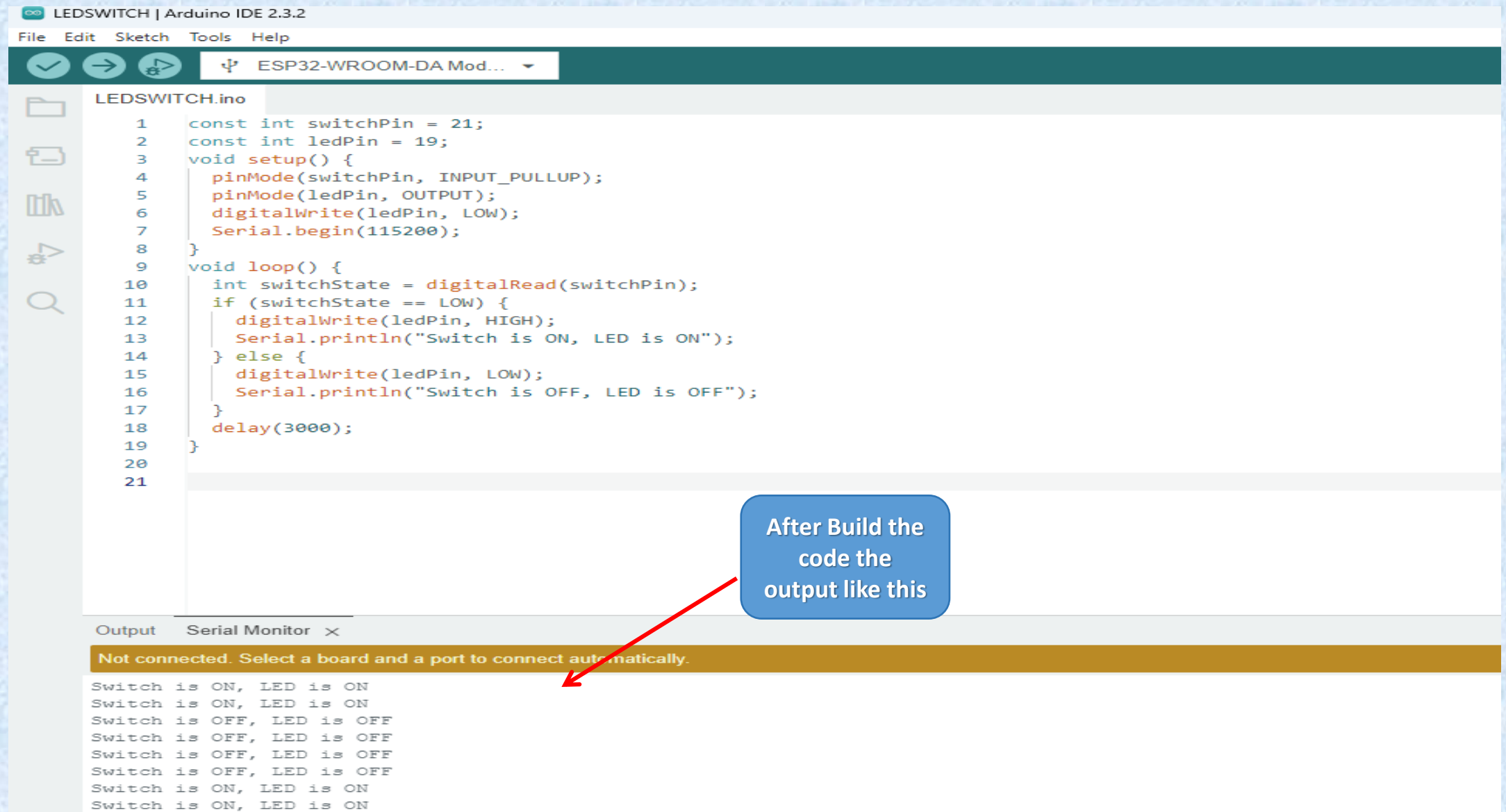
Tools---->port---->select your com







OUTPUT :



The screenshot displays the Arduino IDE interface. The top menu bar includes File, Edit, Sketch, Tools, and Help. The toolbar shows icons for saving, running, and uploading. The selected board is ESP32-WROOM-DA Mod... The file being edited is LEDSWITCH.ino. The code defines two pins: switchPin (21) and ledPin (19). The setup function configures the switchPin as an input with a pullup and the ledPin as an output, then initializes the serial port at 115200. The loop function reads the switch state; if it's LOW, the LED is turned on and the message "Switch is ON, LED is ON" is printed. Otherwise, the LED is turned off and the message "Switch is OFF, LED is OFF" is printed. A 3000ms delay is used between readings.

```
1  const int switchPin = 21;
2  const int ledPin = 19;
3  void setup() {
4      pinMode(switchPin, INPUT_PULLUP);
5      pinMode(ledPin, OUTPUT);
6      digitalWrite(ledPin, LOW);
7      Serial.begin(115200);
8  }
9  void loop() {
10     int switchState = digitalRead(switchPin);
11     if (switchState == LOW) {
12         digitalWrite(ledPin, HIGH);
13         Serial.println("Switch is ON, LED is ON");
14     } else {
15         digitalWrite(ledPin, LOW);
16         Serial.println("Switch is OFF, LED is OFF");
17     }
18     delay(3000);
19 }
20
21
```

The Serial Monitor at the bottom shows the output of the program. A red arrow points from a blue callout box to the first line of the output. The output consists of alternating "Switch is ON, LED is ON" and "Switch is OFF, LED is OFF" messages.

After Build the code the output like this

Not connected. Select a board and a port to connect automatically.

Switch is ON, LED is ON
Switch is ON, LED is ON
Switch is OFF, LED is OFF
Switch is OFF, LED is OFF
Switch is OFF, LED is OFF
Switch is OFF, LED is OFF
Switch is ON, LED is ON
Switch is ON, LED is ON