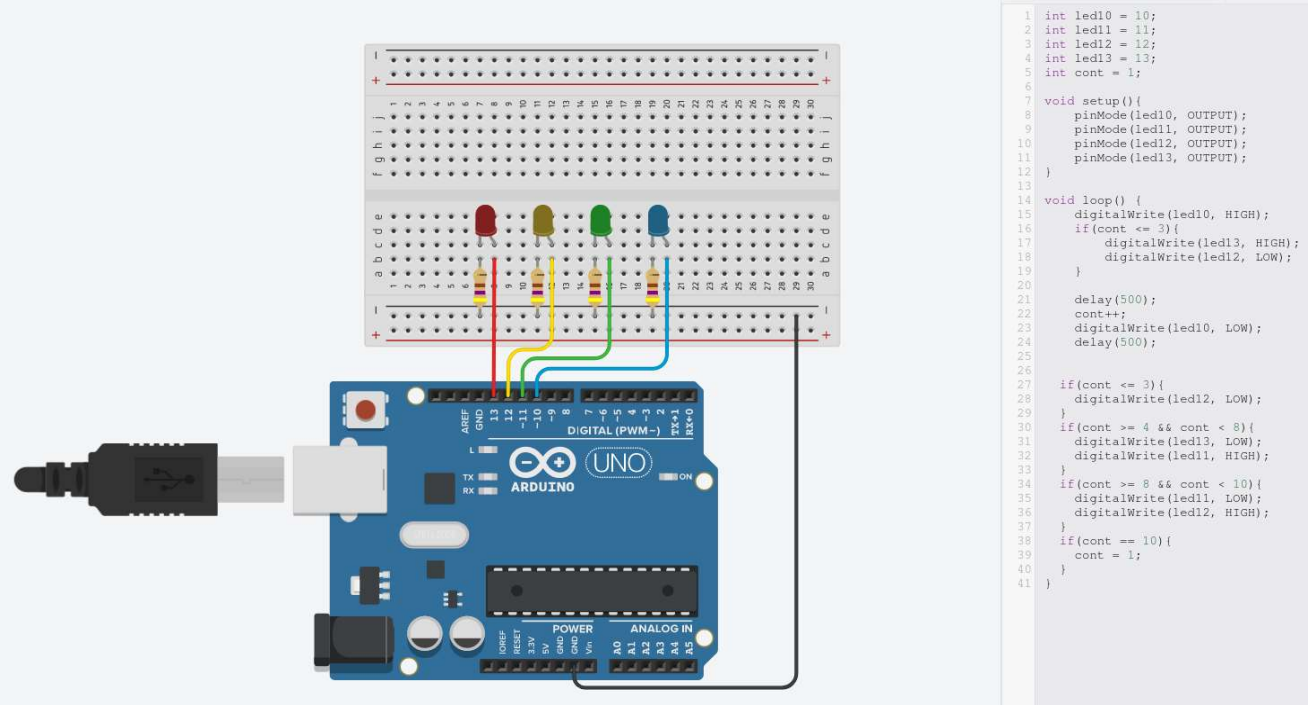
Alunos: André Luiz Baptista Esteves Bassini
Júlio César Gonzaga Ferreira Silva
Suzane Lemos de Lima

Exercício 1

- Um print da tela do Tinkercad mostrando a montagem e o programa.



Código:

```
int led10 = 10;
int led11 = 11;
int led12 = 12;
int led13 = 13;
int cont = 1;

void setup(){
   pinMode(led10, OUTPUT);
   pinMode(led11, OUTPUT);
   pinMode(led12, OUTPUT);
     pinMode(led13, OUTPUT);
}

void loop() {
   digitalWrite(led10, HIGH);
     if(cont <= 3){
        digitalWrite(led13, HIGH);
      digitalWrite(led12, LOW);
     }
```

```
    delay(500);
      cont++;
    digitalWrite(led10, LOW);
    delay(500);


  if(cont <= 3){
      digitalWrite(led12, LOW);
  }
  if(cont >= 4 && cont < 8){
      digitalWrite(led13, LOW);
      digitalWrite(led11, HIGH);
  }
  if(cont >= 8 && cont < 10){
      digitalWrite(led11, LOW);
      digitalWrite(led12, HIGH);
  }
  if(cont == 10){
      cont = 1;
  }
}
```

Exercício 2

- Preencher a tabela com as instruções e os resultados.

Código:

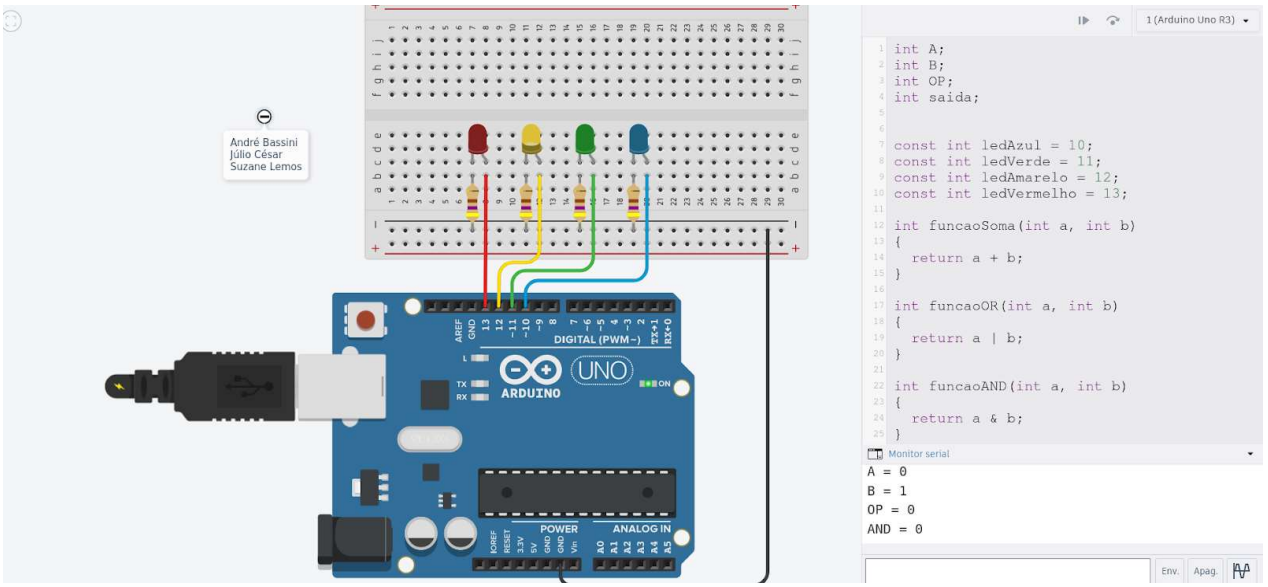
```
int A;
int B;
int OP;
int saida;


const int ledAzul = 10;
const int ledVerde = 11;
const int ledAmarelo = 12;
const int ledVermelho = 13;

int funcaoSoma(int a, int b)
{
 return a + b;
}

int funcaoOR(int a, int b)
{
 return a | b;
}
```

```
int funcaoAND(int a, int b)
{
 return a & b;
}

int funcaoNOT(int a)
{
 return !a;
}

void setup()
{
 Serial.begin(9600);

 pinMode(ledAzul, OUTPUT);
 pinMode(ledVerde, OUTPUT);
 pinMode(ledAmarelo, OUTPUT);
 pinMode(ledVermelho, OUTPUT);
}

void loop()
{
 if (Serial.available() > 0)
 {
   digitalWrite(ledAzul, LOW);
   digitalWrite(ledVerde, LOW);
   digitalWrite(ledAmarelo, LOW);
   digitalWrite(ledVermelho, LOW);


   A = Serial.parseInt();
   B = Serial.parseInt();
   OP = Serial.parseInt();


   Serial.print("A = ");
   Serial.println(A);

   Serial.print("B = ");
   Serial.println(B);

   Serial.print("OP = ");
   Serial.println(OP);

   digitalWrite(ledVermelho, A);
   digitalWrite(ledAmarelo, B);
```

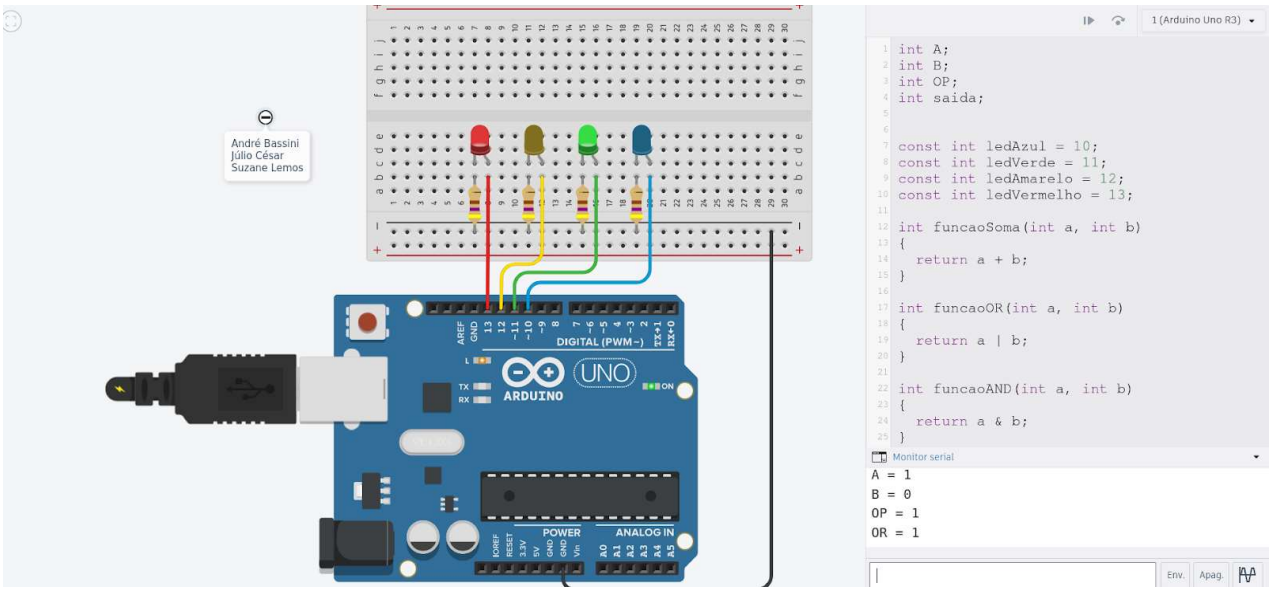
```
switch (OP)
{
  case 0:
    saida = funcaoAND(A, B);

    Serial.print("AND = ");
    Serial.println(saida);

    digitalWrite(ledVerde, saida);

    break;

  case 1:
    saida = funcaoOR(A, B);

    Serial.print("OR = ");
    Serial.println(saida);

    digitalWrite(ledVerde, saida);

    break;

  case 2:
    saida = funcaoNOT(A);

    Serial.print("NOT A = ");
    Serial.println(saida);

    digitalWrite(ledVerde, saida);

    break;

  case 3:
    saida = funcaoSoma(A, B);

    Serial.print("Soma = ");
    Serial.println(saida);

    if (saida == 1)
    {
      digitalWrite(ledVerde, HIGH);
    }

    else if (saida == 2)
    {
      digitalWrite(ledAzul, HIGH);
```

```
        }

        break;

      default:
        Serial.println("OP inválido");

        break;
    }
  }
}
```

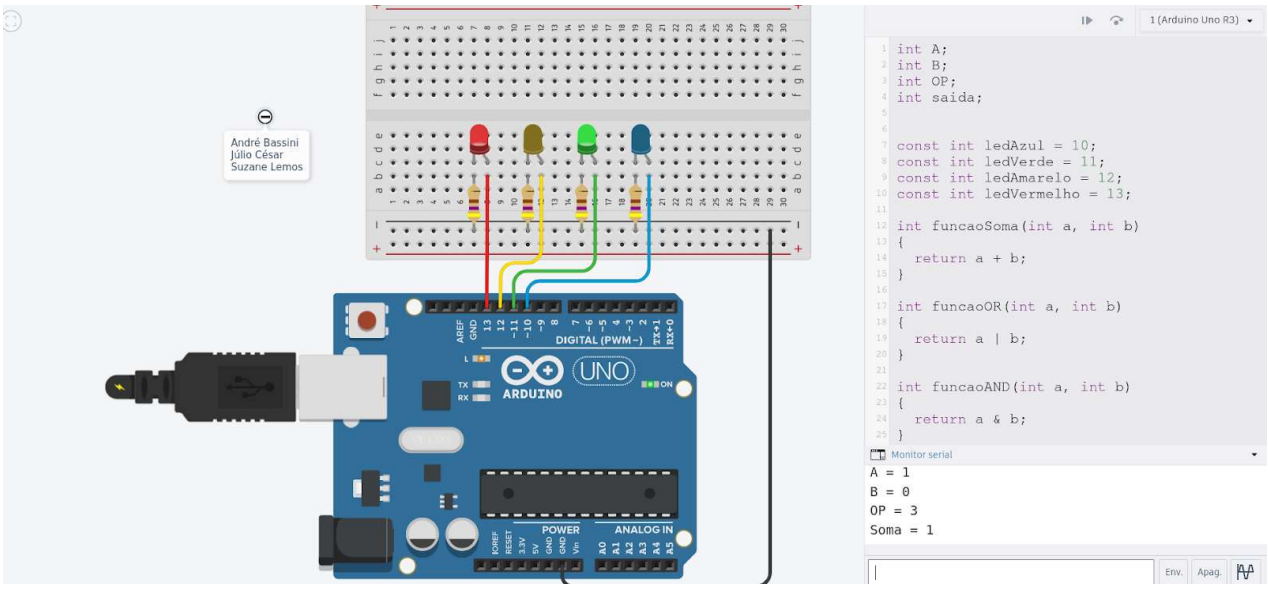
AND(A,B)	0 1 00	0x4	0



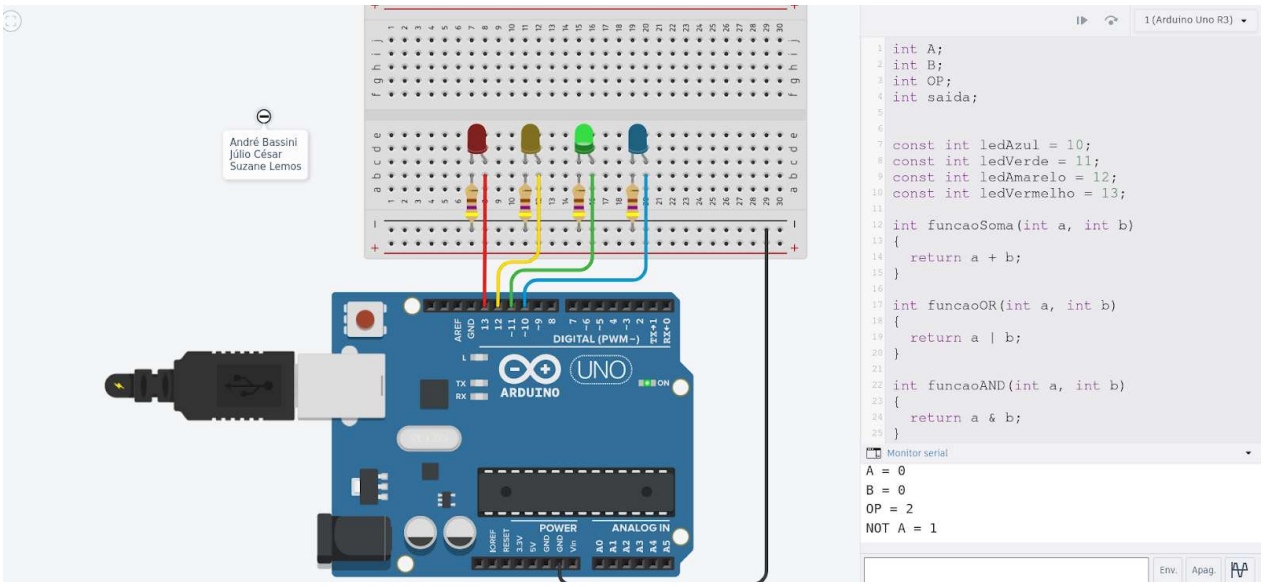
OR(A,B)	10 01	0x9	1



SOMA(A,B)	1 0 11	0Xb	1



NOT(A)	0 0 10	0X2	1



AND(B,A)	0 1 00	0X4	0