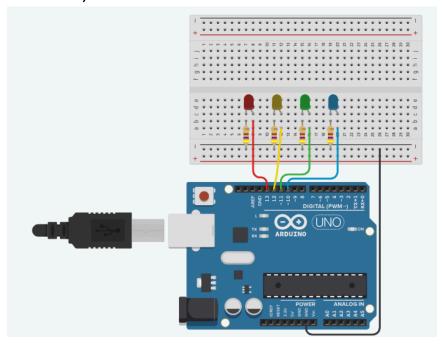
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Exercício Prático 02 Professor: Romanelli

#### Exercício 1)



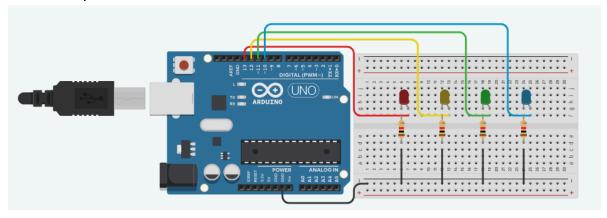
#### Código:

```
24 void loop() {
                                   25
                                          int count = 0;
1 int azul = 10;
                                   26
                                          while (count<3) {
2 int verde = 11;
                                   27
                                              digitalWrite(vermelho, HIGH);
3
   int amarelo = 12;
                                   28
                                              digitalWrite(amarelo, LOW);
   int vermelho = 13;
                                   29
                                              digitalWrite(verde, LOW);
 5
                                   30
                                              piscaAzul();
 6
                                   31
                                              count++;
   void setup() {
                                   32
                                          }
8
    Serial.begin(9600);
                                   33
                                          count = 0;
                                   34
                                          while (count<4) {
9
    pinMode(azul, OUTPUT);
                                   35
                                             digitalWrite(vermelho, LOW);
10
    pinMode(verde, OUTPUT);
                                   36
                                              digitalWrite(amarelo, LOW);
11
    pinMode(amarelo, OUTPUT);
                                   37
                                              digitalWrite(verde, HIGH);
12
     pinMode (vermelho, OUTPUT);
                                   38
                                              piscaAzul();
13
                                   39
                                              count++;
14 }
                                   40
                                          }
15
                                   41
                                          count = 0;
16 void piscaAzul() {
                                   42
                                          while (count<2) {
      digitalWrite(azul, HIGH); 43
17
                                             digitalWrite(vermelho, LOW);
18
       delay(500);
                                              digitalWrite(amarelo, HIGH);
                                   44
19
       digitalWrite(azul, LOW);
                                   45
                                              digitalWrite(verde, LOW);
20
       delay(500);
                                   46
                                              piscaAzul();
21
                                   47
                                              count++;
22
                                   48
23
                                   49 }
```

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Exercício 2)



### Código:

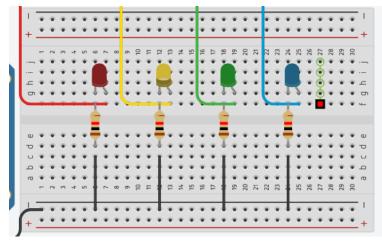
```
switch (op) {
1 int ledA = 13;
                                                      case 0: // AND (a.b)
                                              30
2 int ledB = 12;
                                                        saida = a & b;
                                              31
                                                         vai1 = 0;
3 int ledSaida = 11;
                                              32
                                                         break;
4 int ledVail = 10;
                                              33
                                              34
                                                      case 1: // OR (a | b)
5
                                              35
                                                         saida = a | b;
6 void setup() {
                                              36
                                                         vai1 = 0;
7
   pinMode(ledA, OUTPUT);
                                              37
                                                         break;
    pinMode(ledB, OUTPUT);
8
                                              38
   pinMode(ledSaida, OUTPUT);
                                                      case 2: // NOT a
9
                                              39
                                                         saida = !a;
   pinMode(ledVail, OUTPUT);
10
                                              40
                                                         vai1 = 0;
11
    Serial.begin(9600);
                                              41
                                                        break;
12 }
                                                      case 3: // Soma (a + b)
                                              42
13
                                              43
                                                       saida = a ^ b;
14 void loop() {
                                              44
                                                         vai1 = a & b;
break;
15
    if (Serial.available() >= 3) {
                                              45
16
                                              46
                                                       default:
      char aChar = Serial.read();
17
                                              47
                                                        // OP Code inválido
     char bChar = Serial.read();
18
                                                         saida = 0;
                                              48
19
      char opChar = Serial.read();
                                                         vai1 = 0;
                                              49
20
                                              50
                                                         break;
      // Converte os caracteres para inteiros 51
21
                                                     }
     int a = aChar - '0';
22
                                              52
     int b = bChar - '0';
23
                                              53
                                                    digitalWrite(ledA, a);
      int op = opChar - '0';
24
                                               54
                                                    digitalWrite(ledB, b);
25
                                               55
                                                    digitalWrite(ledSaida, saida);
26
     int saida = 0;
                                               56
                                                      digitalWrite(ledVail, vail);
     int vai1 = 0;
27
                                               57
28
                                              58 3
```

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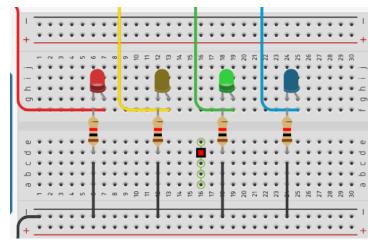
Professor: Romanelli

Instrução realizada	Binário (A,B,Op.code)	Valor em Hexa (0x)	Resultado em binário
AND(A,B)	0 1 00	0x4	0
OR(A,B)	1 0 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

# 1) 010:

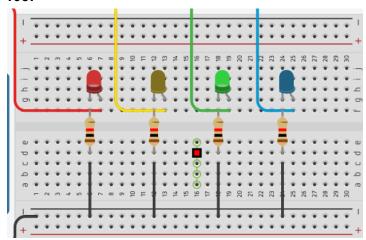


## 2) 101:

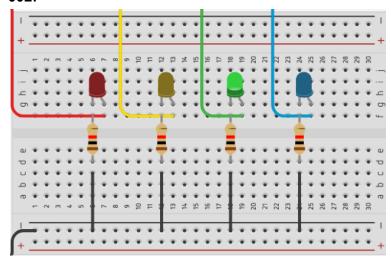


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### 3) 103:



## 4) 002:



5) 110:

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