

Introdução rápida ao Arduino Uno R3

Gustavo Azevedo











```
p03_LoveOMeter | Arduino 1.6.4
  p03_LoveOMeter
23 // room temperature in Celcius
24 const float baselineTemp = 20.0;
25
Z6 void setup() {
    // open a serial connection to display values
     Serial.begin(9600);
     // set the LED pins as outputs
     // the for() loop saves some extra coding
     for (int pinNumber = 2; pinNumber < 5; pinNumber++) {</pre>
       pinMode(pinNumber, OUTPUT);
33
       digitalWrite(pinNumber, LOW);
34
35 }
36
37 void loop() {
     // read the value on AnalogIn pin 0
     // and store it in a variable
40
     int sensorVal = analogRead(sensorPin);
41
42
     // send the 10-bit sensor value out the serial port
     Serial.print("sensor Value: ");
     Serial.print(sensorVal);
                                   Arduino Uno on /dev/cu.usbmodemfa131
```





Reset

programa

Portas Digitais (escrita analógica)

(0-255)

Led de teste

Curiosidade

Fonte

ARDUINO

RX HIMM ARDUINO.CC - HADE IN ITALY

POWER ANALOG IN A ANA

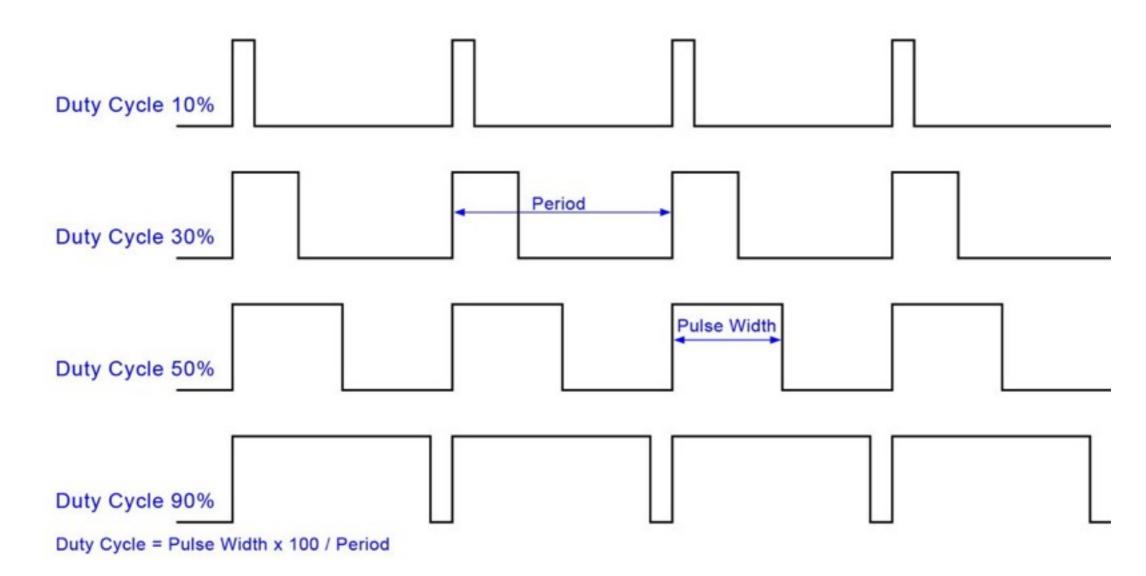
Alimentação 3V

Portas de leitura analógica (0-1023)





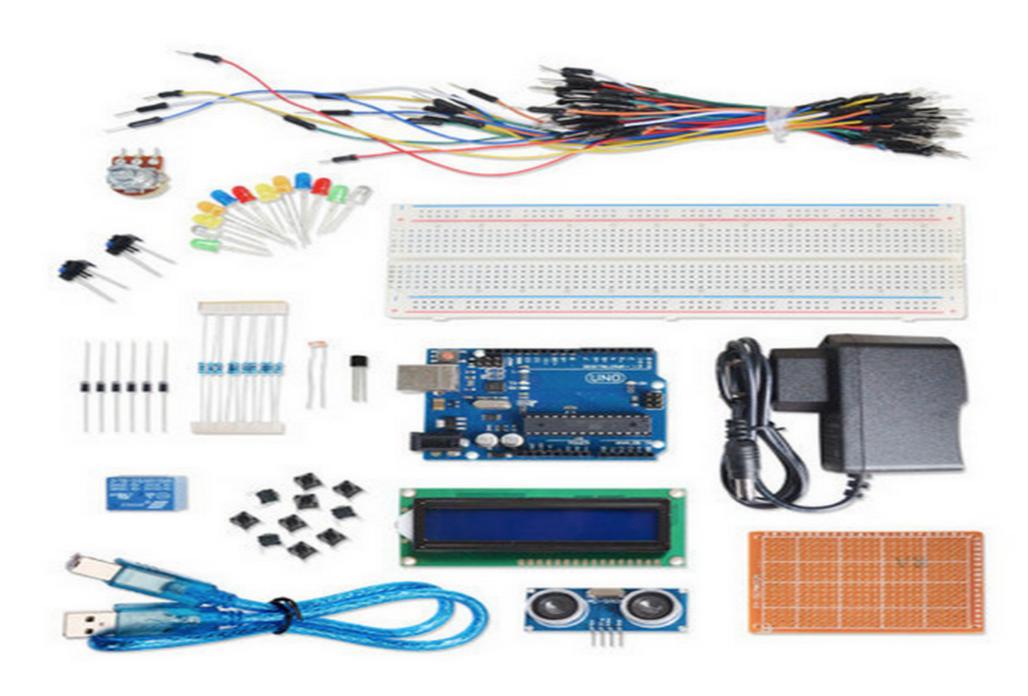
Pulse With Modulation



ATMega168





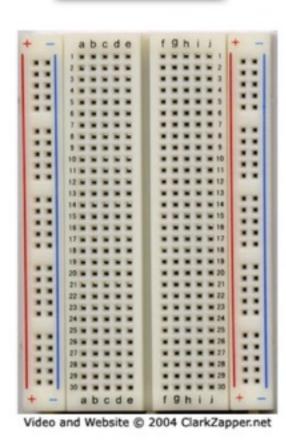




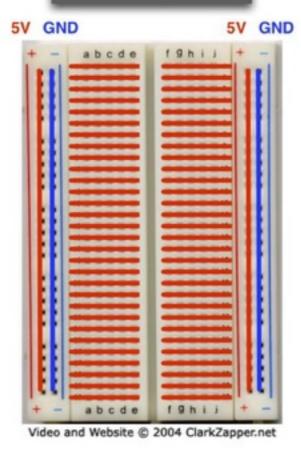


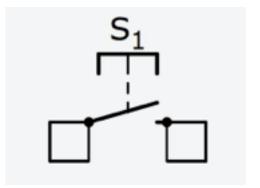


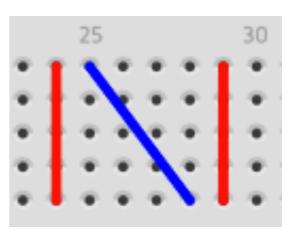
Breadboard (photo)



Breadboard (schematic)







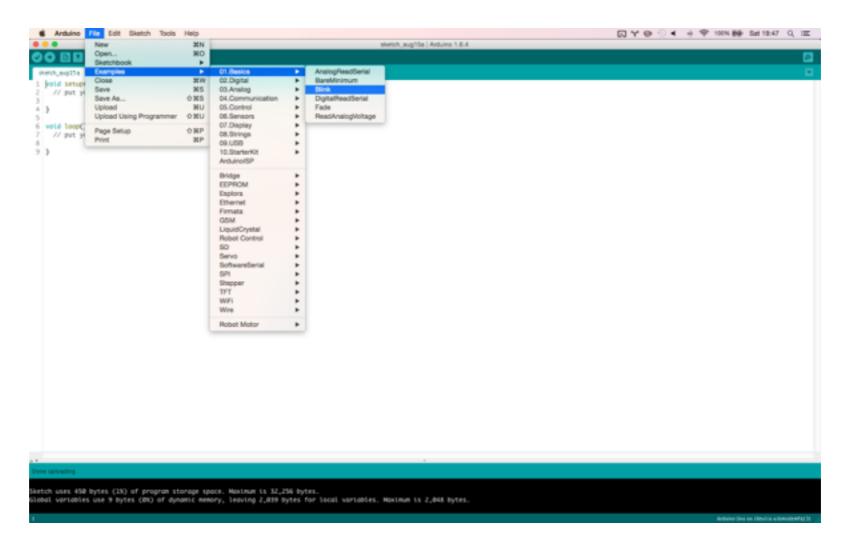
Material de Estudo



123d.circuits.io

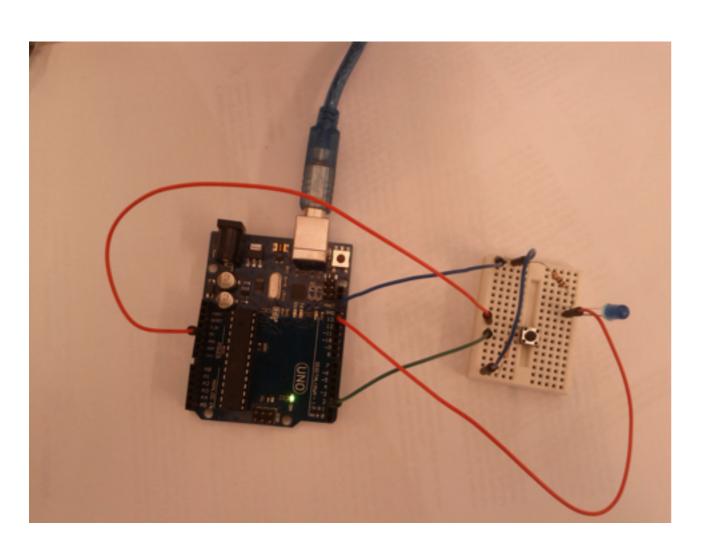
arduino.cc

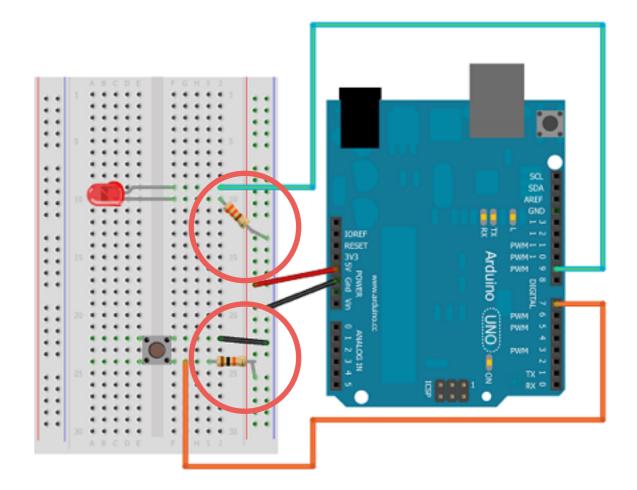
https://www.youtube.com/user/arduinoteam



Pq?



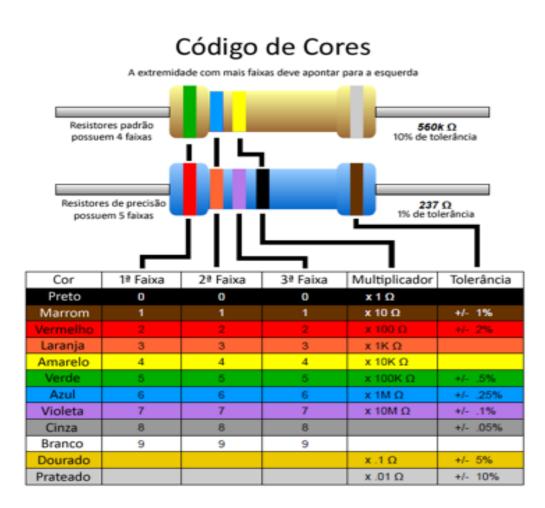




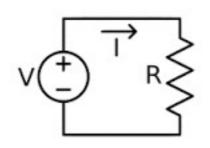
Vale lembrar...

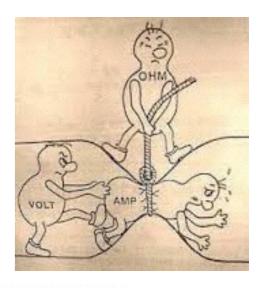


Como escolher um resistor?



Lei de Ohm





V = R.I em que:

V - tensão aplicada (v)

R - resistência elétrica (\O)

I - intensidade de corrente (A)



V = R.I

R=V_I

I=V R

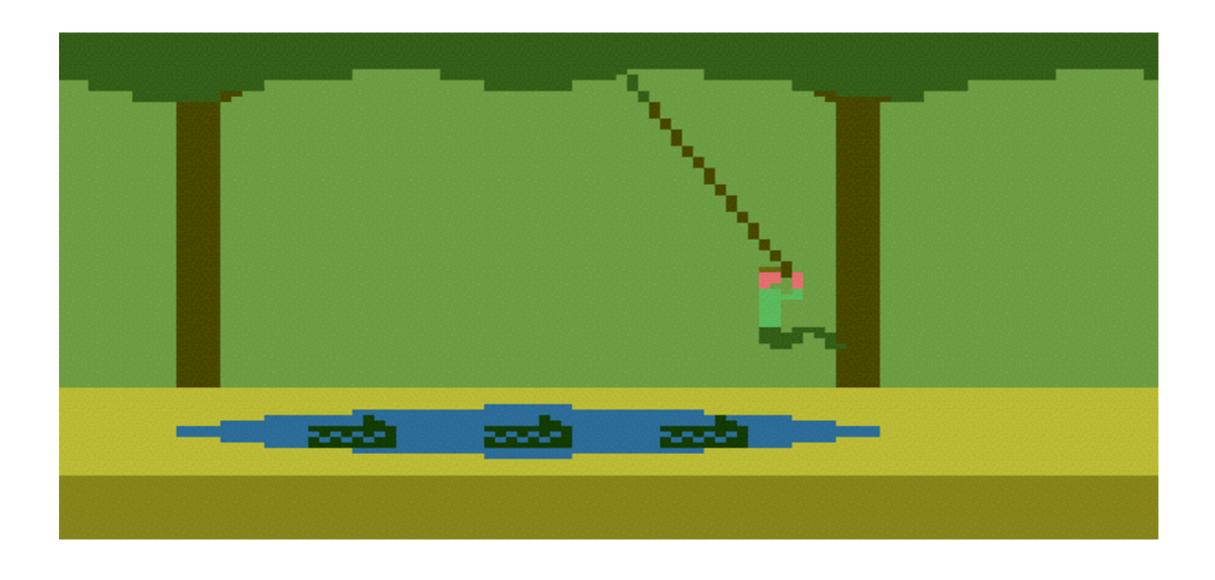
Vale lembrar...



Série: Req = R1+R2

> Paralelo: Req = (R1*R2)/(R1+R2)

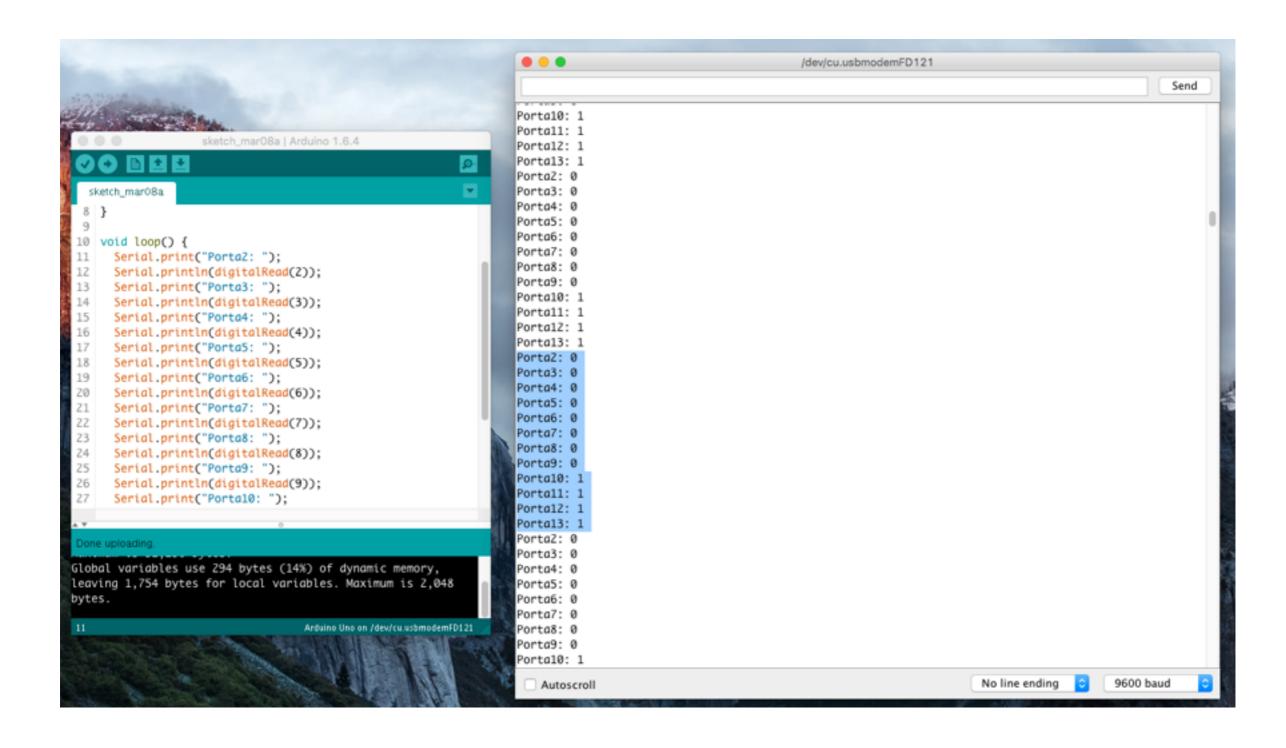




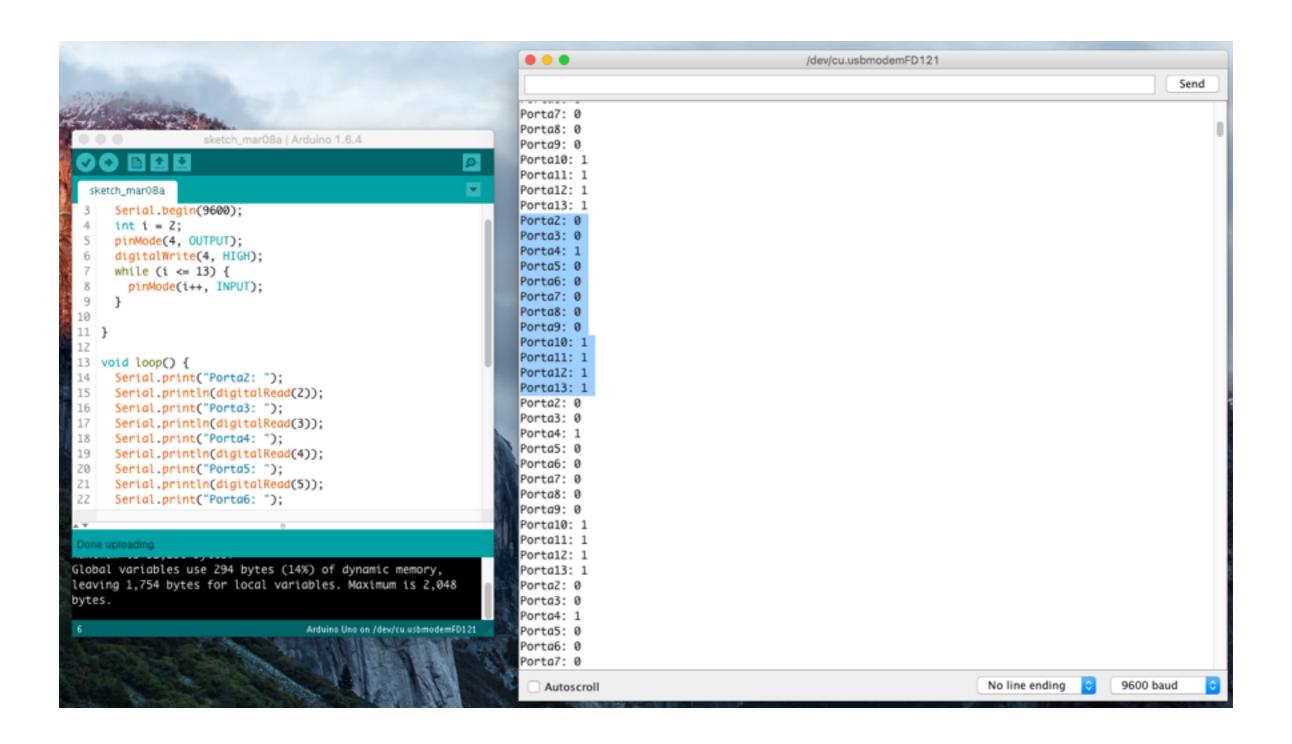


```
sketch_mar09b | Arduino 1.6.4
  sketch_mar09b
 1 |void setup() {
     // put your setup code here, to run once:
 4
 6 void loop() {
     // put your main code here, to run repeatedly:
 9 }
Problem uploading to board. See http://www.arduino.( Copy error messages
  tp://www.arduino.cc/en/Guide/Troubleshooting#upload for
                                     Arduino Uno on /dev/cu.usbmodemFD121
```









Debugging

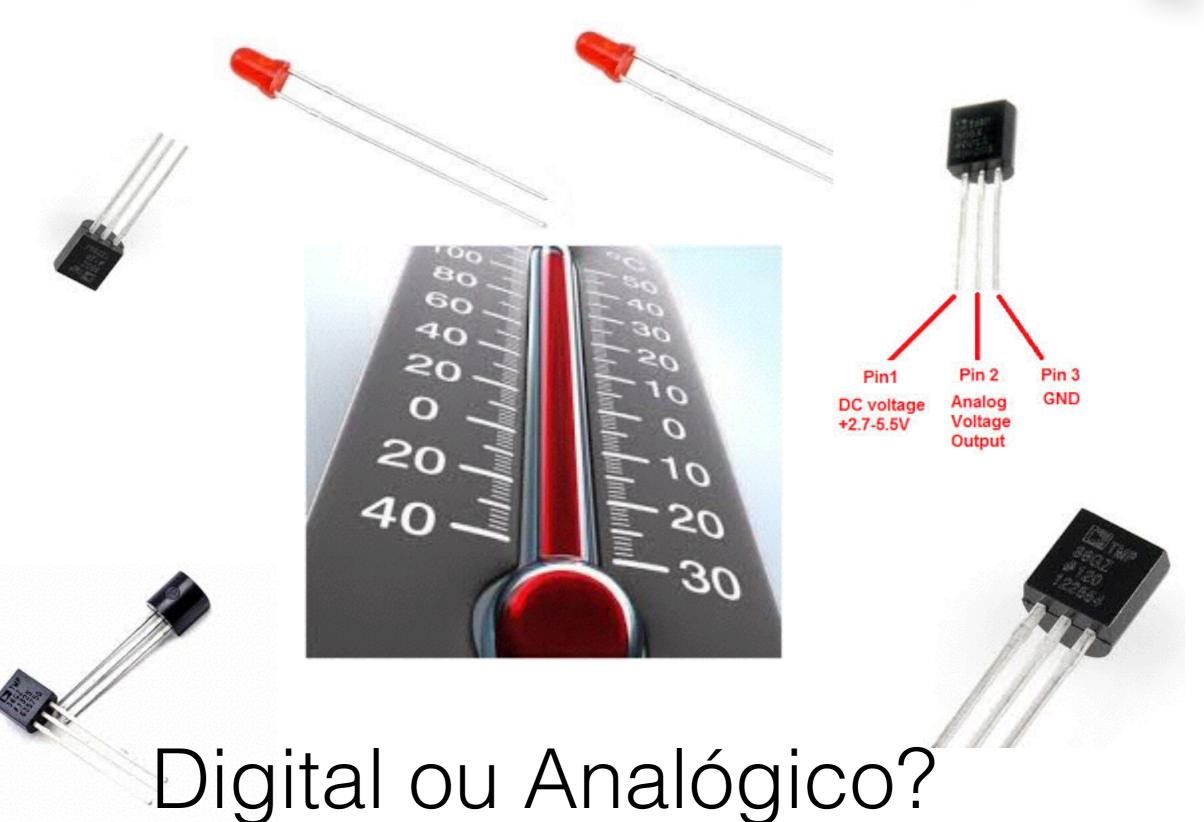




• • •	/dev/cu.usbmodemFD121	
		Send
Porta7: 0		
Porta8: 0		
Porta9: 0		
Porta10: 1		
Portall: 1		
Portal2: 1		
Portal3: 1		
PortaZ: 0		
Porta3: 0		
Porta4: 1		
Porta5: 0		
Porta6: 0		
Porta7: 0		
Porta8: 0		
Porta9: 0		
Porta10: 1		
Portall: 1		
Portal2: 1		
Portal3: 1		
PortaZ: 0		
Porta3: 0		
Porta4: 1		
Porta5: 0		
Porta6: 0		
Porta7: 0		
Porta8: 0		
Porta9: 0		
Porta10: 1		
Portall: 1		
Portal2: 1		
Portal3: 1		
PortaZ: 0		
Porta3: 0		
Porta4: 1		
Porta5: 0		
Porta6: 0		
Porta7: 0		
or car . v	_	_
Autoscroll	No line ending	9600 baud

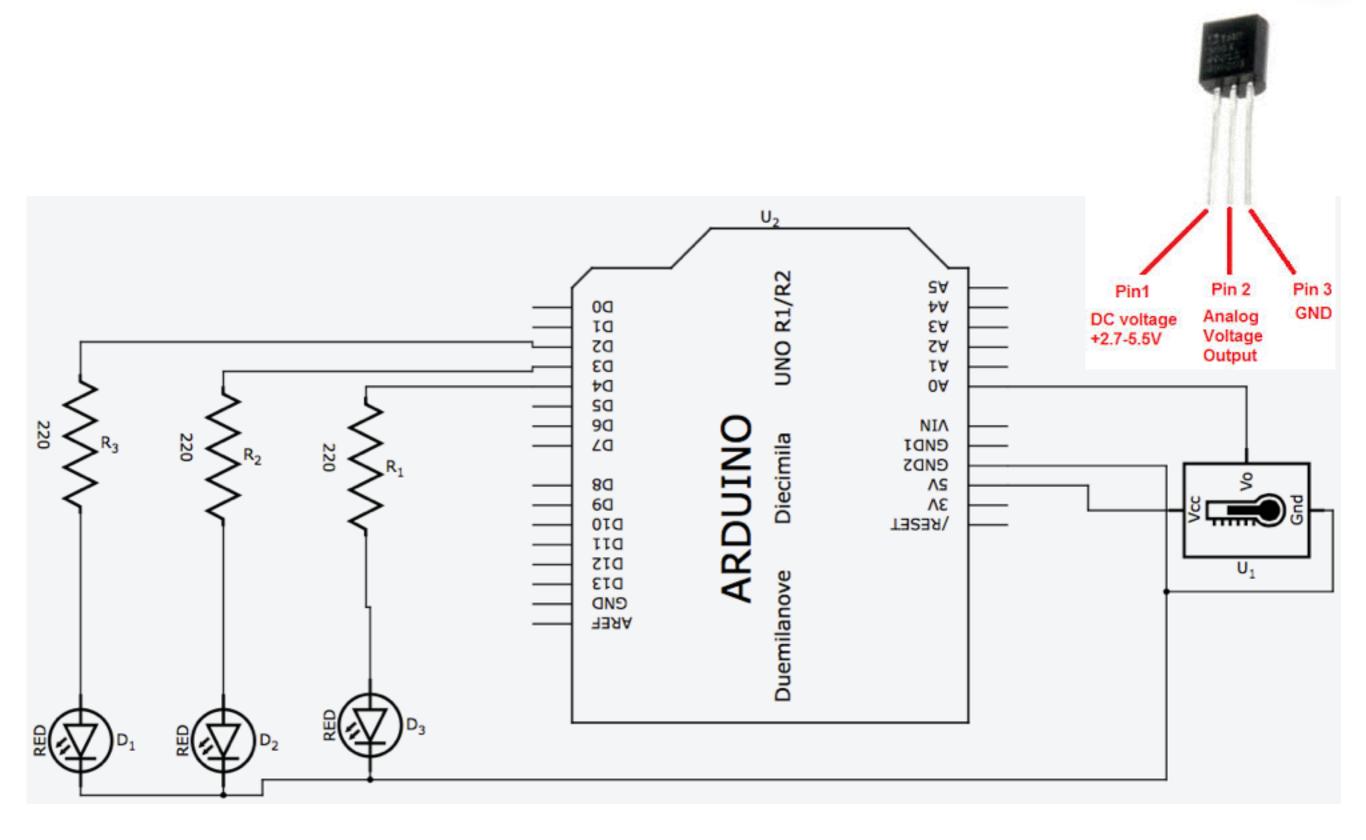
Experimento





Experimento





Experimento



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sketch_aug16b §
```

```
void setup() {
  // put your setup code here, to run once:
}

void loop() {
  // put your main code here, to run repeatedly:
}

// put your main code here, to run repeatedly:
}
```

Funções do Arduino:

- pinMode(porta, modo)
- digitalWrite(porta, valor)
- Serial.begin(9600)
- analogRead(porta)
- Serial.print("")
 - println
 - \n