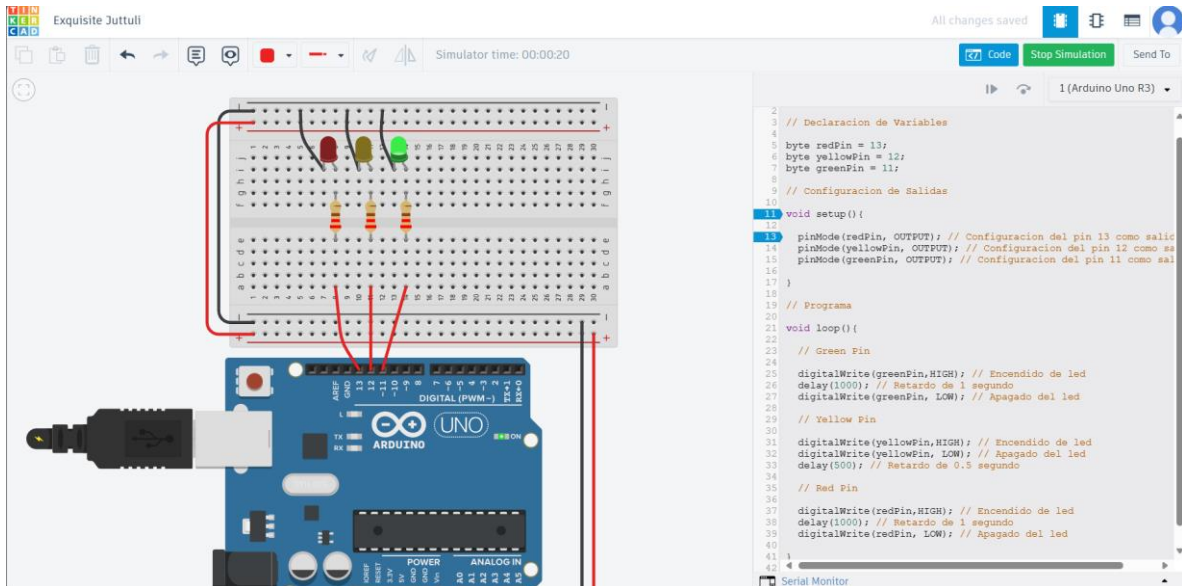


Practica Virtual 2.1

Tema: Arduino I

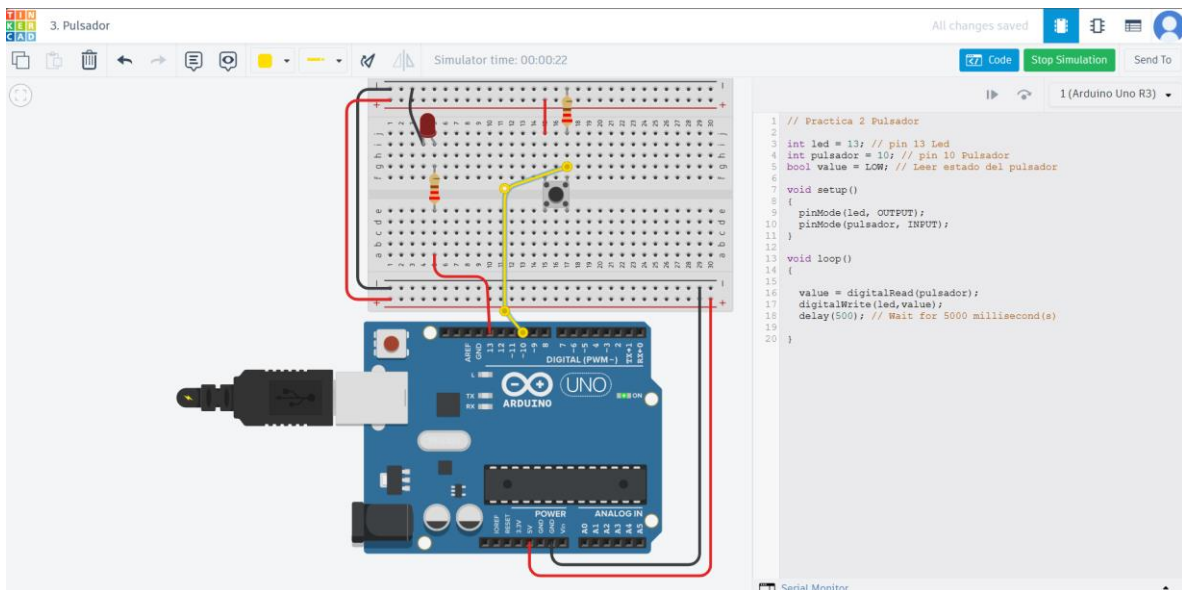
Practica 2: SEMAFORO



The screenshot shows the Arduino IDE interface with a breadboard circuit and a C++ code file. The breadboard circuit is connected to an Arduino Uno R3. Three LEDs (red, yellow, and green) are connected to digital pins 13, 12, and 11 respectively. The code defines variables for the LED pins and configures them as outputs. The main loop turns on the green LED for 1 second, then the yellow LED for 0.5 seconds, and finally the red LED for 1 second, with delays between each state.

```
2 // Declaracion de Variables
3
4
5 byte redPin = 13;
6 byte yellowPin = 12;
7 byte greenPin = 11;
8
9 // Configuracion de Salidas
10
11 void setup() {
12
13   pinMode(redPin, OUTPUT); // Configuracion del pin 13 como salida
14   pinMode(yellowPin, OUTPUT); // Configuracion del pin 12 como salida
15   pinMode(greenPin, OUTPUT); // Configuracion del pin 11 como salida
16 }
17
18 // Programa
19
20 void loop() {
21
22   // Green Pin
23
24   digitalWrite(greenPin, HIGH); // Encendido de led
25   delay(1000); // Retardo de 1 segundo
26   digitalWrite(greenPin, LOW); // Apagado del led
27
28   // Yellow Pin
29
30   digitalWrite(yellowPin, HIGH); // Encendido de led
31   digitalWrite(yellowPin, LOW); // Apagado del led
32   delay(500); // Retardo de 0.5 segundo
33
34   // Red Pin
35
36   digitalWrite(redPin, HIGH); // Encendido de led
37   delay(1000); // Retardo de 1 segundo
38   digitalWrite(redPin, LOW); // Apagado del led
39
40 }
41
42
```

Practica 3: LECTURA DEL PULSADOR



The screenshot shows the Arduino IDE interface with a breadboard circuit and a C++ code file. The breadboard circuit is connected to an Arduino Uno R3. A push button is connected to digital pin 10, and an LED is connected to digital pin 13. The code defines variables for the LED and button pins. The main loop reads the state of the button and turns on the LED if the button is pressed, with a 500ms delay.

```
1 // Practica 2 Pulsador
2
3 int led = 13; // pin 13 Led
4 int pulsador = 10; // pin 10 Pulsador
5 bool value = LOW; // Leer estado del pulsador
6
7 void setup() {
8   pinMode(led, OUTPUT);
9   pinMode(pulsador, INPUT);
10 }
11
12 // Programa
13
14 void loop() {
15
16   value = digitalRead(pulsador);
17   digitalWrite(led, value);
18   delay(500); // Wait for 5000 millisecond(s)
19
20 }
```

Practica 4: COMPUERTA AND

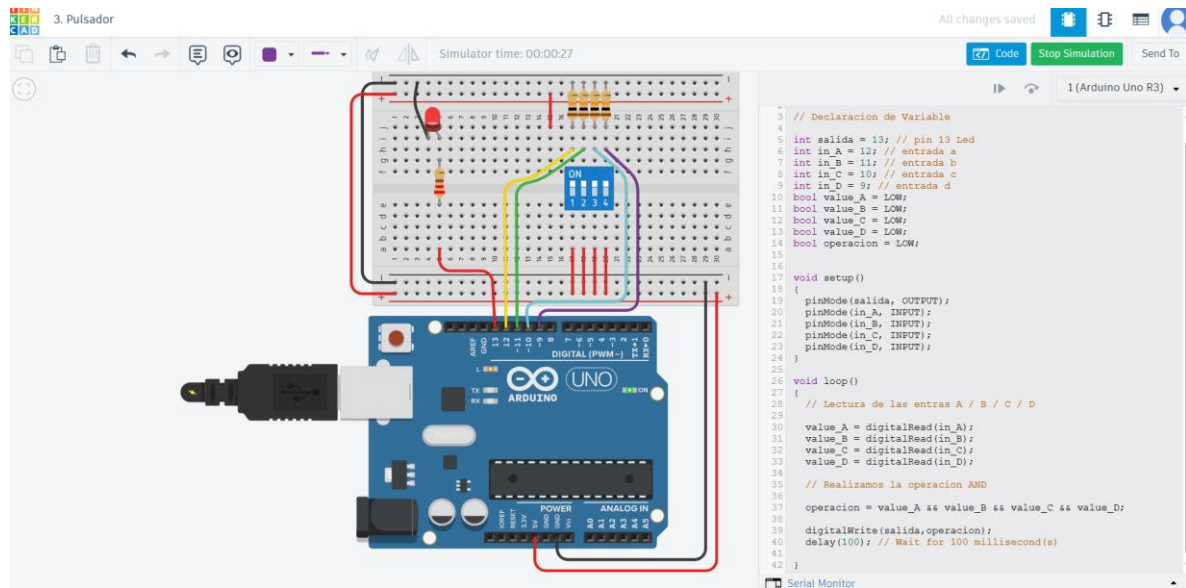
3. Pulsador

Simulator time: 00:00:27

All changes saved

Code Stop Simulation Send To

1 (Arduino Uno R3)



```
// Declaracion de Variable
int salida = 13; // pin 13 led
int in_A = 12; // entrada a
int in_B = 11; // entrada b
int in_C = 10; // entrada c
int in_D = 9; // entrada d
bool value_A = LOW;
bool value_B = LOW;
bool value_C = LOW;
bool value_D = LOW;
bool operacion = LOW;

void setup()
{
  pinMode(salida, OUTPUT);
  pinMode(in_A, INPUT);
  pinMode(in_B, INPUT);
  pinMode(in_C, INPUT);
  pinMode(in_D, INPUT);
}

void loop()
{
  // Lectura de las entradas A / B / C / D
  value_A = digitalRead(in_A);
  value_B = digitalRead(in_B);
  value_C = digitalRead(in_C);
  value_D = digitalRead(in_D);

  // Realizamos la operacion AND
  operacion = value_A && value_B && value_C && value_D;

  digitalWrite(salida, operacion);
  delay(100); // Wait for 100 millisecond(s)
}
```

Serial Monitor