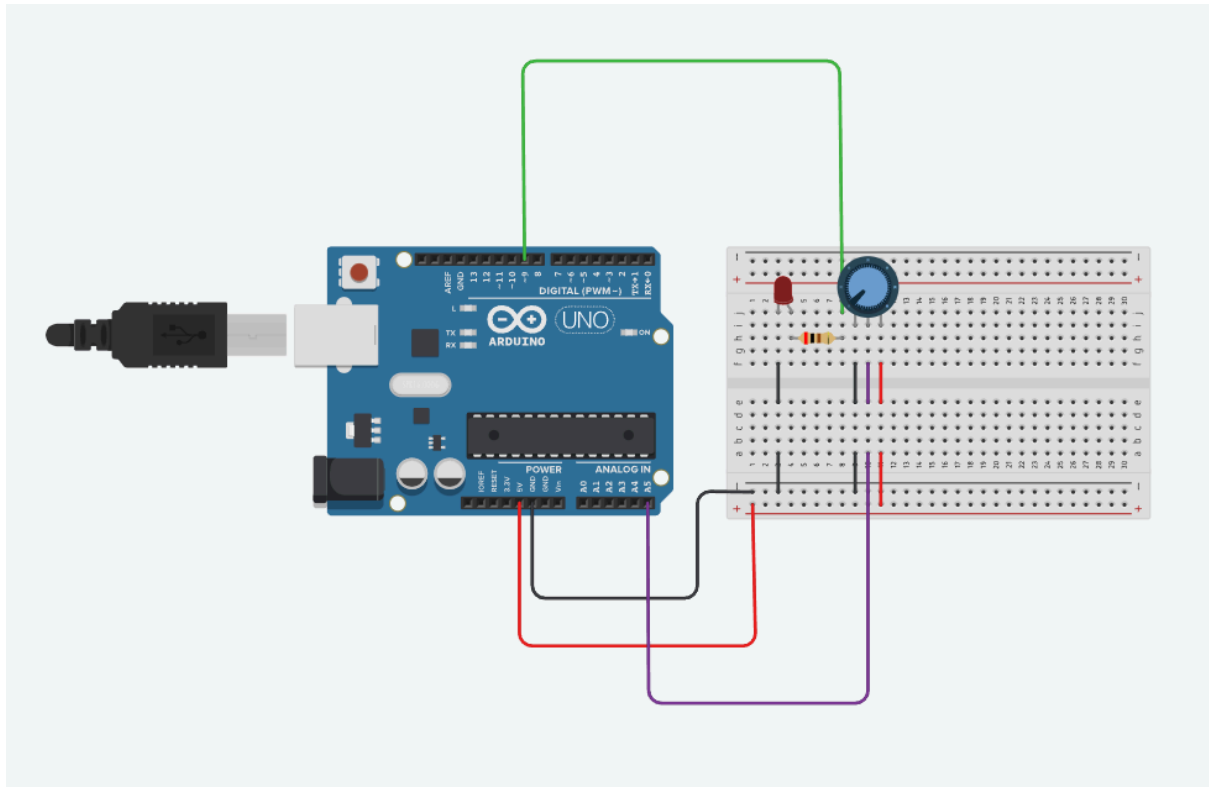


Visto do tinkercad, Data: 04/09/2024

Aluno: Daniel Ribeiro da costa, TDS sesi senai

POTENCIÔMETRO:



Código:

```
// C++ code
```

```
//
```

```
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);
```

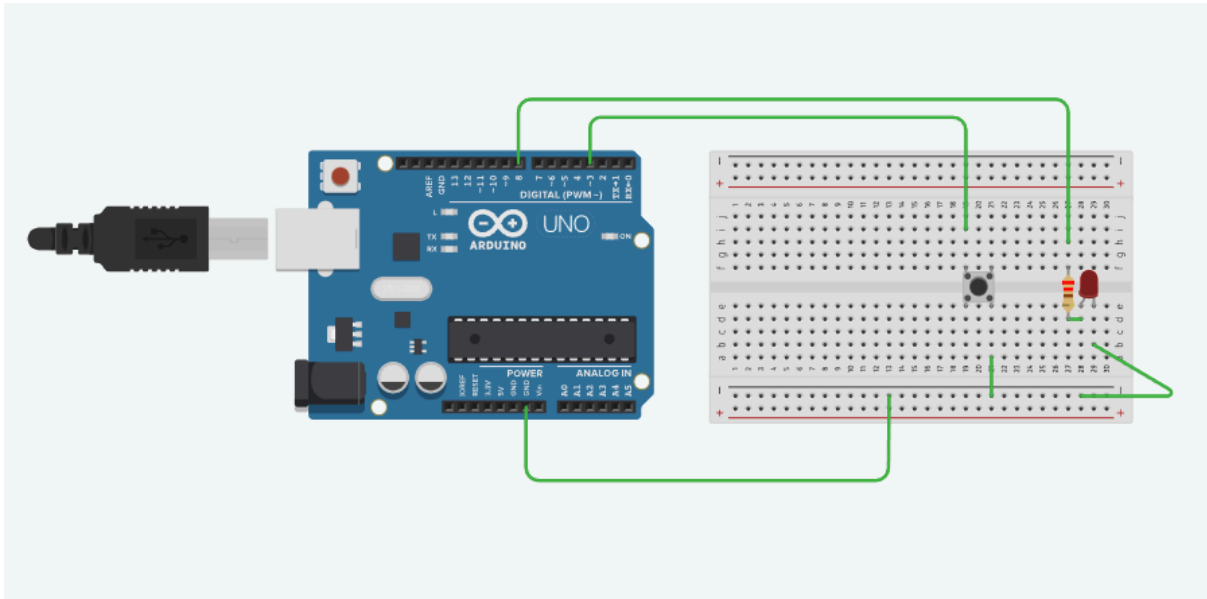
```
  Serial.println(pwm);
```

```
  analogWrite(ledPin, pwm);
```

```
delay(1000);
```

```
}
```

Botão que não funciona:

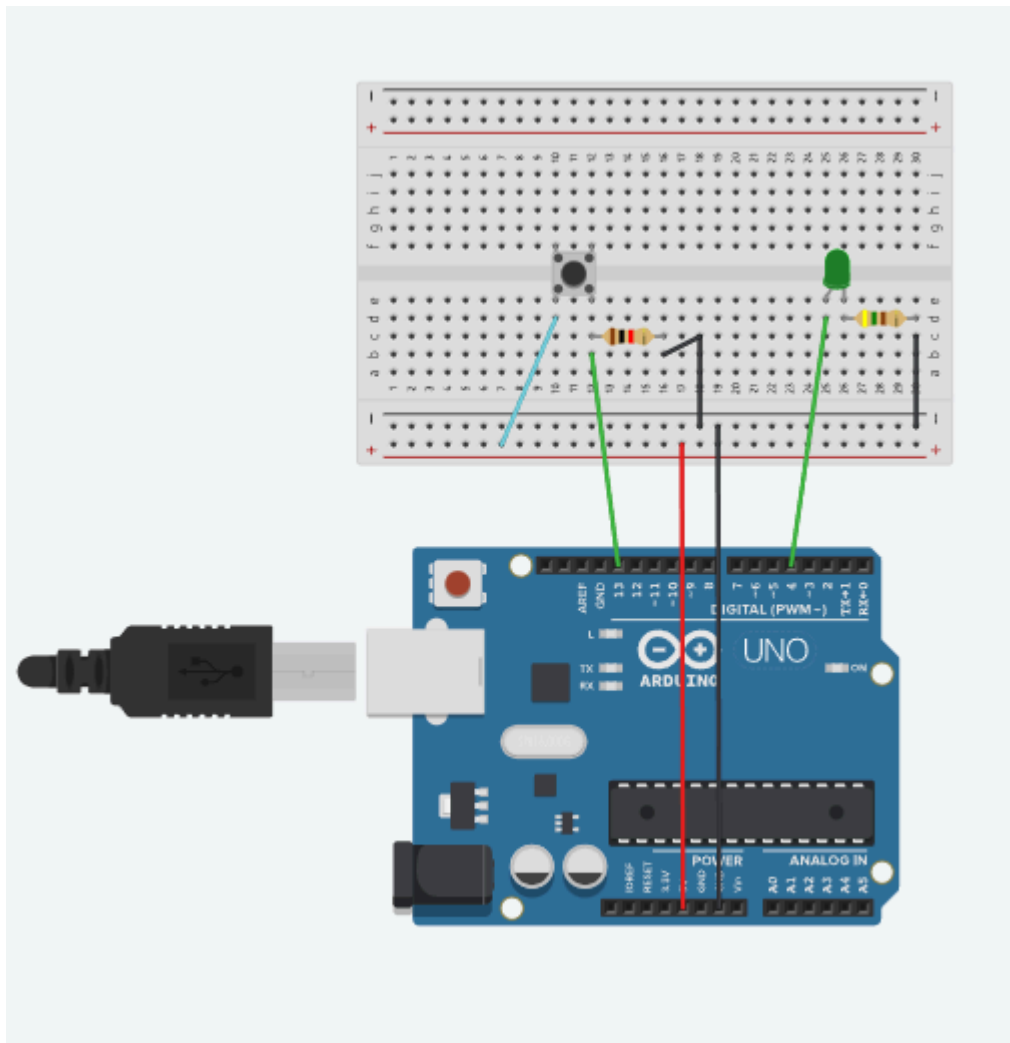


Código:

```
void setup(){  
  pinMode(8, OUTPUT);  
}
```

```
void loop(){  
  int estado = digitalRead(3);  
  delay(10);  
  if(estado == LOW){  
    digitalWrite(8, HIGH);  
  } else{  
    digitalWrite(8, LOW);  
  }  
}
```

Botão que funciona:



Código:

```
int estado_botao = 0; //variável para leitura do status do botão
```

```
void setup()
```

```
{  
  pinMode(4, OUTPUT); //Pino4 configurado como saída  
  pinMode(13, INPUT); //Pino 13 configurado como entrada  
}
```

```
void loop()
```

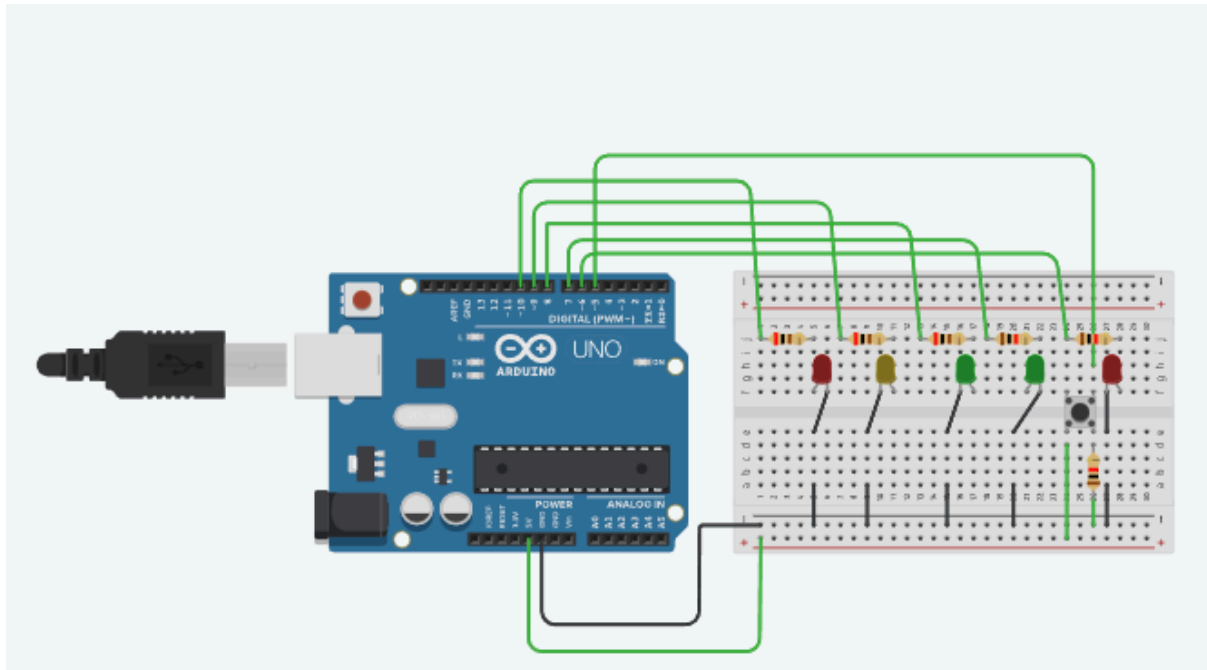
```
{  
  estado_botao = digitalRead(13); //Leitura do estado do botão  
  switch(estado_botao)  
  {  
    case HIGH: //Se o botão estiver pressionado, o LED acende  
      digitalWrite(4, HIGH);  
      break;  
    case LOW: //Se o botão não estiver pressionado, o LED apaga  
      digitalWrite(4, LOW);  
      break;  
  }
```

```

default: //Caso padrão (não necessário aqui, mas adicionado para boa prática)
digitalWrite(4, LOW);
break;
}
}

```

Semáforo:



Código:

```

int ledGreen = 8;
int ledYellon = 9;
int ledRed = 10;
int ledGreen2 = 7;
int ledRed2 = 6;
void setup()
{
  pinMode(ledGreen, OUTPUT);
  pinMode(ledGreen2, OUTPUT);
  pinMode(ledRed, OUTPUT);
  pinMode(ledRed2, OUTPUT);
  pinMode(ledYellon, OUTPUT);
}

void loop()
{
  digitalWrite(ledRed, HIGH);
  digitalWrite(ledGreen2, HIGH);
  delay(5000);
  digitalWrite(ledRed, LOW);
  digitalWrite(ledYellon, HIGH);
  digitalWrite(ledGreen2, LOW);
  delay(500);
}

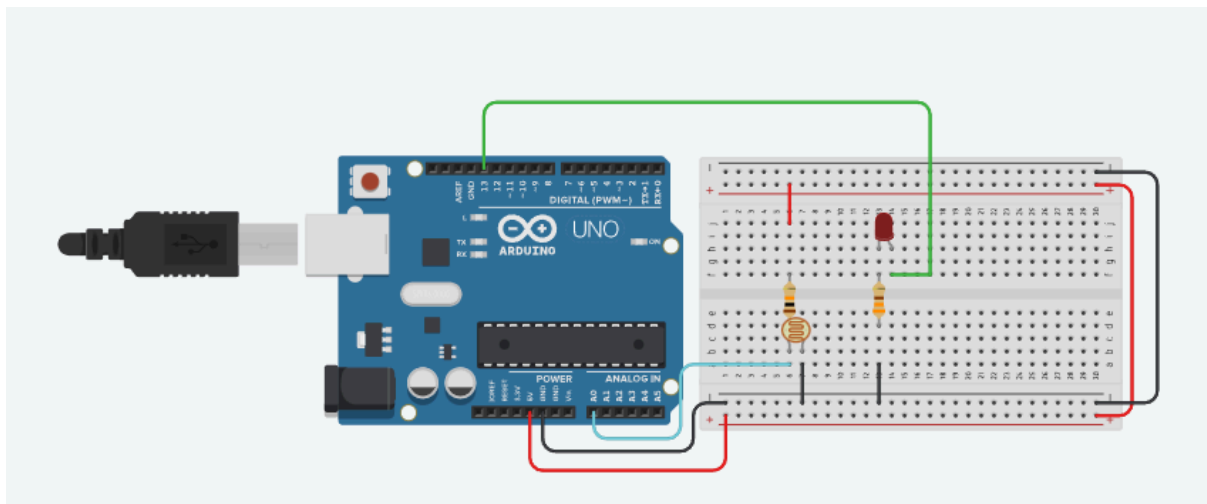
```

```

digitalWrite(ledGreen2, HIGH);
delay(500);
digitalWrite(ledGreen2, LOW);
delay(500);
digitalWrite(ledGreen2, HIGH);
delay(500);
digitalWrite(ledGreen2, LOW);
delay(500);
digitalWrite(ledGreen2, HIGH);
delay(500);
digitalWrite(ledGreen2, LOW);
digitalWrite(ledYellon, LOW);
digitalWrite(ledGreen, HIGH);
digitalWrite(ledRed2, HIGH);
delay(5000);
digitalWrite(ledGreen, LOW);
digitalWrite(ledYellon, HIGH);
digitalWrite(ledGreen, LOW);
delay(500);
digitalWrite(ledRed2, HIGH);
delay(500);
digitalWrite(ledRed2, LOW);
delay(500);
digitalWrite(ledRed2, HIGH);
delay(500);
digitalWrite(ledRed2, LOW);
delay(500);
digitalWrite(ledRed2, HIGH);
delay(500);
digitalWrite(ledRed2, LOW);
delay(500);
digitalWrite(ledYellon, LOW);
}

```

LDR:



Código:

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

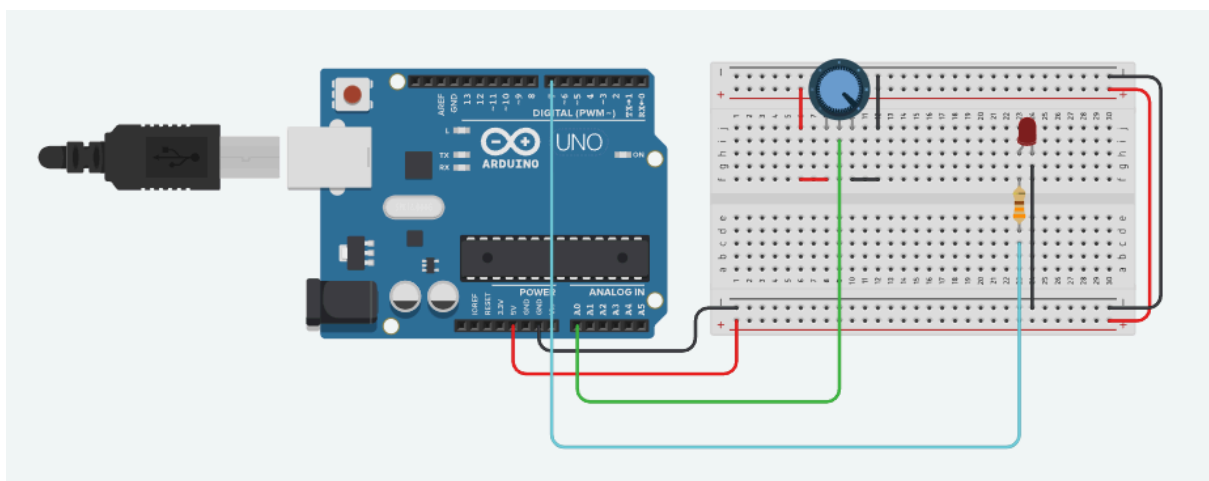
```
int Leitura = 0;  
float VoltageLDR;  
float ResLDR;
```

```
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);  
}
```

Potenciômetro 2:



Código:

```
#define sensorPin A0
```

```
int sensorValue = 0;  
float voltage;
```

```

int led = 7;
void setup()
{
  pinMode(led, OUTPUT);
  Serial.begin(9600);
  delay(100);
}

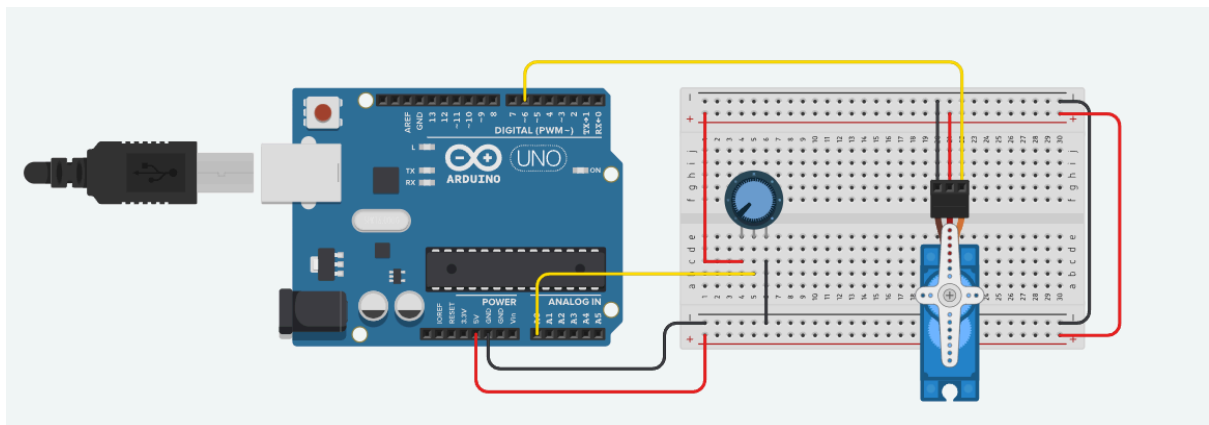
void loop()
{
  sensorValue = analogRead(sensorPin);
  voltage = sensorValue * (5.0 / 1024);

  Serial.print("Tensão do potenciometro: ");
  Serial.print(voltage);
  Serial.print(" Valor: ");
  Serial.println(sensorValue);
  delay(500);

  if(voltage <= 0.0)
    digitalWrite(led, LOW);
  else
    digitalWrite(led, HIGH);
}

```

Micro servo:



Código:
#include <Servo.h>

Servo myservo;

#define potpin A0

int val;

void setup()

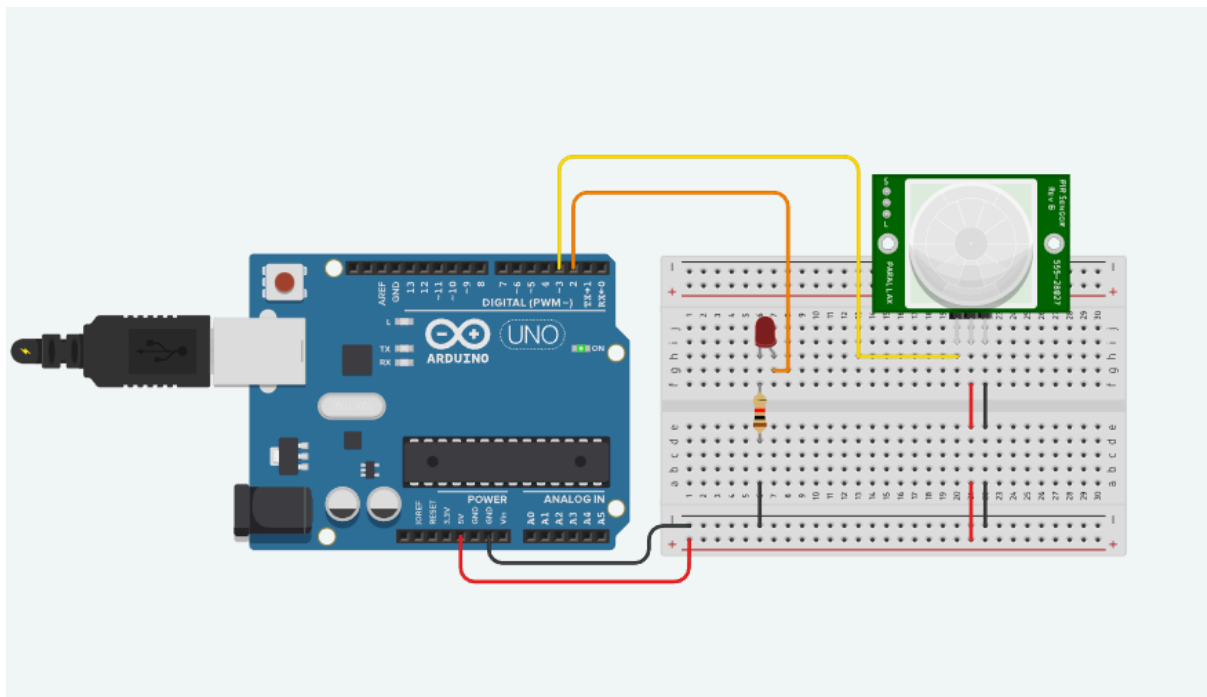
```

{
myservo.attach(6);
}

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

```

Sensor de movimento:



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);  
}
```