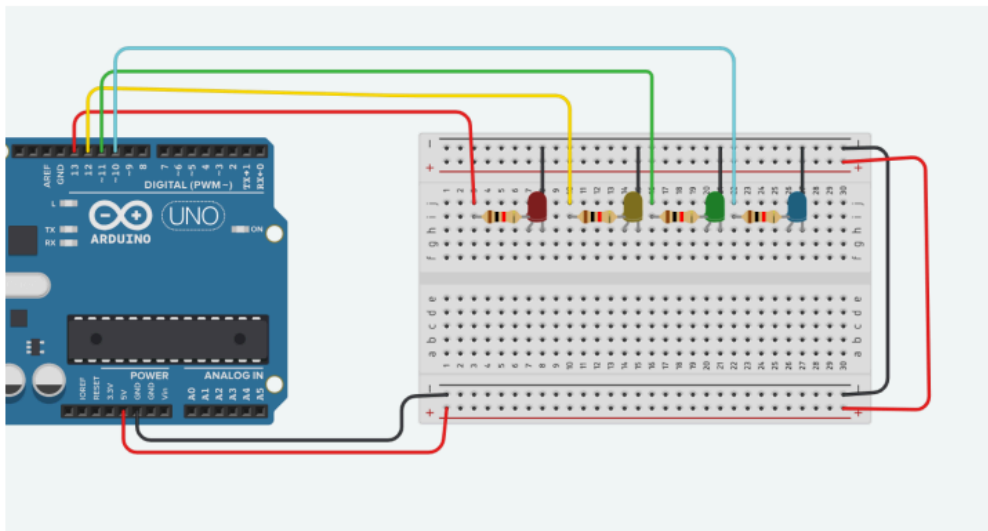


Trabalho de Arquitetura - Ep03

Luca Lourenço Gonzaga

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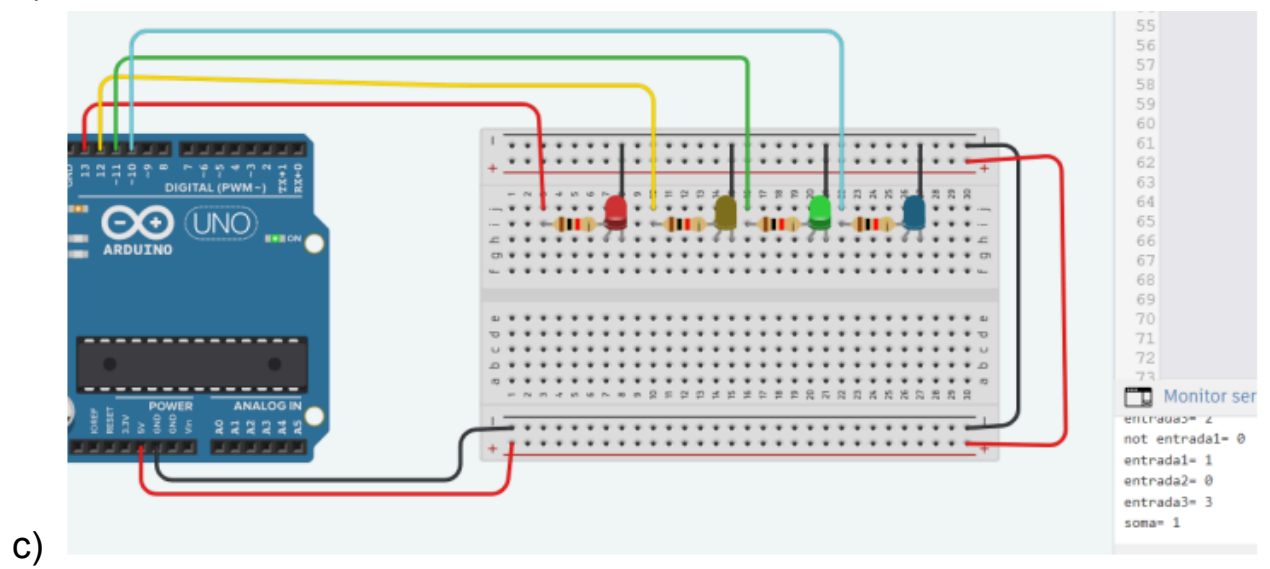
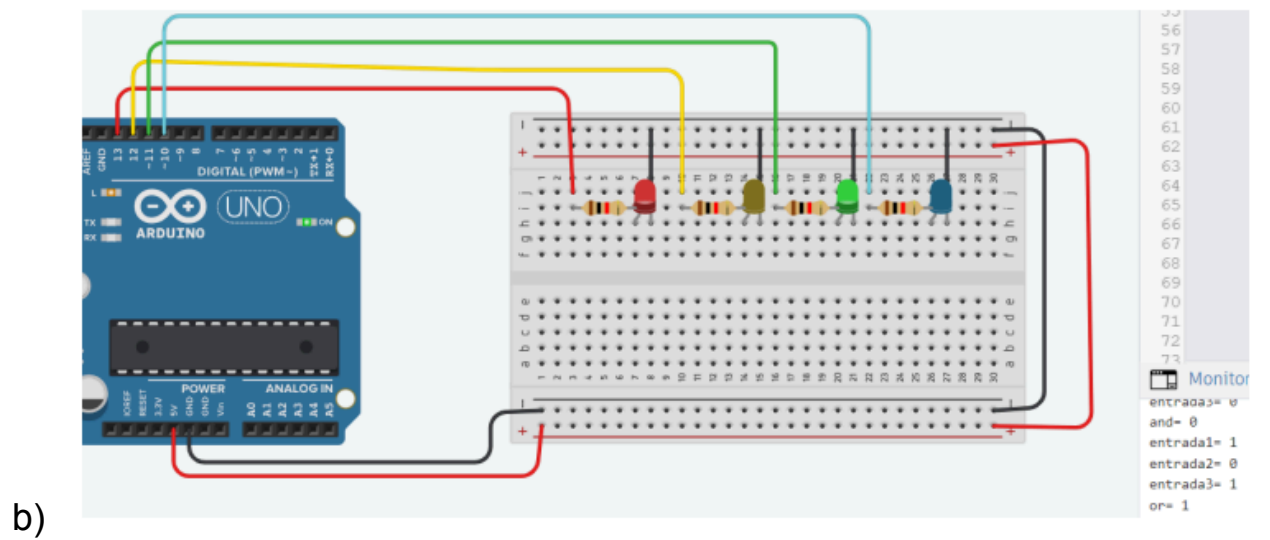
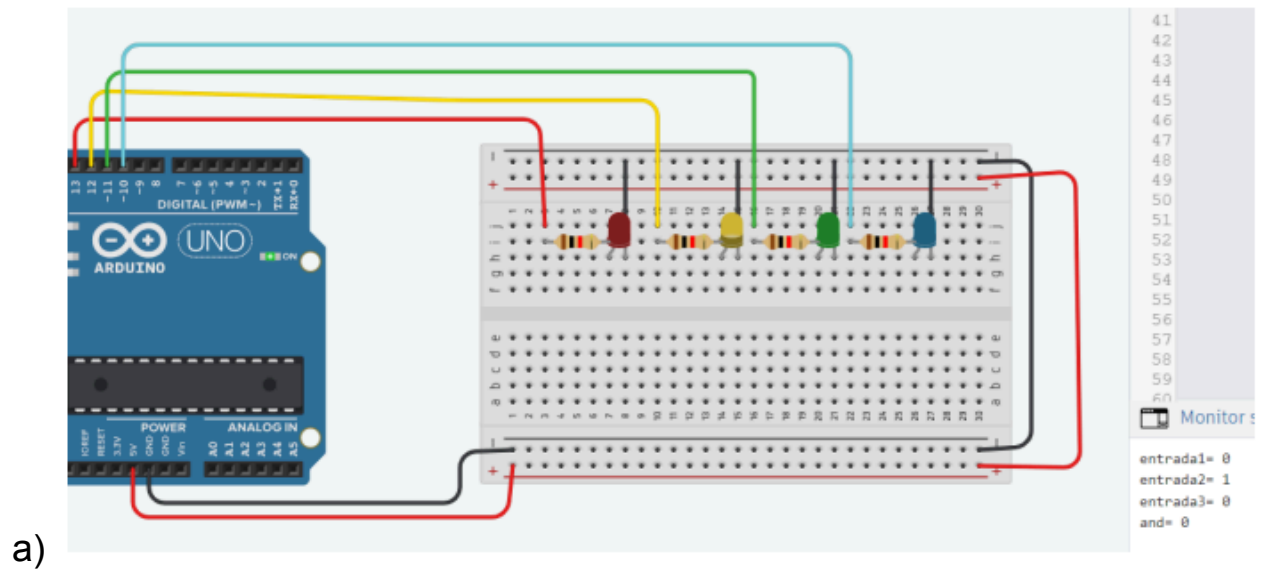
1)



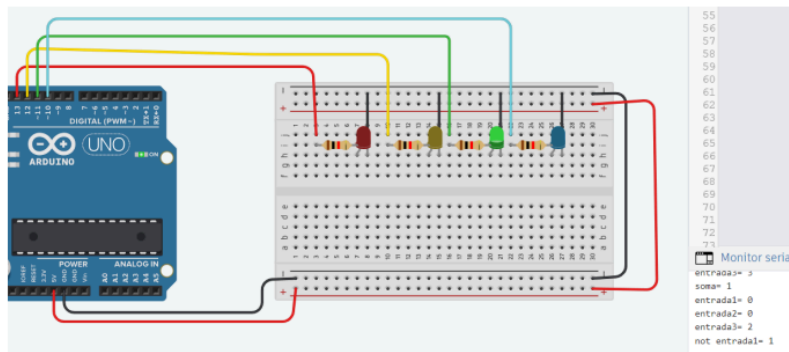
Código)

```
20 void loop() {
21   // primeiro ciclo (vermelho)
22   digitalWrite(led10, HIGH);
23   digitalWrite(led13, HIGH);
24   delay(1000);
25   digitalWrite(led10, LOW);
26   delay(1000);
27   // segundo ciclo (vermelho)
28   digitalWrite(led10, HIGH);
29   delay(1000);
30   digitalWrite(led10, LOW);
31   delay(1000);
32   // terceiro ciclo (vermelho)
33   digitalWrite(led10, HIGH);
34   delay(1000);
35   digitalWrite(led10, LOW);
36   digitalWrite(led13, LOW);
37   delay(100);
38   // primeiro ciclo (verde)
39   digitalWrite(led10, HIGH);
40   digitalWrite(led11, HIGH);
41   delay(1000);
42   digitalWrite(led10, LOW);
43   delay(1000);
44   // segundo ciclo (verde)
45   digitalWrite(led10, HIGH);
46   delay(1000);
47   digitalWrite(led10, LOW);
48   delay(1000);
49   // terceiro ciclo (verde)
50   digitalWrite(led10, HIGH);
51   delay(1000);
52   digitalWrite(led10, LOW);
53   delay(1000);
54 }
```

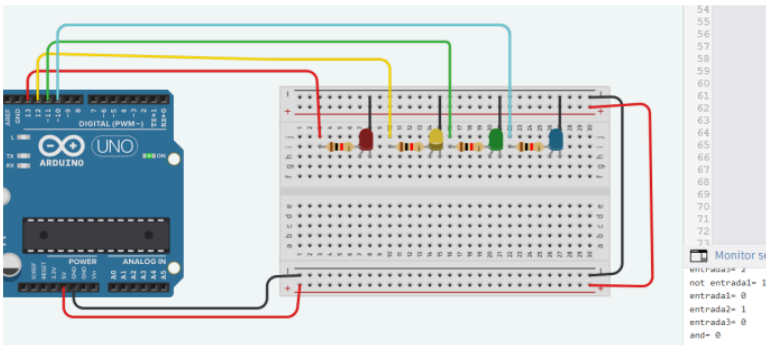
2)



d)



e)



Parte do programa:

```
// acender a e b

if (entrada1 == 1){
  digitalWrite(led13, HIGH);
}
if (entrada2 == 1){
  digitalWrite(led12, HIGH);
}

// verificar o op

if (entrada3 == 0){
  saida = portaand(entrada1, entrada2);
  Serial.print("and= ");
  Serial.print(saida);
  Serial.println();
  if (saida == 1){
    digitalWrite(led11, HIGH);
  }
} else if (entrada3 == 1){
  saida = portaor(entrada1, entrada2);
  Serial.print("or= ");
  Serial.print(saida);
  Serial.println();
  if (saida == 1){
    digitalWrite(led11, HIGH);
  }
} else if (entrada3 == 2){
  saida = portanot(entrada1);
  Serial.print("not entrada1= ");
  Serial.print(saida);
  Serial.println();
  if (saida == 1){
    digitalWrite(led11, HIGH);
  }
} else {
  saida = portasoma(entrada1, entrada2);
  Serial.print("soma= ");
  Serial.print(saida);
  Serial.println();
  if (saida == 1){
    digitalWrite(led11, HIGH);
  }
  else if (saida == 2){
    digitalWrite(led10, HIGH);
  }
}
```

Tabela:

Instrução realizada	Binário (A,B,Op.code)	Valor em Hexa (0x ...)	Resultado em binário
AND(A,B)	0000 0001 00	(0000 0000 0100) = 0x4	0
OR(A,B)	0001 0000 01	(0000 0000 1001) = 0x9	1
SOMA(A,B)	0001 0000 11	(0000 0000 1011) = 0x11	1
NOT(A,B)	0000 0000 10	(0000 0000 0010) = 0x2	1
AND(B,A)	0000 0001 00	(000 0000 0100) = 0x4	0