Exercise 13_Catch the LED game.

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```
bool Button;
int I = 0;  // counts the number of loops made
int x = 0;  // counts the LED that should be on
int counter_s = 0;  // count the number of succeses
int counter_f = 0;  // count the number of misses
int dance = 0;  // variable to make sure LED flash is only made once

void setup() {
  pinMode(2, INPUT);
  pinMode(9, OUTPUT);
  pinMode(10, OUTPUT);
  pinMode(11, OUTPUT);
  pinMode(12, OUTPUT);
  pinMode(13, OUTPUT);

  Serial.begin(9600);
}

void loop() {
  if (counter_s < 10) {  // stop playing the game after 10 succeses
    // Sets the speed of the game (the speed of the LEDs)
    I += 1;
    if (I == 10000 - (counter_s * 750)) {
      x += 1;
      if (x == 5) {
        x = 0;
      }
      I = 0;
    }

    digitalWrite(9 + x, HIGH);
    Button = digitalRead(2);

```

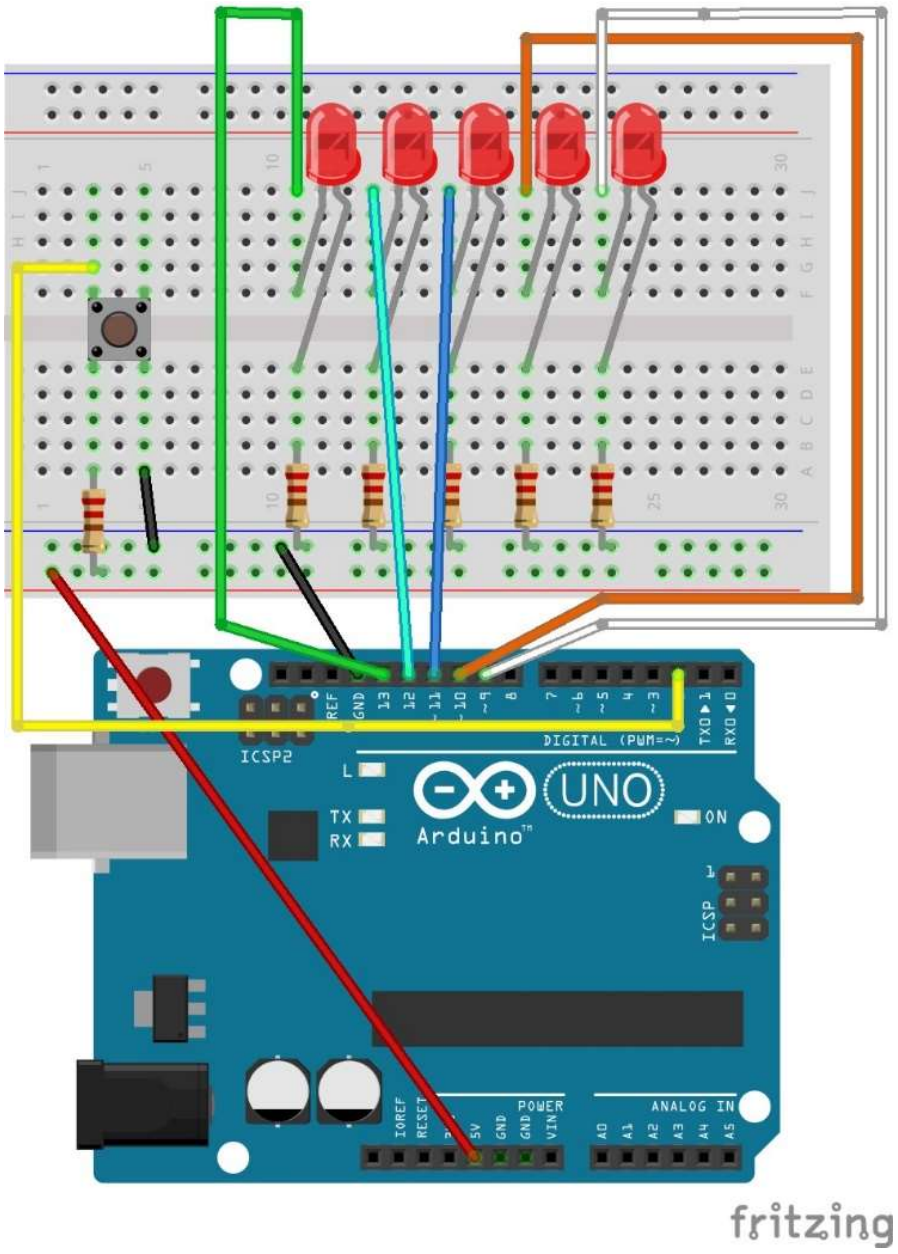
```
34      // button pressed on the wrong time
35      if (x != 2 && Button == 0) {
36        counter_f += 1;
37        Serial.println("Miss");
38        Serial.print("You have ");
39        Serial.print(counter_f);
40        Serial.println(" misses");
41        digitalWrite(9, LOW);
42        digitalWrite(10, LOW);
43        digitalWrite(11, LOW);
44        digitalWrite(12, LOW);
45        digitalWrite(13, LOW);
46        delay(1000);
47        // button pressed on the right time
48      } else if (x == 2 && Button == 0) {
49        counter_s += 1;
50        Serial.println("Succes");
51        Serial.print("you have ");
52        Serial.print(counter_s);
53        Serial.println(" succeses");
54        // makes the LED flash 8 times
55        for (int i = 0; i <= 7; i++) {
56          digitalWrite(9, HIGH);
57          digitalWrite(10, HIGH);
58          digitalWrite(11, HIGH);
59          digitalWrite(12, HIGH);
60          digitalWrite(13, HIGH);
61          delay(200);
62          digitalWrite(9, LOW);
63          digitalWrite(10, LOW);
64          digitalWrite(11, LOW);
65          digitalWrite(12, LOW);
66          digitalWrite(13, LOW);
67          delay(200);
68        }
```

```
      // reset cycle
      x = 0;
      I = 0;
    }

    // LEDs flash randomly when 8 succeses have been made
    if (counter_s == 8 && dance == 0) {
      for (int i = 0; i <= 14; i++) {
        int ran = random(9, 14);  // random port between 9-13
        digitalWrite(ran, HIGH);
        delay(100);
        digitalWrite(ran, LOW);
        delay(100);
      }
      dance = 1;  // makes the random flash happend only once
      delay(500);
    }

    digitalWrite(9 + x, LOW);  // turns the LED in the cycle off

    // end of game
    if (counter_s == 10) {
      Serial.println("GAME OVER");
      Serial.print("You ended the game with ");
      Serial.print(counter_s);
      Serial.print(" succeses and ");
      Serial.print(counter_f);
      Serial.println(" misses");
    }
  }
}
```

Serial Monitor

```
Succes
you have 1 succeses
Succes
you have 2 succeses
Succes
you have 3 succeses
Succes
you have 4 succeses
Succes
you have 5 succeses
Succes
you have 6 succeses
Succes
you have 7 succeses
Miss
You have 1 misses
Succes
you have 8 succeses
Succes
you have 9 succeses
Miss
You have 2 misses
Miss
You have 3 misses
Miss
You have 4 misses
Succes
you have 10 succeses
GAME OVER
You ended the game with 10 succeses and 4 misses
```

Circuit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