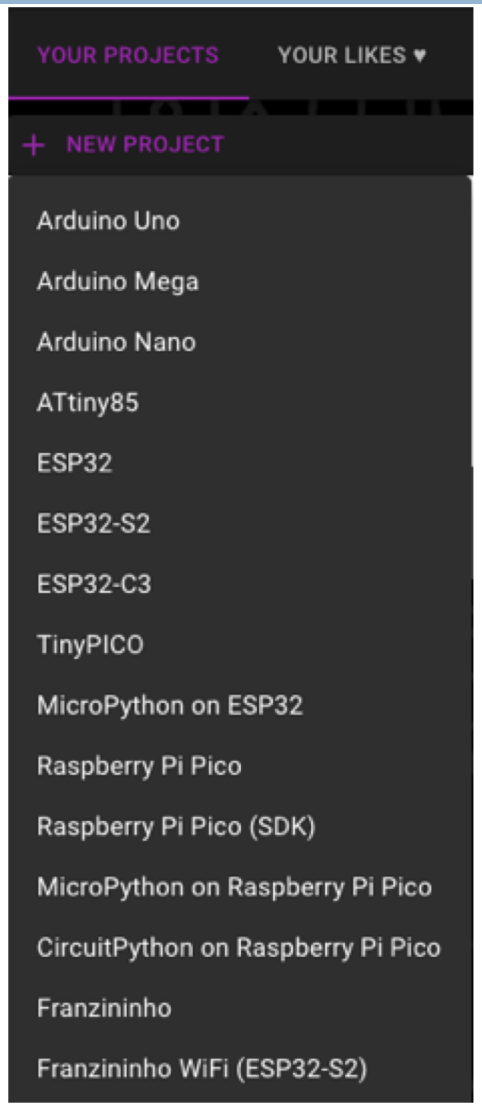
DevTitans

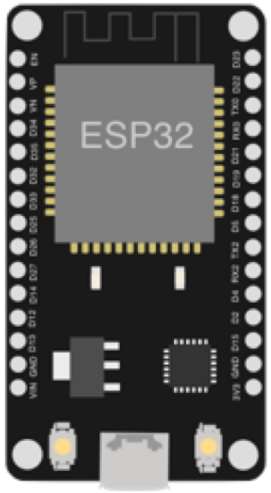
Wokwi: um emulador para ESP32

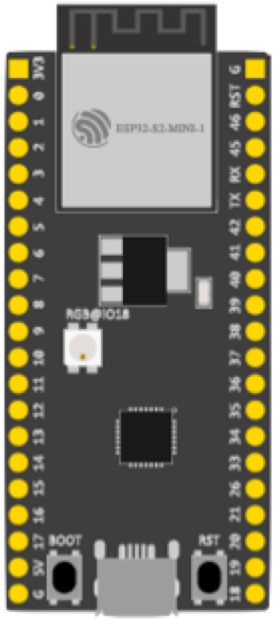
WOKWI

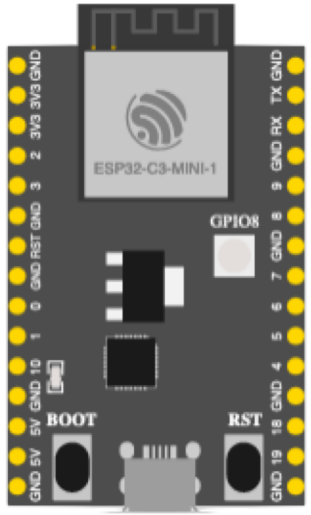
https://wokwi.com/

ESP32's do Wokwi







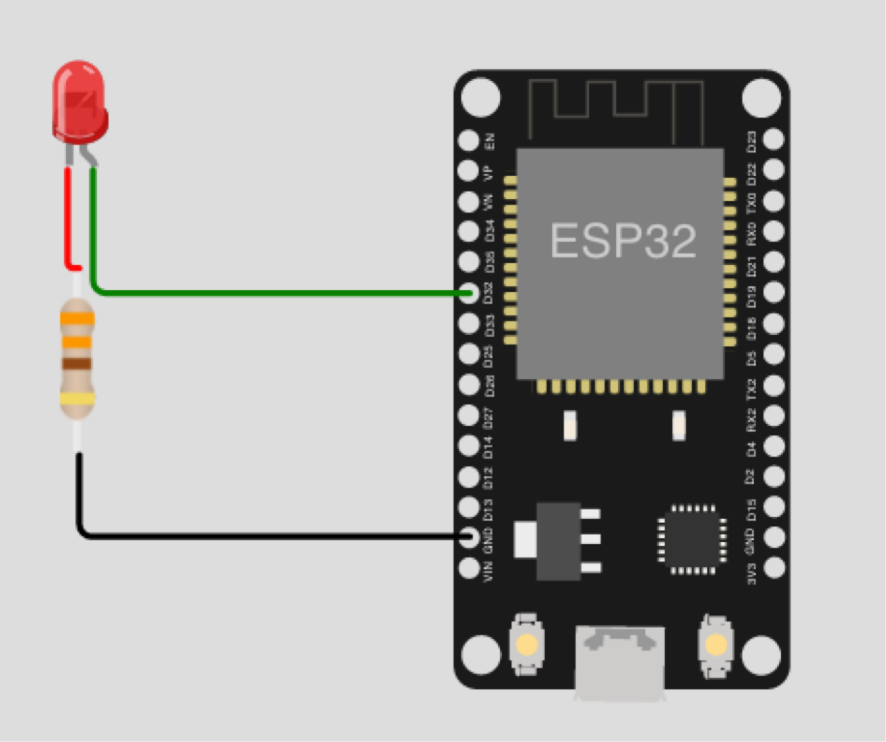


Pisca LED

Saída Digital

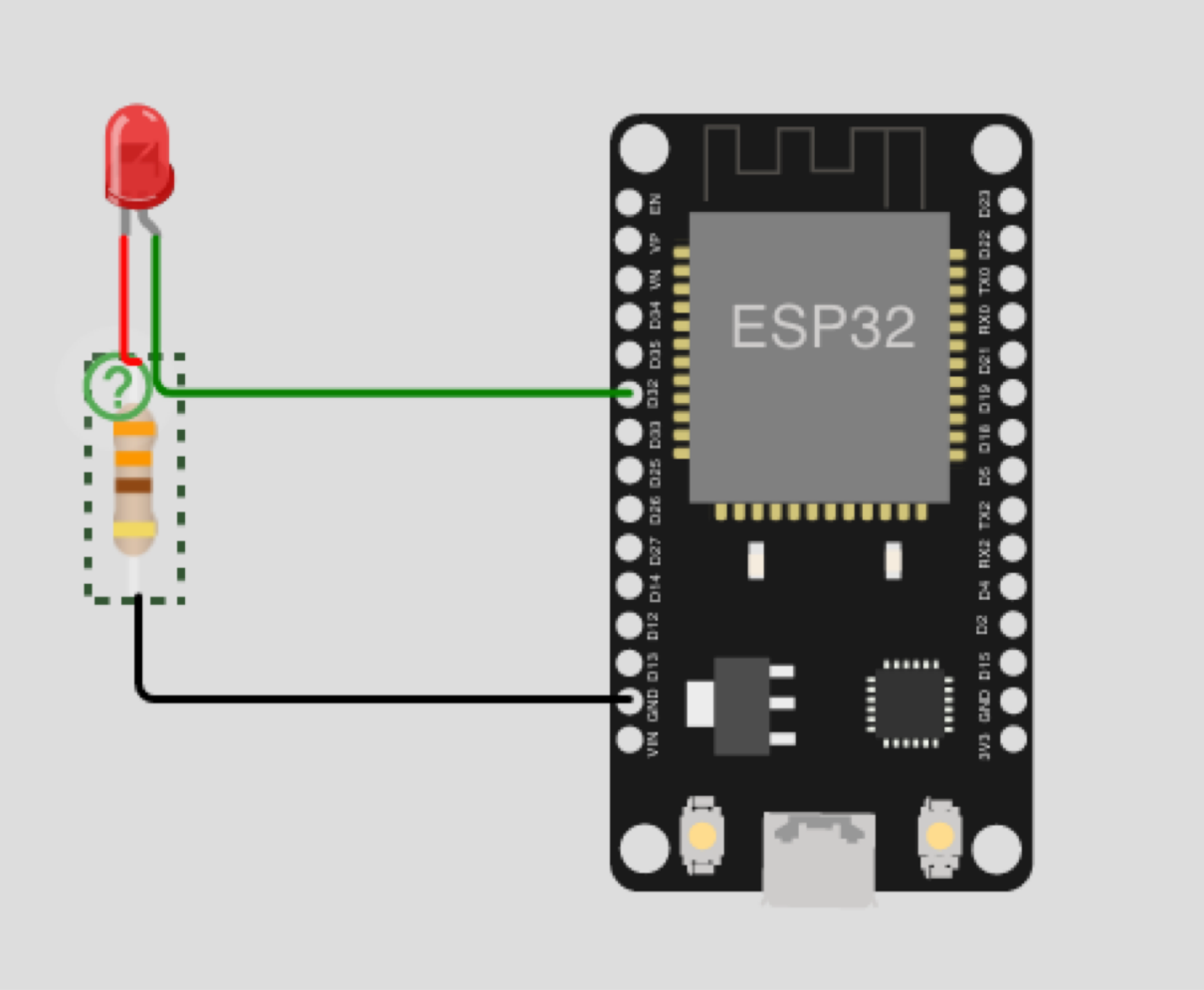
Circuito LED

Construa o circuito abaixo



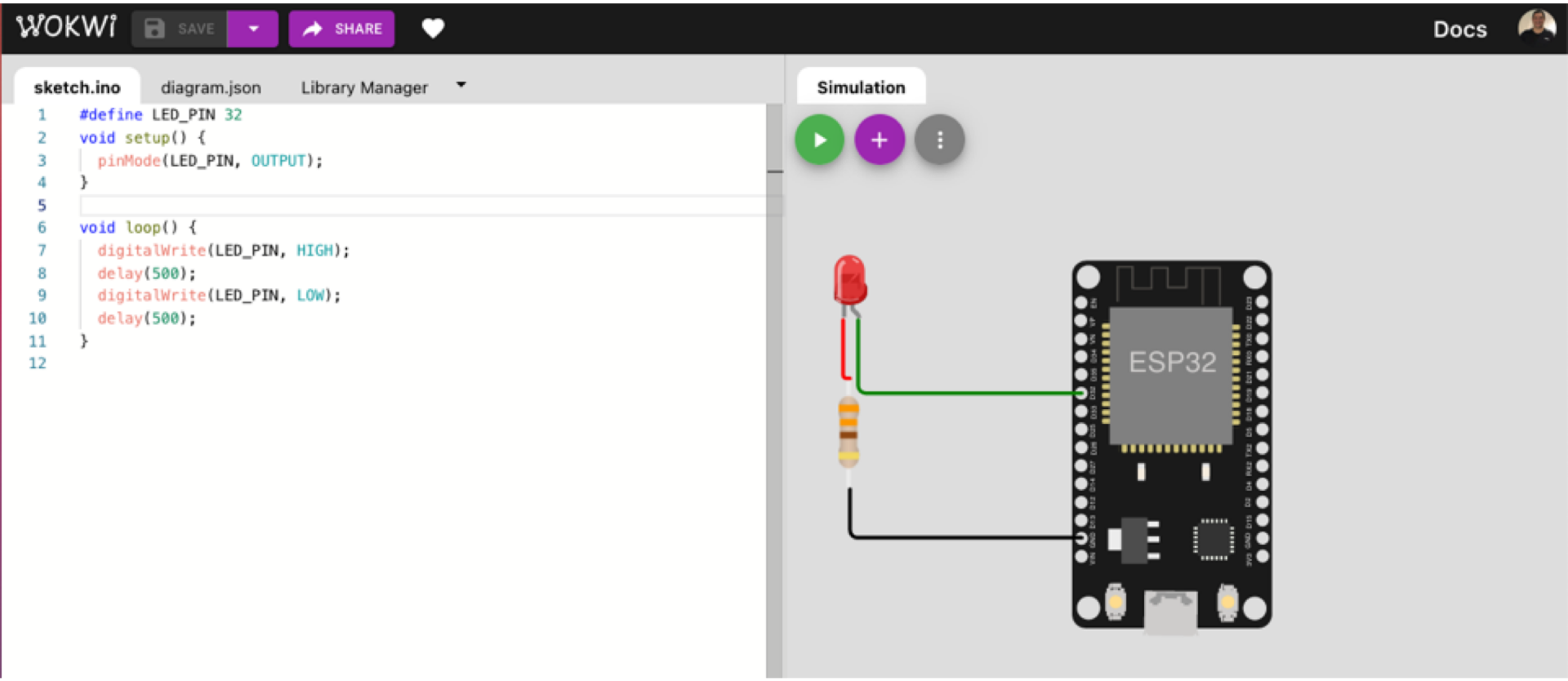
Anodo (+) do LED (Pino D32)
Catodo (-) do LED (Term. Resistor)
Term. Resistor (Pino GND)

Documentação (Ajuda)



Documentação (Ajuda)

Codificação



Codificação

```
#define LED_PIN 32
void setup() {
  pinMode(LED_PIN, OUTPUT);
}

void loop() {
  digitalWrite(LED_PIN, HIGH);
  delay(500);
  digitalWrite(LED_PIN, LOW);
  delay(500);
}
```

JSON

WOKWI SAVE SHARE Docs

sketch.ino | diagram.json | Library Manager

```
{
  "version": 1,
  "author": "Raimundo Barreto",
  "editor": "wokwi",
  "parts": [
    { "type": "wokwi-esp32-devkit-v1", "id": "esp", "top": 6, "left": 172.67, "attrs":
    { "type": "wokwi-led", "id": "led1", "top": -2.7, "left": 34.83, "attrs": { "color
    {
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      "id": "r1",
      "top": 89.3,
      "left": 23.51,
      "rotate": 90,
      "attrs": { "value": "330" }
    }
  ],
  "connections": [
    [ "esp:TX0", "$serialMonitor:RX", "", [] ],
    [ "esp:RX0", "$serialMonitor:TX", "", [] ],
    [ "r1:1", "led1:C", "red", [ "h0" ] ],
    [ "esp:GND.2", "r1:2", "black", [ "h0" ] ],
    [ "led1:A", "esp:D32", "green", [ "v0" ] ]
  ]
}
```
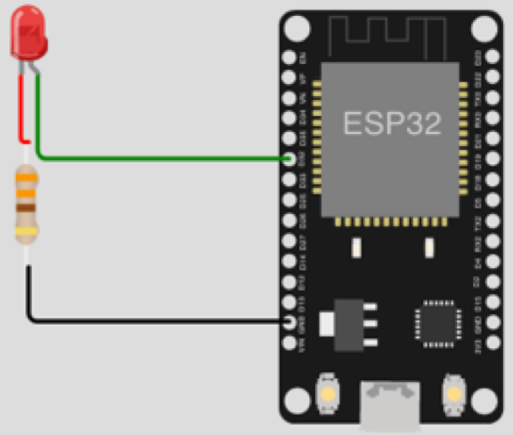
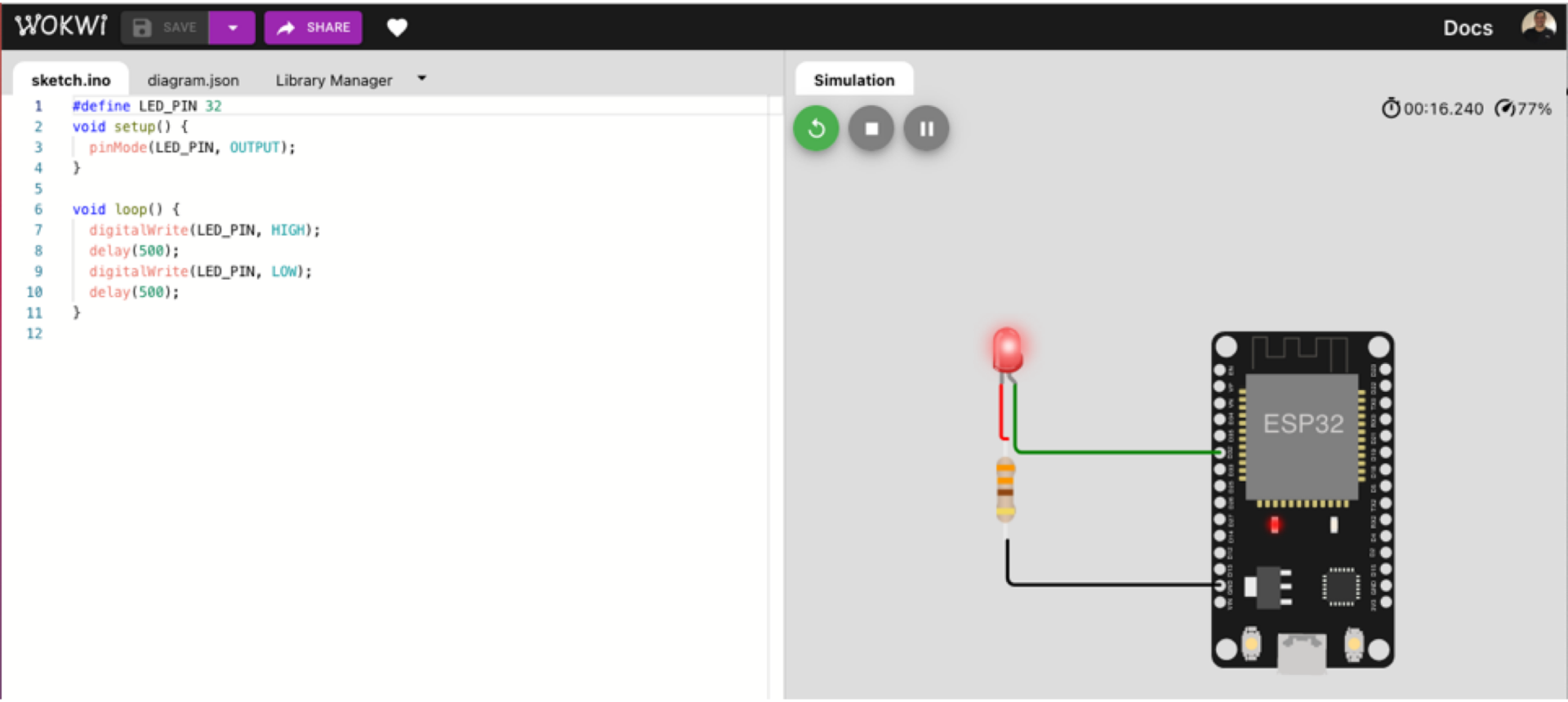
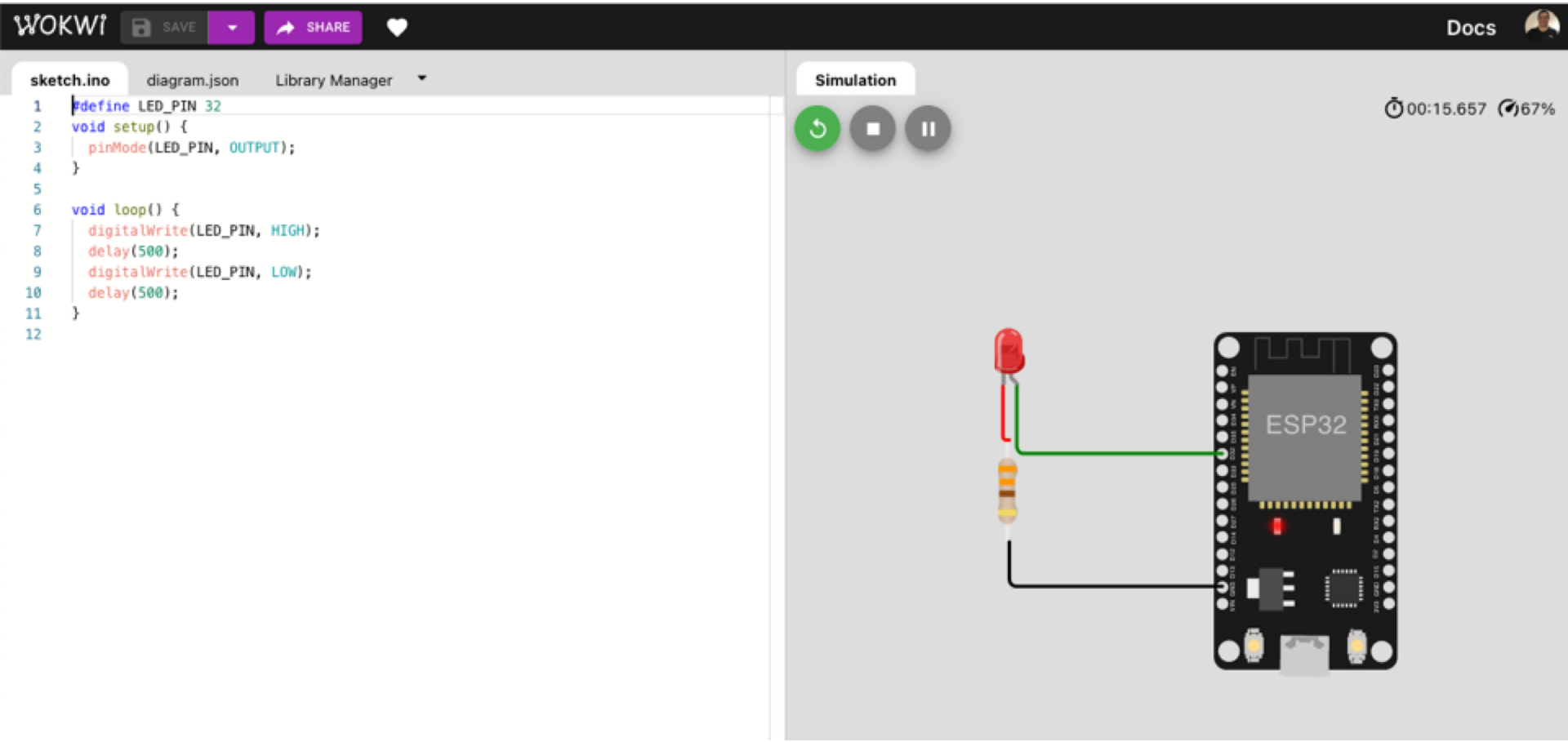

Simulation



Simulação (HIGH)



Simulação (LOW)




```ino
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}

void loop() {
  digitalWrite(LED_PIN, HIGH);
  delay(500);
  digitalWrite(LED_PIN, LOW);
  delay(500);
}

```
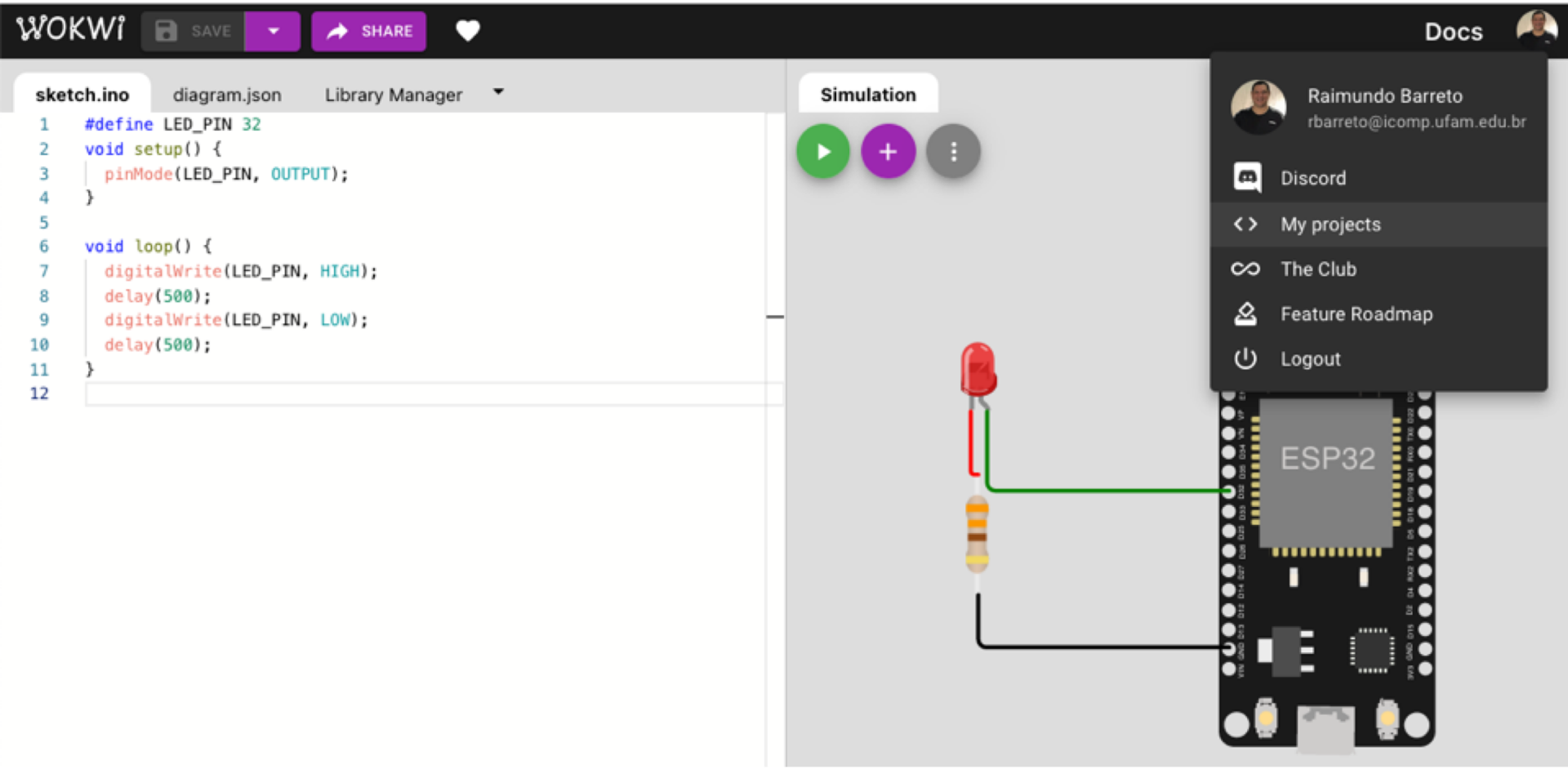
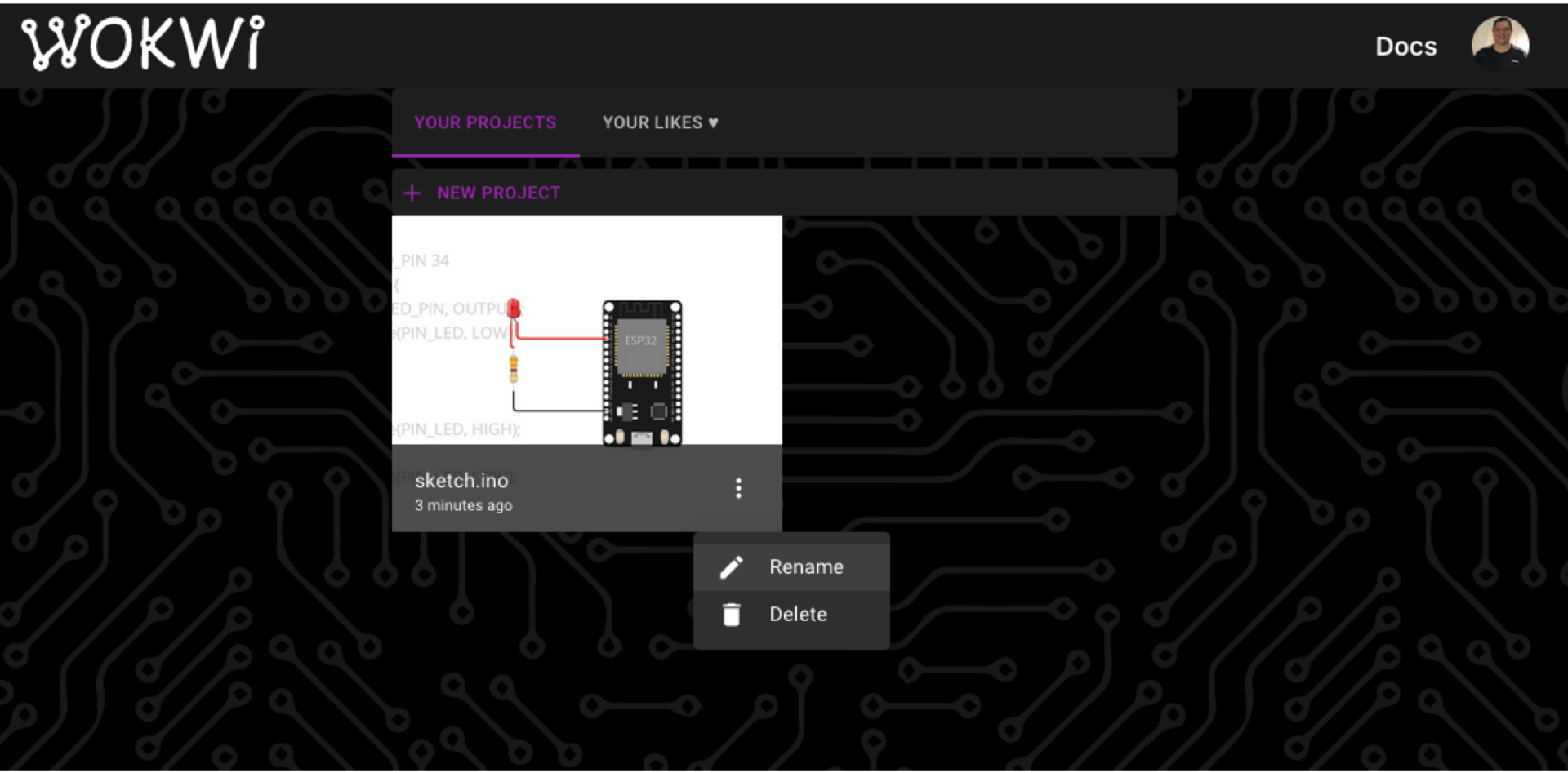

Renomear


WOKWi
SAVE
SHARE
Docs
sketch.ino
diagram.json
Library Manager
1 #define LED_PIN 32
2 void setup() {
3 pinMode(LED_PIN, OUTPUT);
4 }
5
6 void loop() {
7 digitalWrite(LED_PIN, HIGH);
8 delay(500);
9 digitalWrite(LED_PIN, LOW);
10 delay(500);
11 }
12
Simulation
Raimundo Barreto
rbarreto@icomp.ufam.edu.br
Discord
My projects
The Club
Feature Roadmap
Logout
ESP32

Renomear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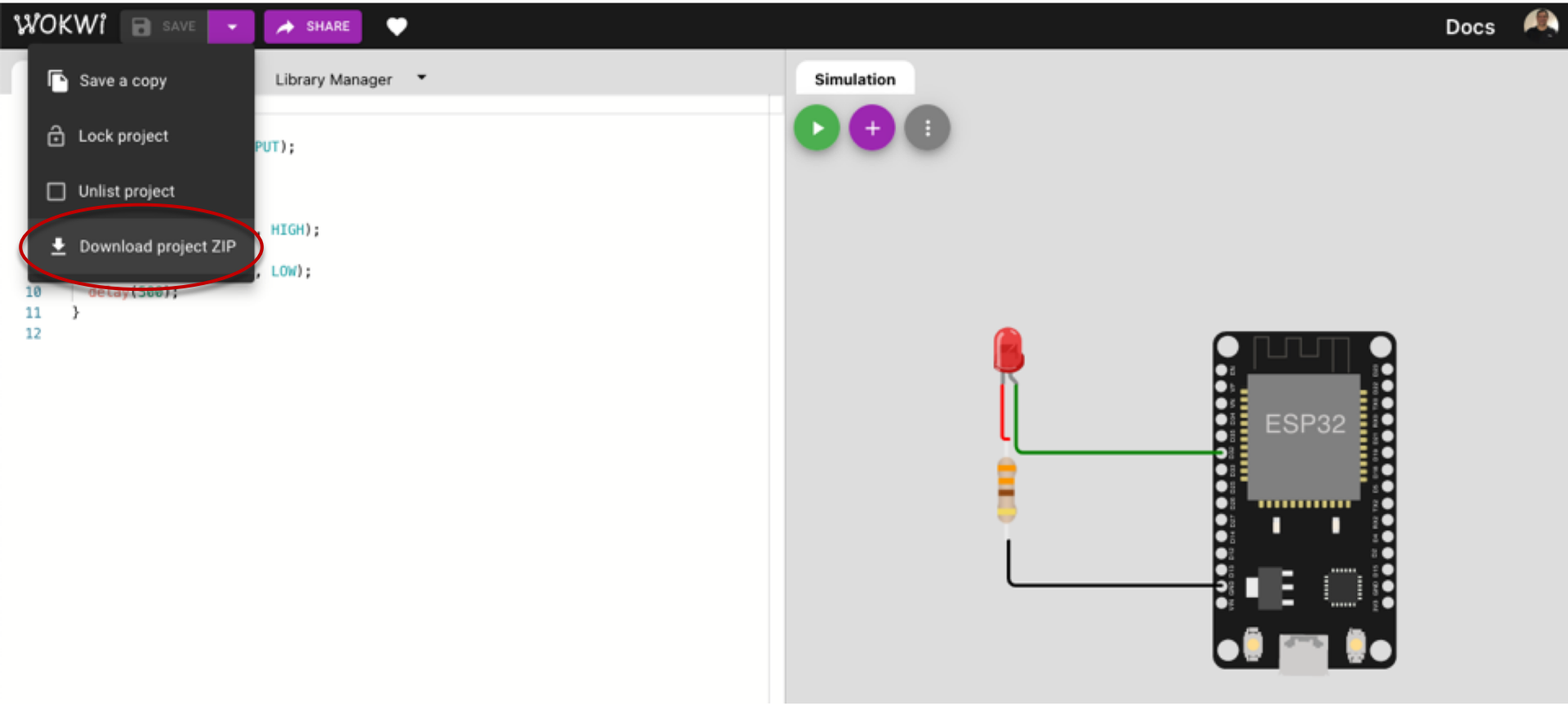
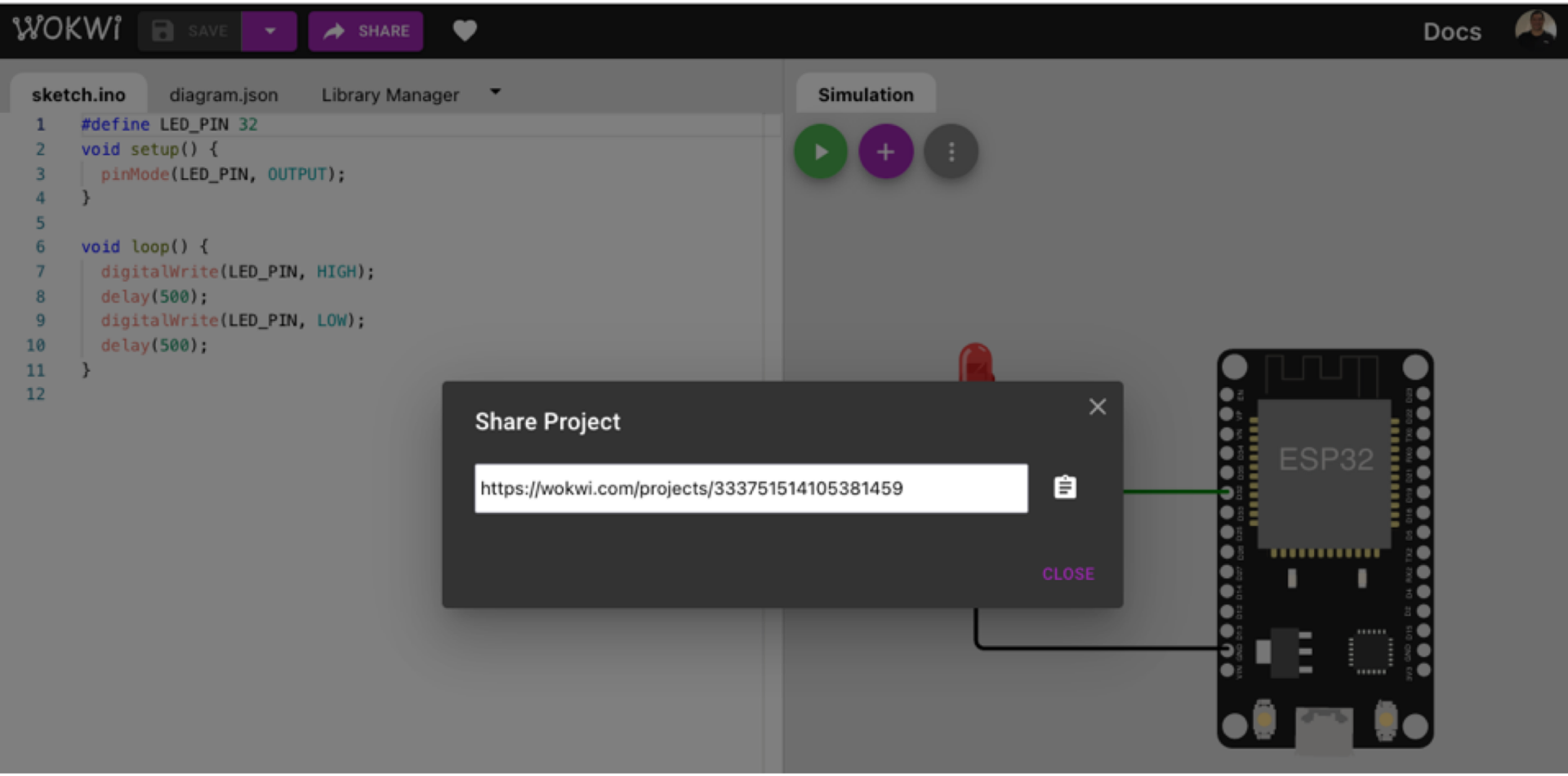
Docs
YOUR PROJECTS
YOUR LIKES ♥
+ NEW PROJECT
ESP32
sketch.ino
3 minutes ago
Rename
Delete

Download


WOKWI
SAVE
SHARE
Docs
Save a copy
Lock project
Unlist project
Download project ZIP
Library Manager
PUT);
HIGH);
LOW);
10
11 }
12
Simulation
ESP32

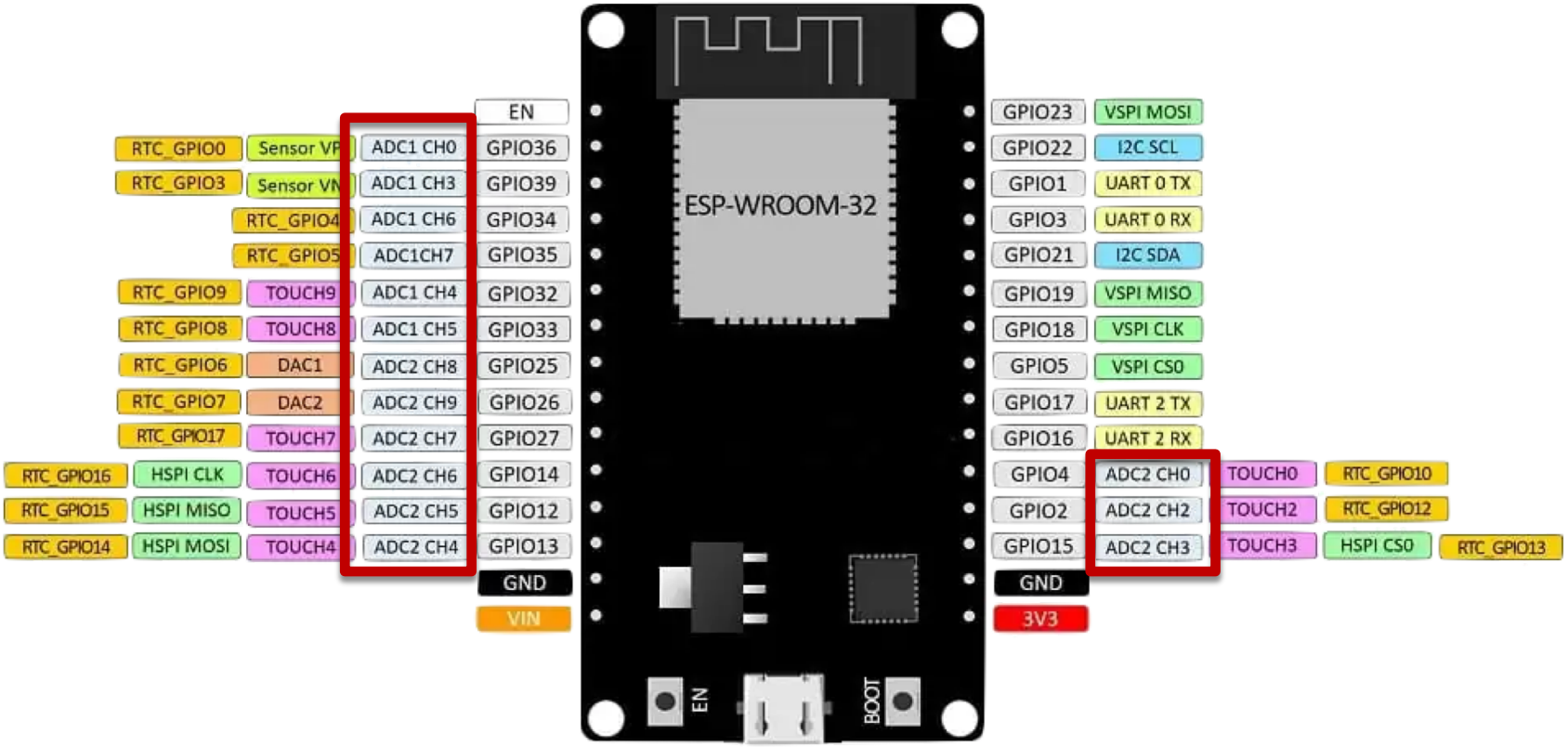
Compartilhando



Potenciômetro

Entrada Analógica

Pinos analógicos (ESP32 DevKit)



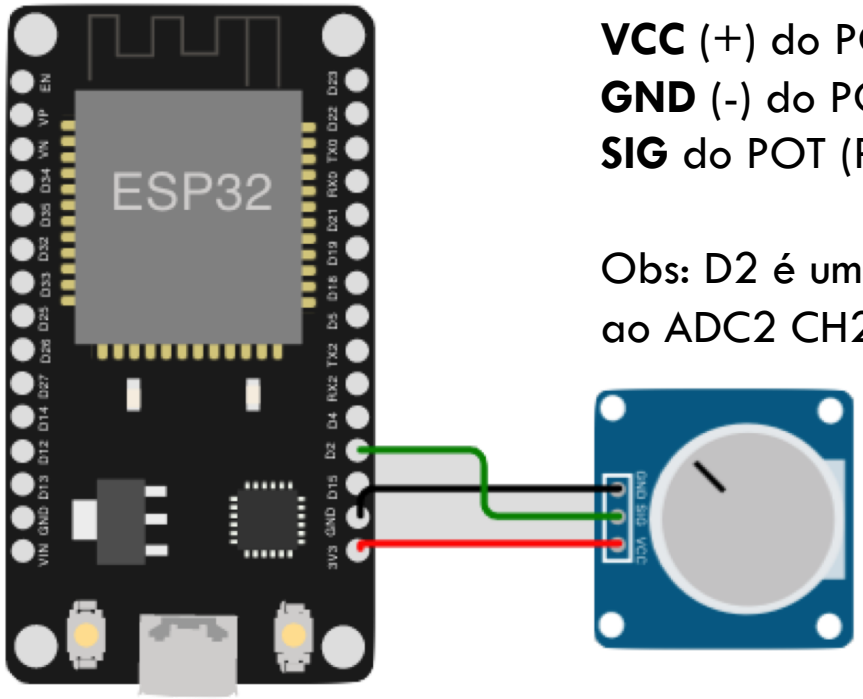
Nem todos os pinos podem ser usados como pinos analógicos

Entradas Analógicas

- As **entradas analógicas** são úteis para ler valores de sensores analógicos ou potenciômetros
- No ESP32, a ideia é medir **níveis de tensão variáveis** (analógicos) entre 0V e 3,3V
- Como o conversor analógico para digital (ADC) é de **12 bits**, a tensão medida é atribuída a um valor entre 0 e **4095** (2^{12}), em que 0 V corresponde a 0 e 3,3 V corresponde a 4095

Circuito

Construa o circuito abaixo



VCC (+) do POT (Pino 3V3)
GND (-) do POT (GND)
SIG do POT (Pino **D2**)

Obs: D2 é um pino que está ligado ao ADC2 CH2

Código

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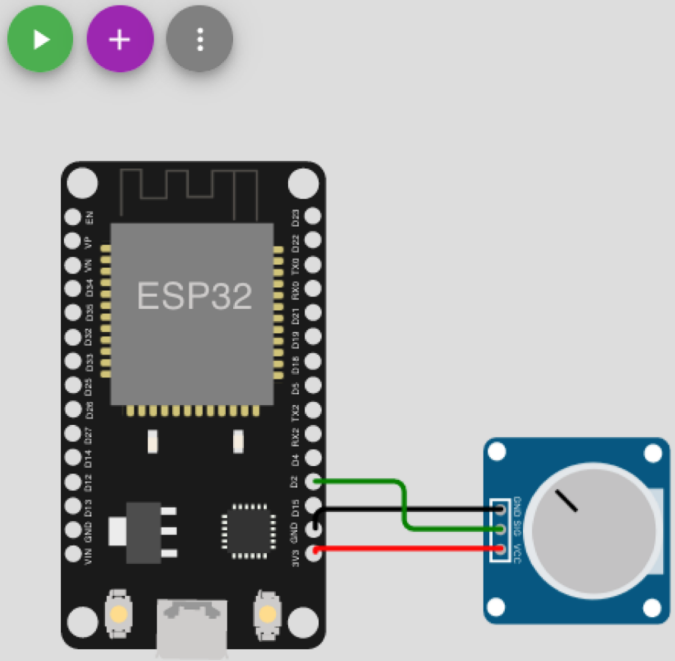
sketch.ino | diagram.json | Library Manager

```
#define POT_PIN 2
void setup() {
  pinMode(POT_PIN, INPUT);
  Serial.begin(115200);
}

void loop() {
  Serial.println(analogRead(POT_PIN));
  delay(10);
}

```

Simulation



Código

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}
```

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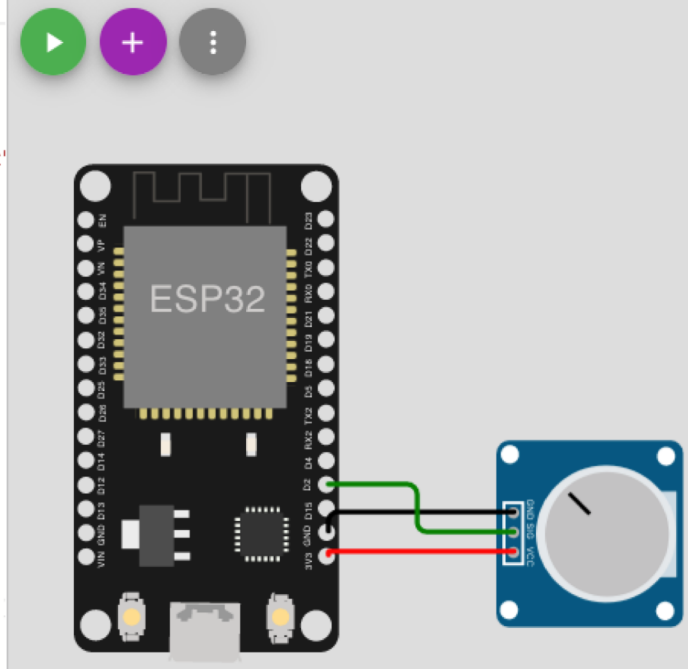
```
{
  "version": 1,
  "author": "Raimundo Barreto",
  "editor": "wokwi",
  "parts": [
    { "type": "wokwi-esp32-devkit-v1", "id": "esp", "top": 12.66, "left"
    {
      "type": "wokwi-potentiometer",
      "id": "pot1",
      "top": 122.46,
      "left": 240.33,
      "rotate": 90,
      "attrs": {}
    }
  ],
  "connections": [
    [ "esp:TX0", "$serialMonitor:RX", "", [] ],
    [ "esp:RX0", "$serialMonitor:TX", "", [] ],
    [ "esp:3V3", "pot1:VCC", "red", [ "v0" ] ],
    [ "pot1:GND", "esp:GND.1", "black", [ "h0" ] ],
    [ "pot1:SIG", "esp:D2", "green", [ "h-38.83", "v-19.09", "h-35.52"
  ]
}
```

Simulation



Simulação

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sketch.ino | diagram.json | Library Manager

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#define POT_PIN 2
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}

void loop() {
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  delay(10);
}
```
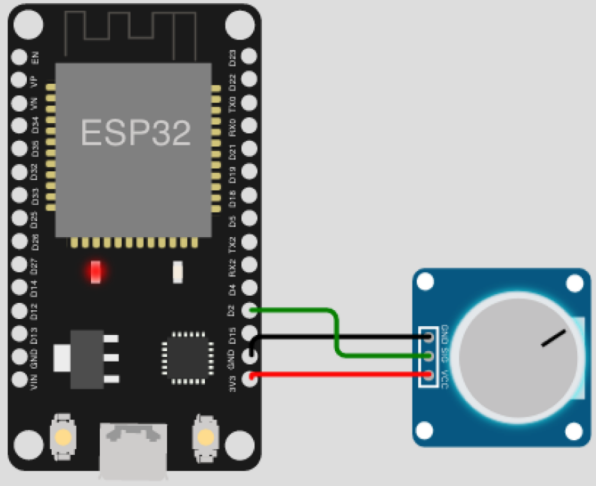

Simulation

00:10.265 56%




```
1545
1545
1545
1545
1545
1545
1545
```