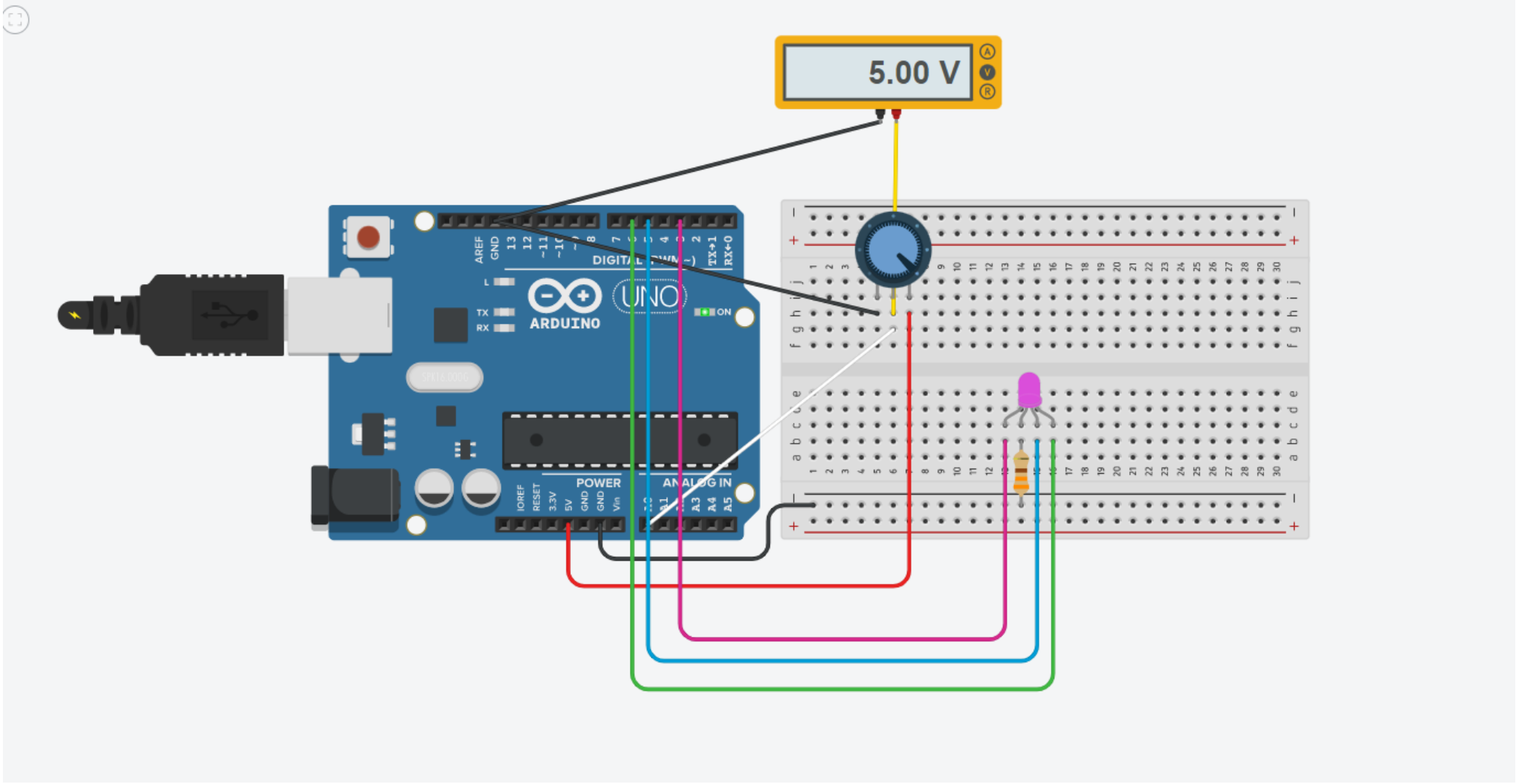
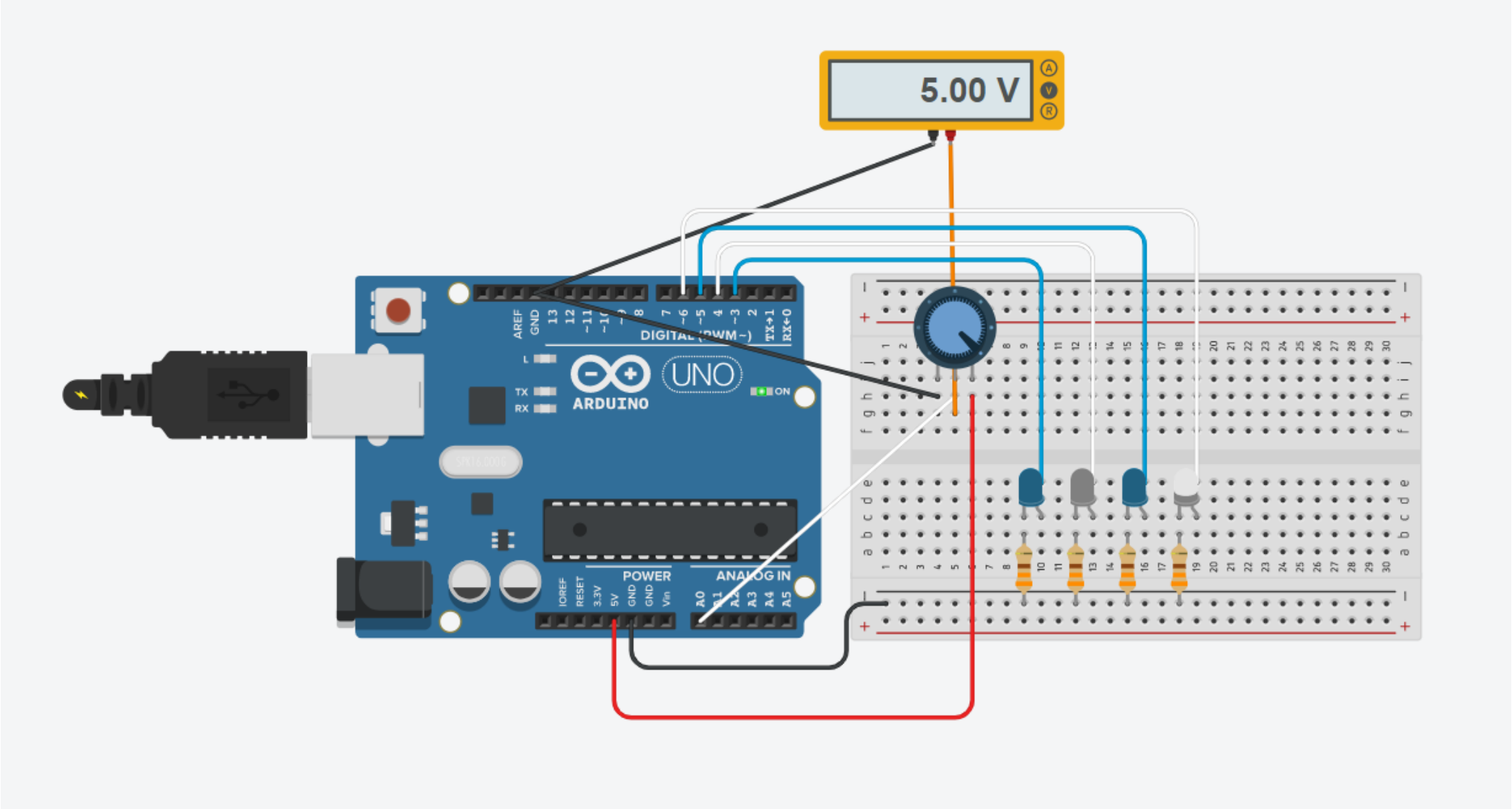
Nome: Maria Eduarda Expedita Oliveira Canto **Série:** 2° DS

- Mudar a cor do LED RGB com Potenciômetro:



```
int led_R = 3; // LED Vermelho (R)
int led_G = 6; // LED Verde (G)
int led_B = 5; // LED Azul (B)

void setup()
{
  pinMode(led_R, OUTPUT);
  pinMode(led_G, OUTPUT);
  pinMode(led_B, OUTPUT);
  //lowLed();
}

void loop()
{
  int sensorValue = analogRead(A0) / 4;

  //acende vermelho
  if(sensorValue >= 0 && sensorValue <= 35)
  {
    Red();
  }

  //acende laranja | amarelo + vermelho
  if(sensorValue > 36 && sensorValue <= 71)
  {
    Yellow();
    delay(10);
    Red();
    delay(10);
  }

  //acende amarelo | vermelho + verde
  if(sensorValue > 72 && sensorValue <= 106)
  {
    Yellow();
  }

  //acende verde
  if(sensorValue > 107 && sensorValue <= 141)
  {
    Green();
  }

  //acende azul
  if(sensorValue > 142 && sensorValue <= 176)
  {
    Blue();
  }

  //acende anil | ciano + magenta + amarelo
  if(sensorValue > 177 && sensorValue <= 211)
  {
    Blue();
    delay(10);
    Red();
    delay(10);
    Yellow();
    delay(10);
  }

  //acende roxo | vermelho + azul
  if(sensorValue > 212 && sensorValue <= 246)
  {
    Purple();
  }
}

void Red()
{
  digitalWrite(led_R, HIGH);
  digitalWrite(led_G, LOW);
  digitalWrite(led_B, LOW);
}

void Green()
{
  digitalWrite(led_R, LOW);
  digitalWrite(led_G, HIGH);
  digitalWrite(led_B, LOW);
}

void Blue()
{
  digitalWrite(led_R, LOW);
  digitalWrite(led_G, LOW);
  digitalWrite(led_B, HIGH);
}

void Yellow()
{
  digitalWrite(led_R, HIGH);
  delay(10);
  digitalWrite (led_G, HIGH);
  delay(10);
}

void Purple()
{
  digitalWrite(led_R, HIGH);
  delay(10);
  digitalWrite(led_B, HIGH);
  delay (10);
}
```

- Acender LEDs com Potenciômetro:



```ino
void setup()
{
  pinMode(3, OUTPUT);
  pinMode(4, OUTPUT);
  pinMode(5, OUTPUT);
  pinMode(6, OUTPUT);
}

void loop()
{
  int sensorValue = analogRead(A0) / 4;

  if(sensorValue >= 2 && sensorValue <= 64)
  {
    digitalWrite(3, HIGH);
    //para poder acender e apagar, mesmo quando voltar:
    delay(100);
    digitalWrite(3, LOW);
  }

  if(sensorValue >= 65 && sensorValue <= 128)
  {
    digitalWrite(4, HIGH);
    delay(100);
    digitalWrite(4, LOW);
  }

  if(sensorValue >= 129 && sensorValue <= 192)
  {
    digitalWrite(5, HIGH);
    delay(100);
    digitalWrite(5, LOW);
  }

  if(sensorValue >= 193 && sensorValue <= 255)
  {
    digitalWrite(6, HIGH);
    delay(100);
    digitalWrite(6, LOW);
  }
}
```