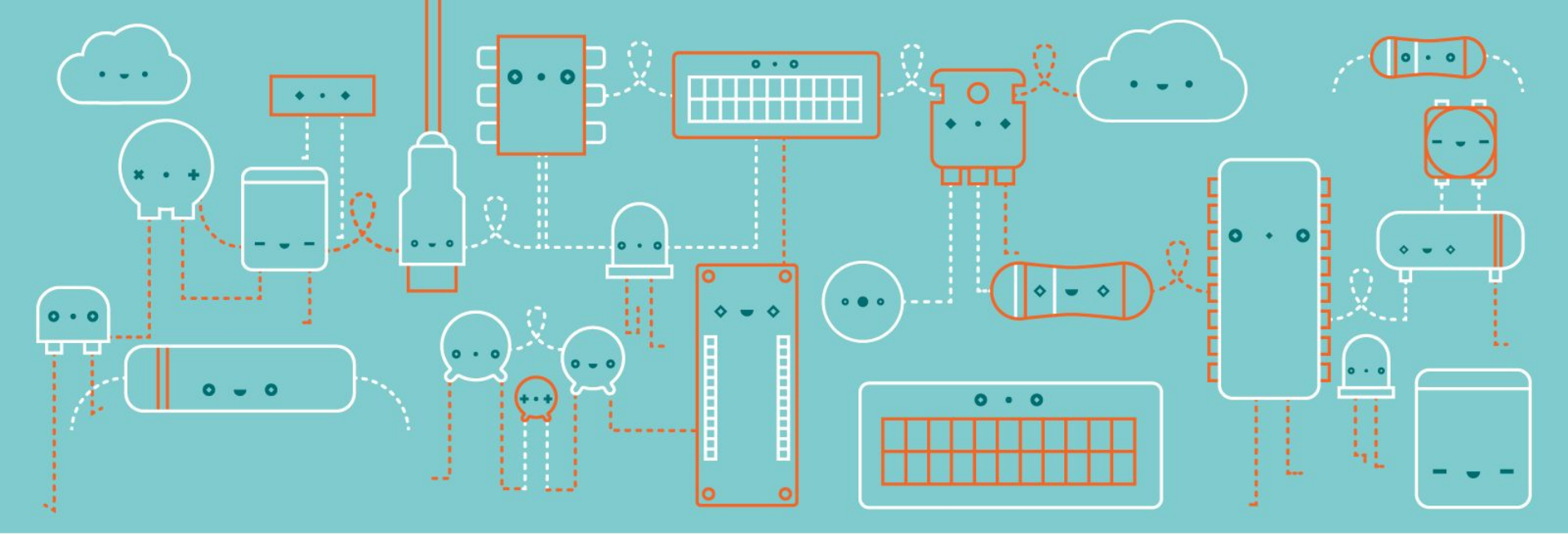

ROBÓTICA MÓVIL

Andrés Blanco Rospigliozzi

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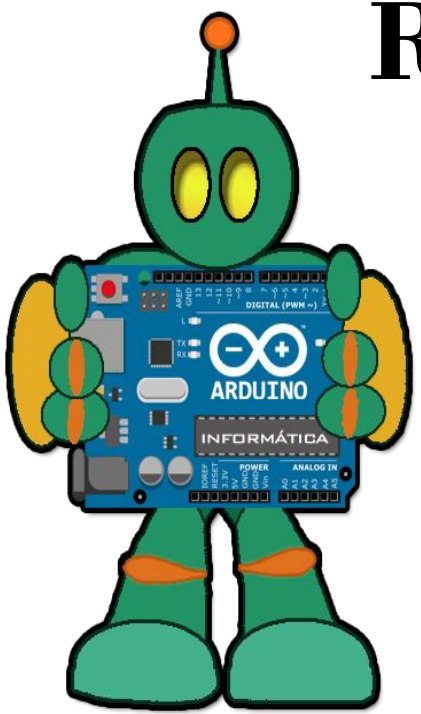
ROBÓTICA MÓVIL



Salidas digitales
Entradas digitales

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MATERIALES:

- Arduino + cable.
- Leds (distintos colores).
- Protoboard y jumpers.
- Resistencias 330 ohms.
- Led RGB (Cátodo común).
- Display de 7 segmentos (Cátodo común).
- Pulsadores.

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PERIFÉRICOS DE ENTRADA

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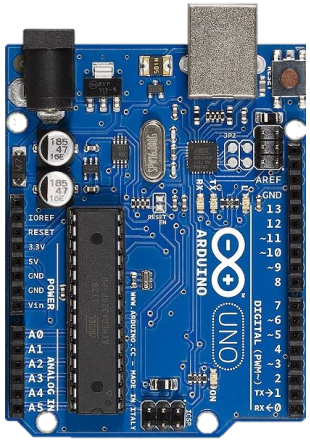
PERIFÉRICOS DE SALIDA

ROBOTICS SPACE MV

INPUT



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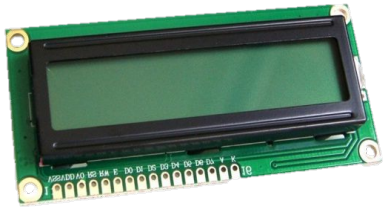
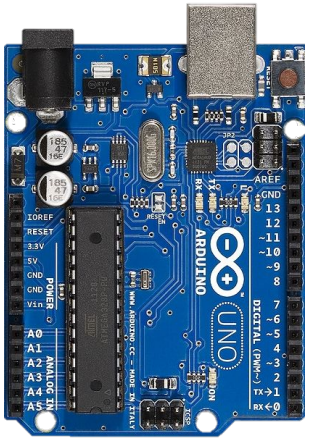
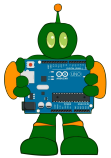
OUTPUT

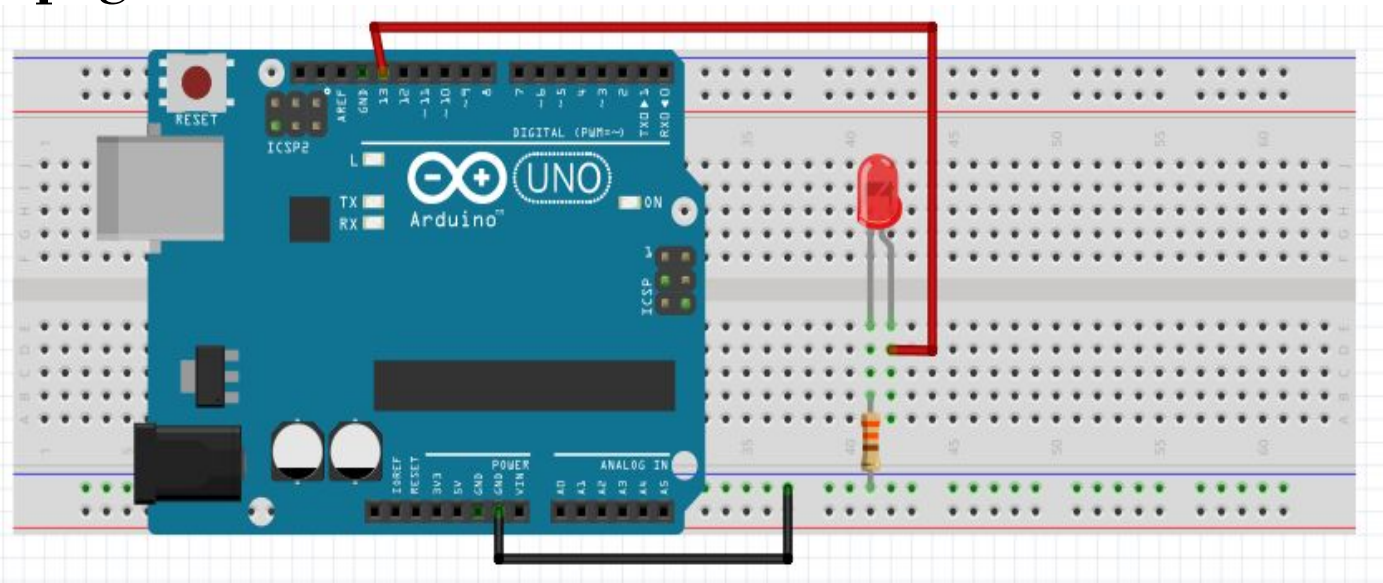






Salidas Digitales

- **Encender y Apagar 1 Led.**



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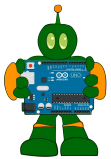
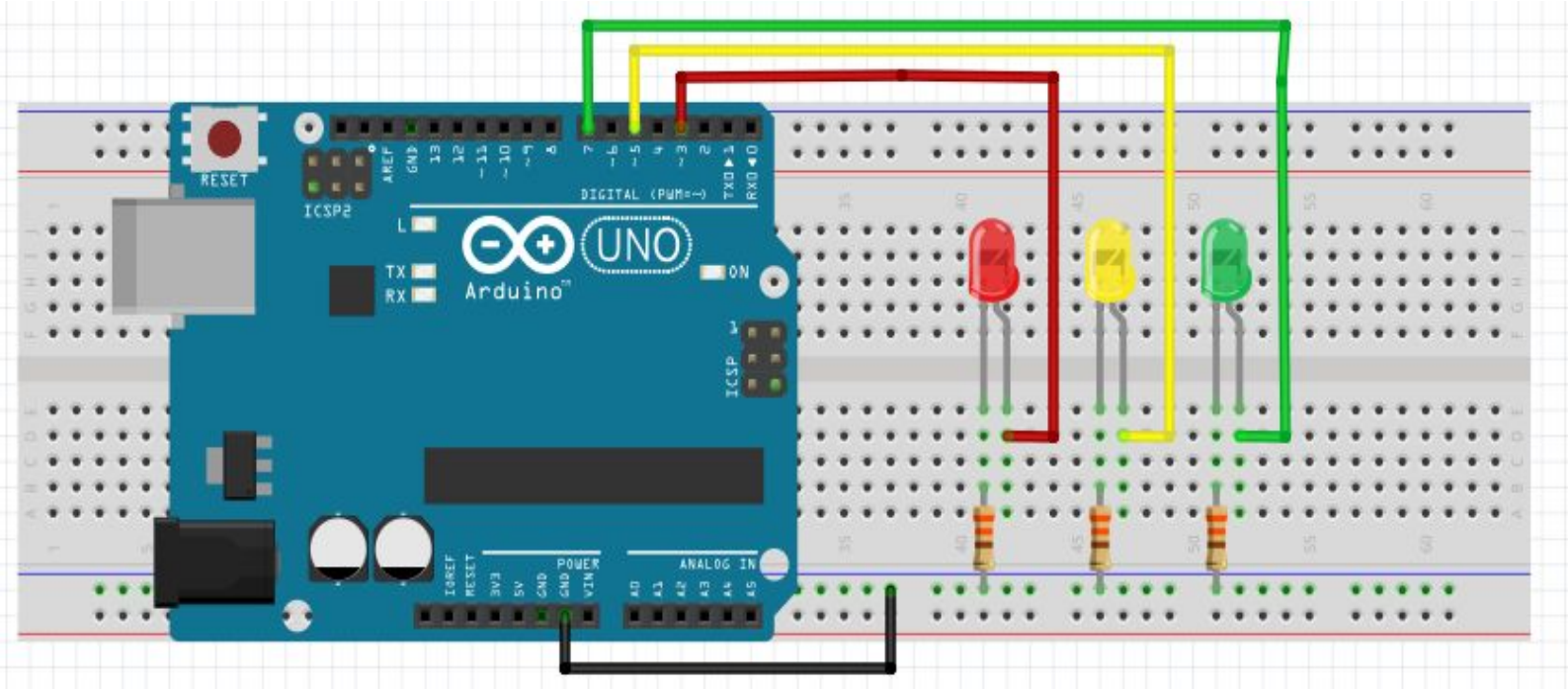
Arduino posee como principal característica la habilidad de comunicarse con nuestra computadora a través del puerto serie.
Esto se conoce como comunicación Serial.

```
int led = 13;

void setup()
{
  pinMode(led, OUTPUT);

}

void loop()
{
  digitalWrite(led, HIGH);      //5v. en el pin 13.
  delay(1000);                  //receso de 1s = 1000ms.
  digitalWrite(led, LOW);       //0v. en el pin 13.
  delay(1000);                  // receso de 1s.

}
```



- Realizar un semáforo automático.



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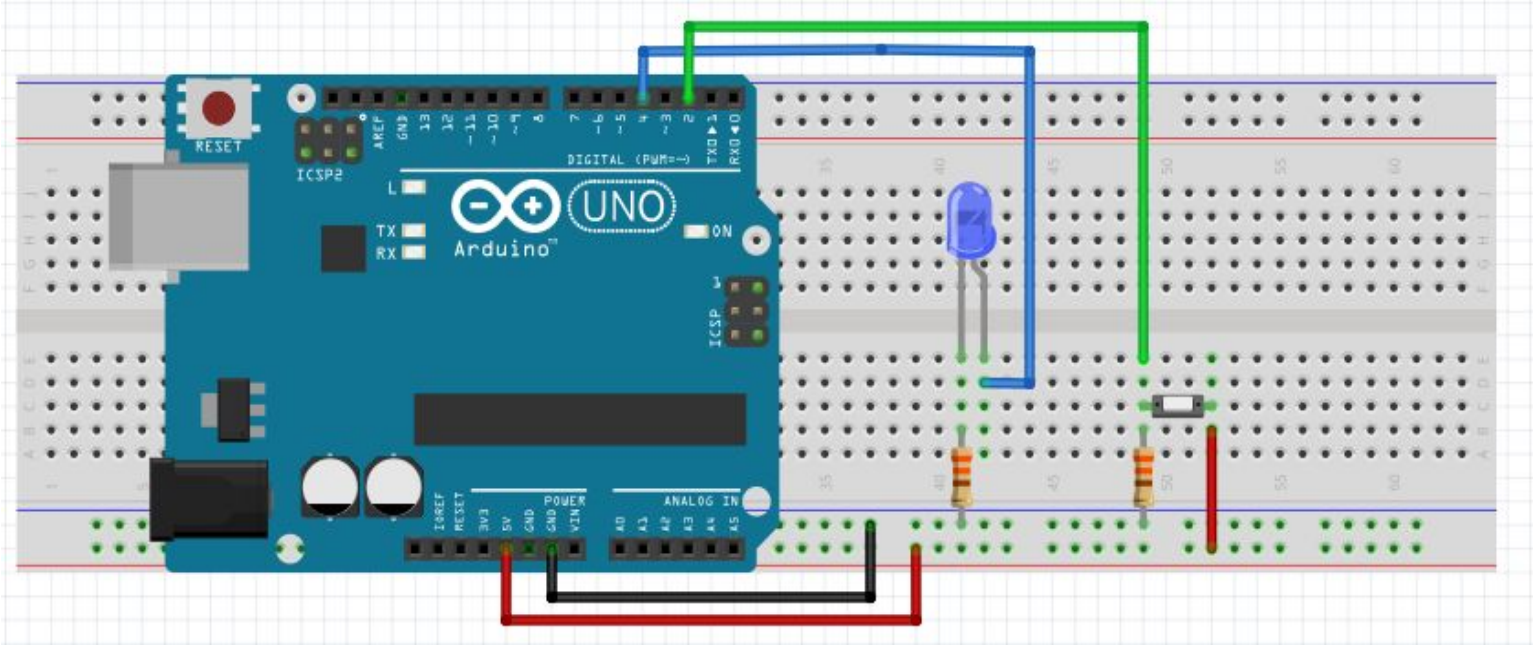
- Entradas Digitales.



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```
int led = 4;
int pulsador = 2;

void setup()
{
  pinMode(pulsador, INPUT);
  pinMode(led, OUTPUT);

}

void loop()
{
  int estado = digitalRead(pulsador);
  if(estado == HIGH)
  {
    digitalWrite(led, HIGH);
  }
  else {
          digitalWrite(led, LOW);
        }
}
```

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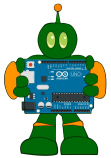
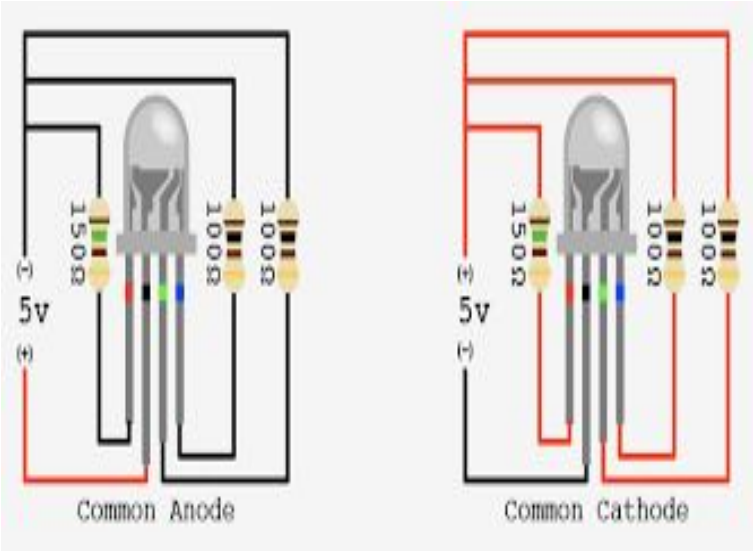
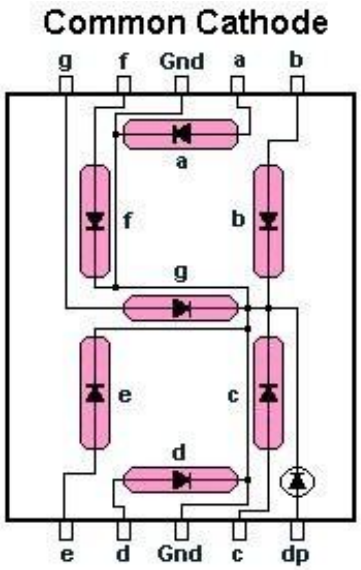


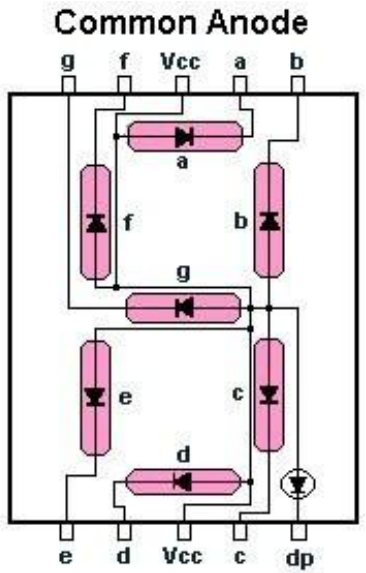
ROBOTICS SPACE MV

LED RGB



DISPLAY DE 7 SEG.





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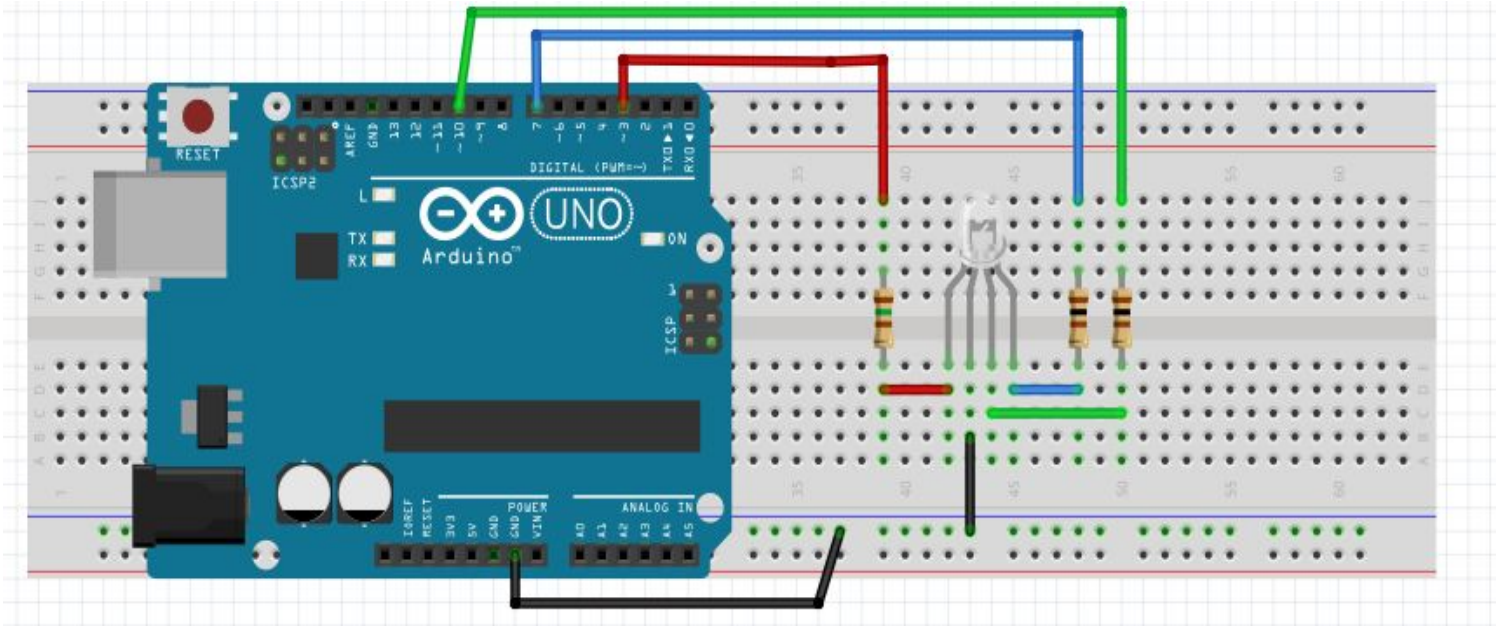
- **Led RGB Cátodo Común.**



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```
int ledR = 10;
int ledG = 7;
int ledB = 3;

void setup()
{
  pinMode(ledR, OUTPUT);
  pinMode(ledG, OUTPUT);
  pinMode(ledB, OUTPUT);
}
```

```
void loop()
{
  digitalWrite(ledR, HIGH);
  delay(1000);
  digitalWrite(ledR, LOW);
  digitalWrite(ledG, HIGH);
  delay(1000);
  digitalWrite(ledG, LOW);
  digitalWrite(ledB, HIGH);
  delay(1000);
  digitalWrite(ledB, LOW);
}
```

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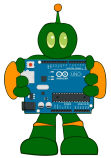
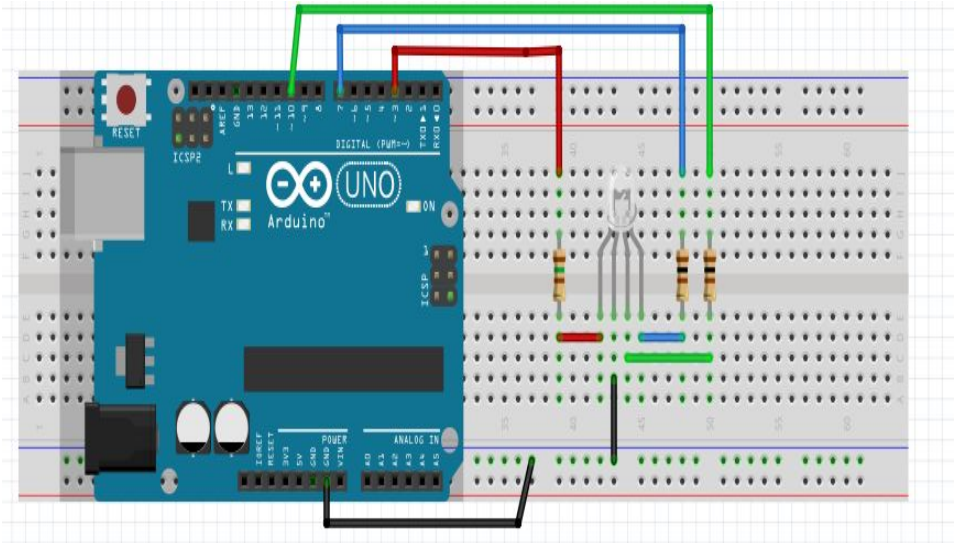
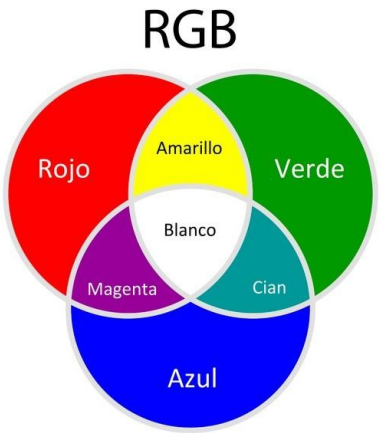


- **Realizar las 4 combinaciones de colores**





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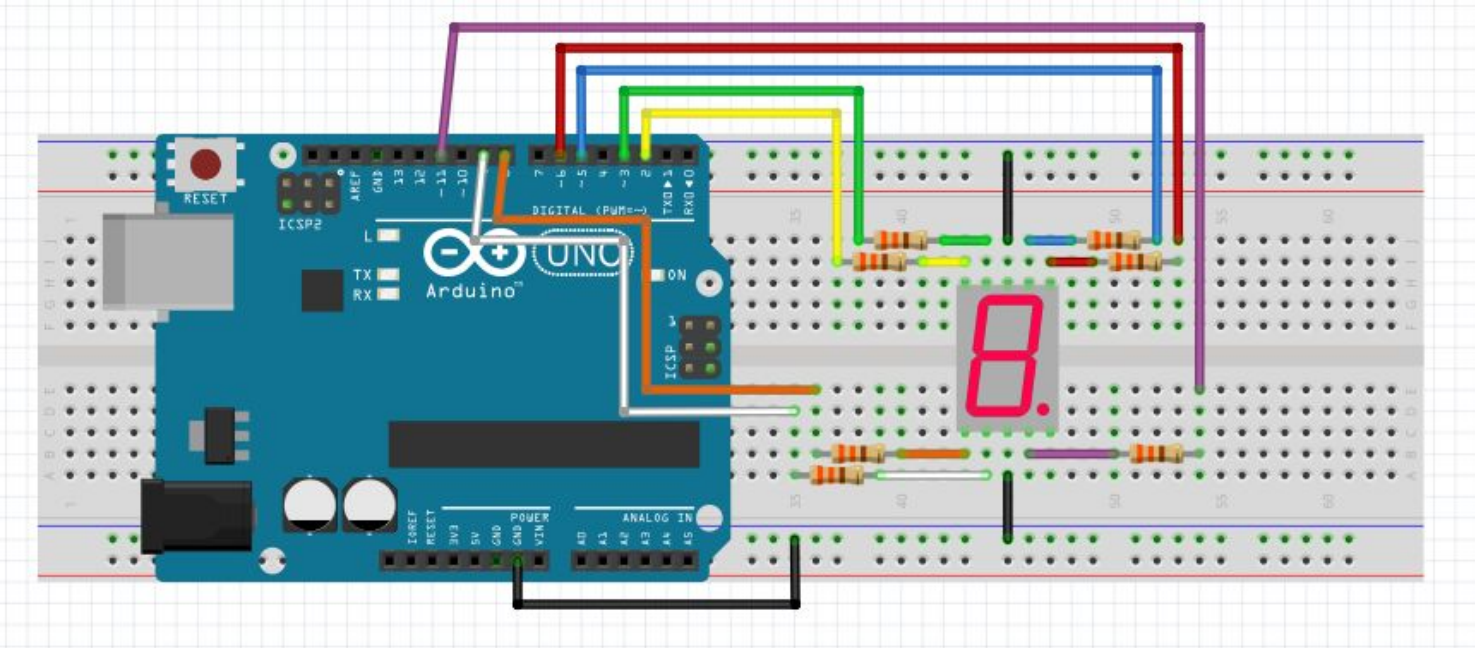
- **Realizar un Contador del 0 al 9.**



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▪ Tabla de Verdad

	Catodo Comun							
	Numero	A	B	C	D	E	F	G
Enable	0	1	1	1	1	1	1	0
0	1	0	1	1	0	0	0	0
0	2	1	1	0	1	1	0	1
0	3	1	1	1	1	0	0	1
0	4	0	1	1	0	0	1	1
0	5	1	0	1	1	0	1	1
0	6	1	0	1	1	1	1	1
0	7	1	1	1	0	0	0	0
0	8	1	1	1	1	1	1	1
0	9	1	1	1	1	0	1	1

	Anodo Comun							
	Numero	A	B	C	D	E	F	G
Enable	0	0	0	0	0	0	0	1
1	1	1	0	0	1	1	1	1
1	2	0	0	1	0	0	1	0
1	3	0	0	0	0	1	1	0
1	4	1	0	0	1	1	0	0
1	5	0	1	0	0	1	0	0
1	6	0	1	0	0	0	0	0
1	7	0	0	0	1	1	1	1
1	8	0	0	0	0	0	0	0
1	9	0	0	0	0	1	0	0

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Canal recomendado:

https://www.youtube.com/channel/UCqLNROazjaZnVqrC-a_NQww