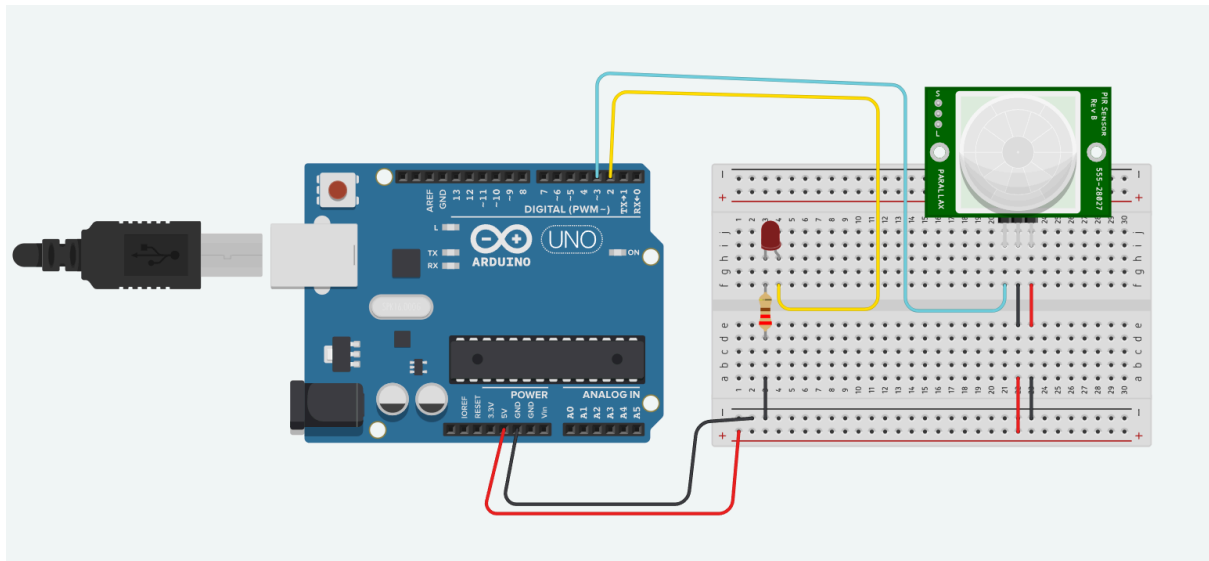


## SENSOR PIR



## CÓDIGO

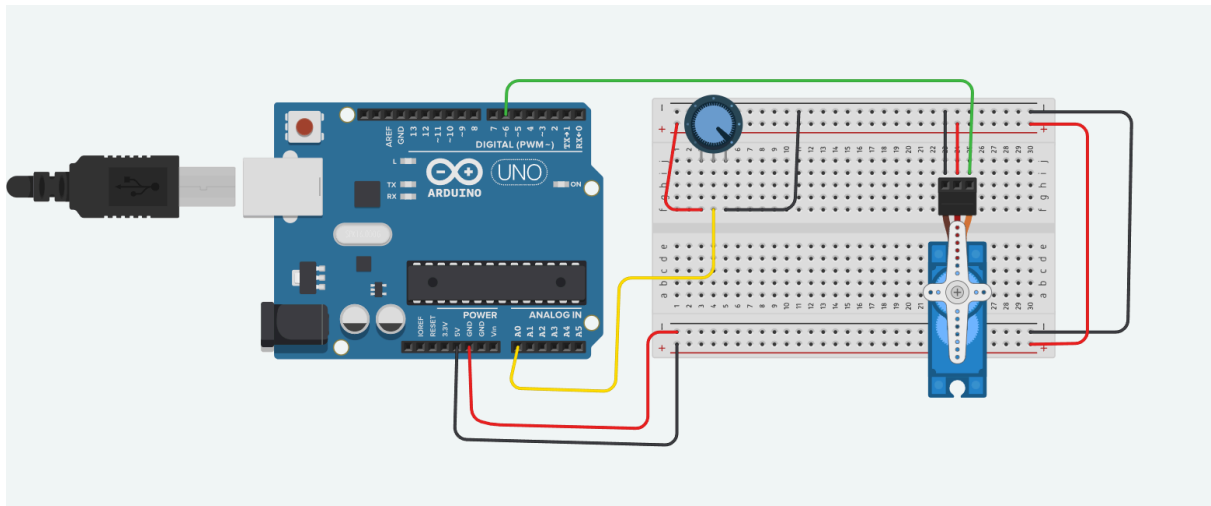
```
#define LED 2
#define SEN 3

int LeituraSensor;

void setup()
{
  pinMode(LED, OUTPUT);
  pinMode(SEN, INPUT);
  Serial.begin(9600);
}

void loop()
{
  LeituraSensor = digitalRead(SEN);
  if (LeituraSensor == LOW)
  {
    digitalWrite(LED, LOW);
  }
  else
  {
    digitalWrite(LED, HIGH);
  }
  delay(2);
}
```

## SERVOMOTOR



## CÓDIGO

```
#include <Servo.h>
```

```
Servo myservo;
```

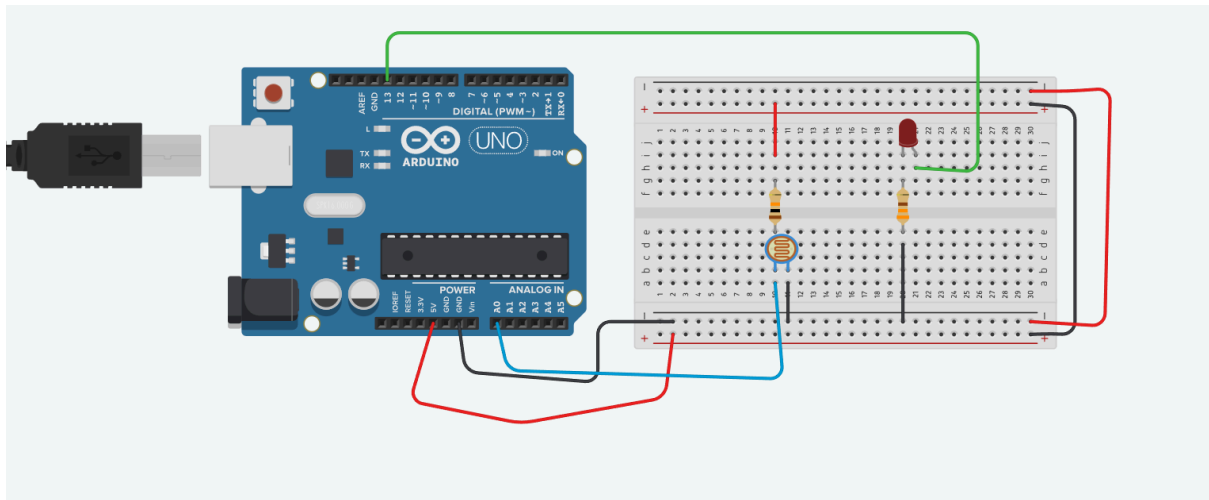
```
#define potpin A0
```

```
int val;
```

```
void setup()
{
  myservo.attach(6);
}
```

```
void loop()
{
  val = analogRead(potpin);
  val = map(val, 0, 1023, 0, 179);
  myservo.write(val);
  delay (15);
}
```

## FOTORESISTOR



## CÓDIGO

```
#define AnalogLDR A0
#define Limiar 1.5
#define ledPin 13
```

```
int Leitura;
float VoltageLDR;
float ResLDR;
```

```
void setup()
{
  pinMode(ledPin, OUTPUT);
  Serial.begin(9600);
  delay(100);
}
```

```
void loop()
{
  Leitura = analogRead(AnalogLDR);

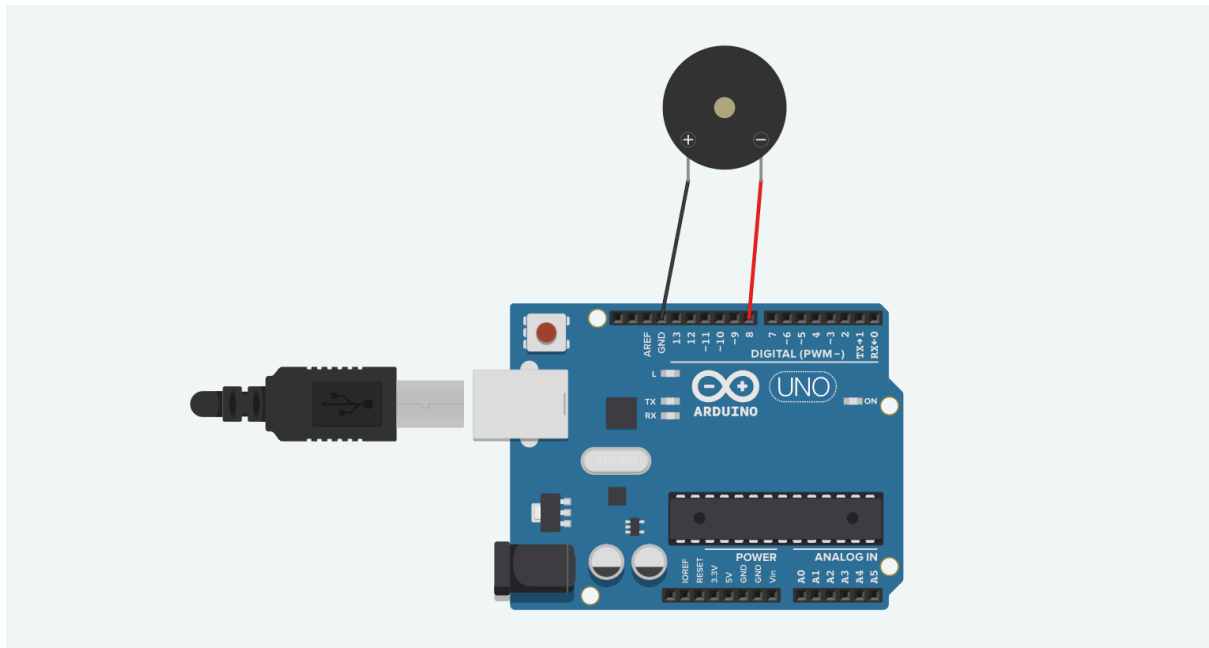
  VoltageLDR = Leitura * (5.0/1024);
  Serial.print("Leitura sensor LDR=");
  Serial.println(VoltageLDR);
}
```

```

if (VoltageLDR > Limiar)
  digitalWrite(ledPin,HIGH);
else
  digitalWrite(ledPin, LOW);
  delay (500);
}

```

## PIEZO



## CÓDIGO

```

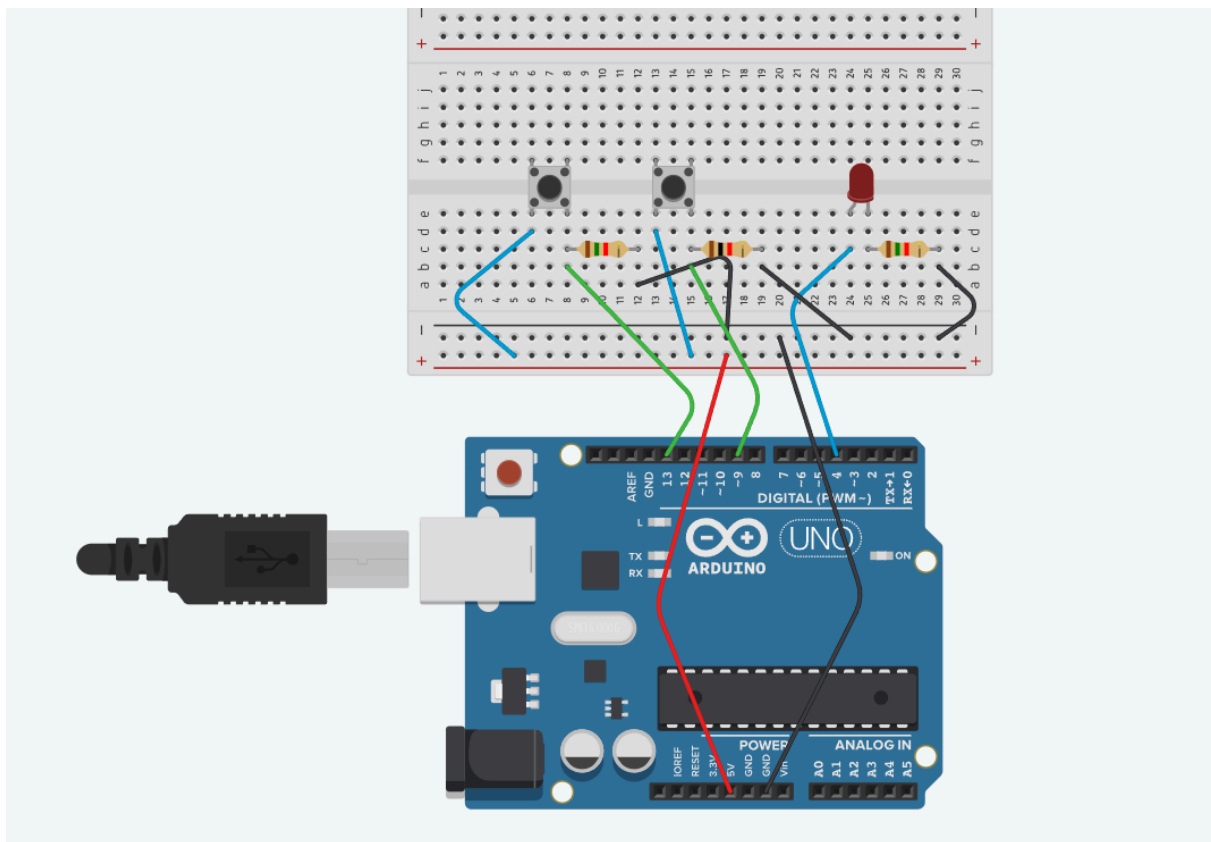
int buzzer = 8;
int i = 0;

void setup()
{
  pinMode(buzzer, OUTPUT);
}

void loop()
{
  for (i = 100; i < 2000; i += 50){
    tone(buzzer , i);
    delay(200);
    noTone(buzzer);
    delay(200);
  }
}

```

## LED BOTÃO



## CÓDIGO

```
#define LED_verde 2
#define botao_1 3
#define botao_2 4

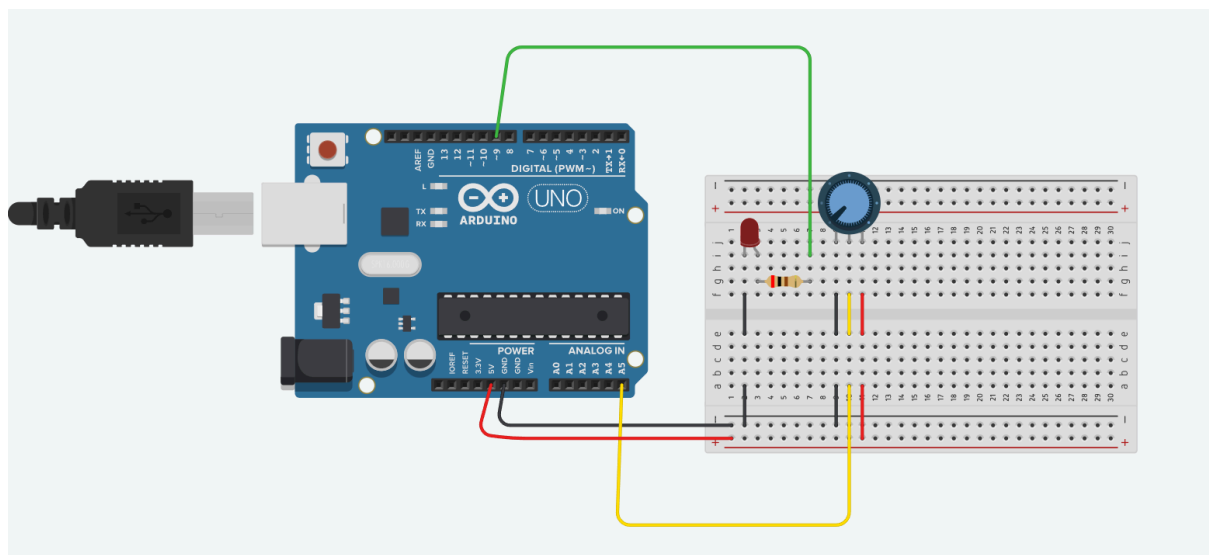
int estado_botao_1 = 0, estado_botao_2;

void setup()
{
    pinMode(4, OUTPUT);
    pinMode(13, INPUT);
    pinMode(9, INPUT);
}

void loop()
{
    estado_botao_1 = digitalRead(13);
    estado_botao_2 = digitalRead(9);

    if (estado_botao_1 == LOW && estado_botao_2 == LOW)
    {
        digitalWrite(4, HIGH);
    }
    else
    {
        digitalWrite(4, LOW);
    }
}
```

## POTENCIÔMETRO LED



## CÓDIGO

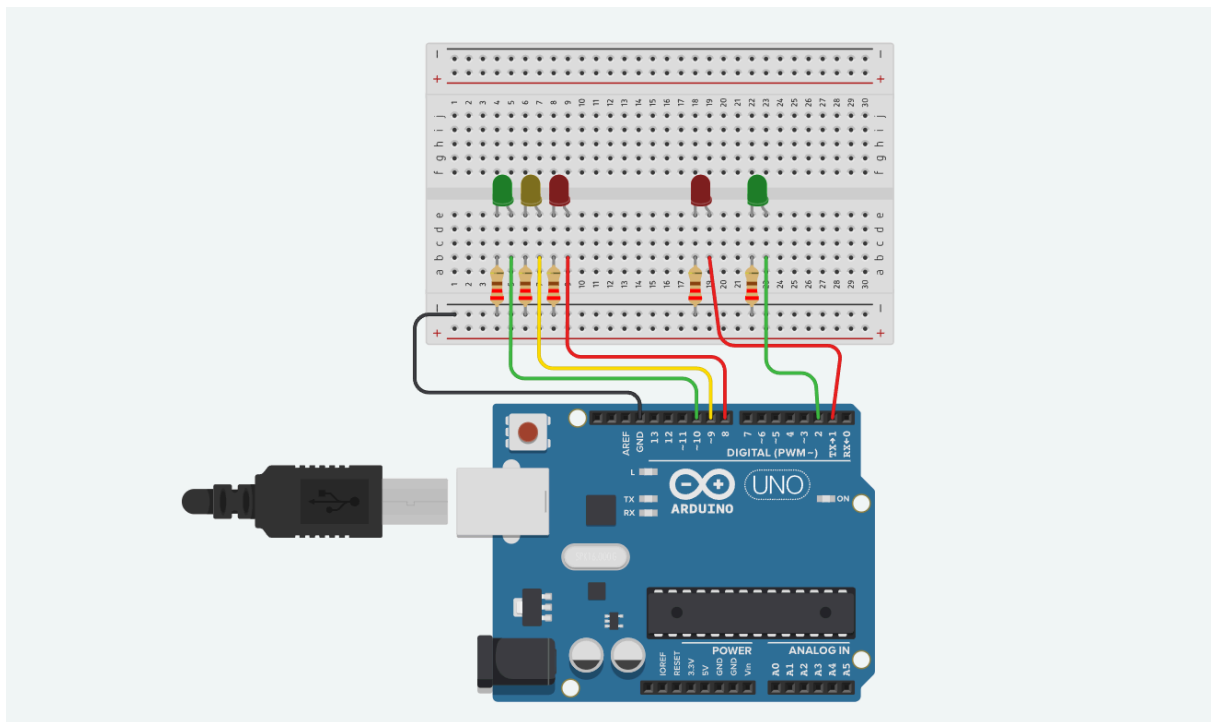
```
int ledPin = 9;
int potPin = A5;
int pwm = 0;
int valorPot = 0;

void setup()
{
  pinMode(ledPin, OUTPUT);
  pinMode(potPin, OUTPUT);
  Serial.begin(9600);
}

void loop()
{
  valorPot = analogRead(potPin);
  pwm = map(valorPot, 0, 1023, 0, 255);
  Serial.print(pwm);
  analogWrite(ledPin, pwm);
  delay(1000); // Wait for 1000 millisecond(s)
}
```



## SEMÁFORO



## CÓDIGO

```
#define LEDCarroverde 10
#define LEDCarroamarelo 9
#define LEDCarrovermelho 8
#define LEDPedestreverde 2
#define LEDPedestrevermelho 1

void setup()
{
  pinMode (LEDCarrovermelho, OUTPUT);
  pinMode (LEDCarroamarelo, OUTPUT);
  pinMode (LEDCarroverde, OUTPUT);
  pinMode (LEDPedestreverde, OUTPUT);
  pinMode (LEDPedestrevermelho, OUTPUT);
}

void loop()
{
  //ativação do LED Carro verde
  digitalWrite (LEDCarrovermelho, LOW);
  digitalWrite(LEDCarroverde, HIGH);
  delay(2000);
  digitalWrite(LEDCarroverde, LOW);
  delay(500);

  //ativação do LED Carro amarelo (oscilante)
  for (int i = 0; i < 3; i++){
    digitalWrite(LEDCarroamarelo, HIGH);
    delay(500);
    digitalWrite(LEDCarroamarelo, LOW);
    delay(500);
  }

  //ativação do LED Carro vermelho
  digitalWrite(LEDCarrovermelho, HIGH);
  delay(2000);
```

```
digitalWrite(LEDCarrovermelho, LOW);
delay(500);

//ativação do LED Pedestre verde
digitalWrite (LEDPedestrevermelho, LOW);
digitalWrite(LEDPedestreverde, HIGH);
delay(2000);
digitalWrite(LEDPedestreverde, LOW);
delay(500);
//ativação do LED Pedestre vermelho (oscilante)
for (int i = 0; i < 3; i++){
    digitalWrite(LEDPedestrevermelho, HIGH);
    delay(500);
    digitalWrite(LEDPedestrevermelho, LOW);
    delay(500);
}
//ativação do LED Pedestre vermelho
digitalWrite(LEDPedestrevermelho, HIGH);
delay(2000);
digitalWrite(LEDPedestrevermelho, LOW);
delay(500);

}
```