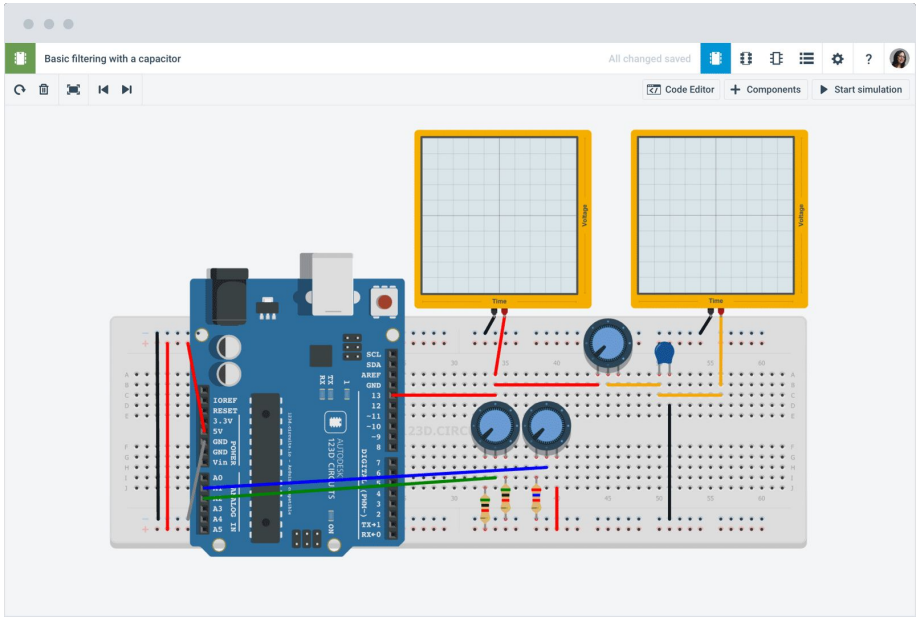
Curso de Arduino: Simuladores

elCacharreo.com

Simuladores ¿y si no tengo arduino?



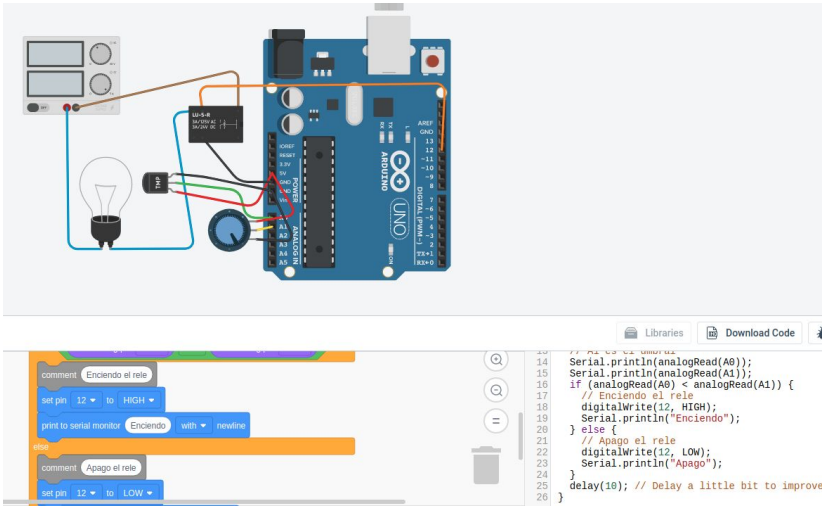
Simuladores

Software que nos permite probar un hardware virtualizado

Usamos el PC para ver el comportamiento de arduino en determinado proyecto

Tanto Hardware como software

Simuladores: Ventajas/desventajas



Ventajas:

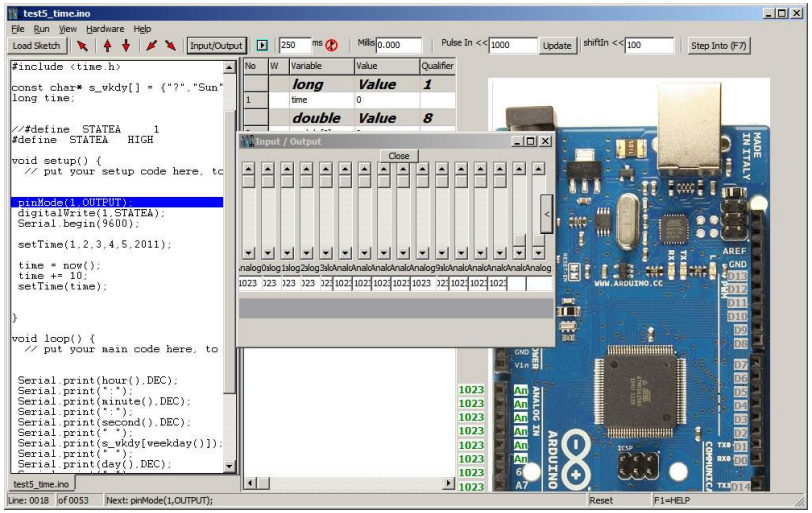
- Podemos usar todo el hardware que queramos
- No hay riesgo de rotura
- Más económico

Desventajas:

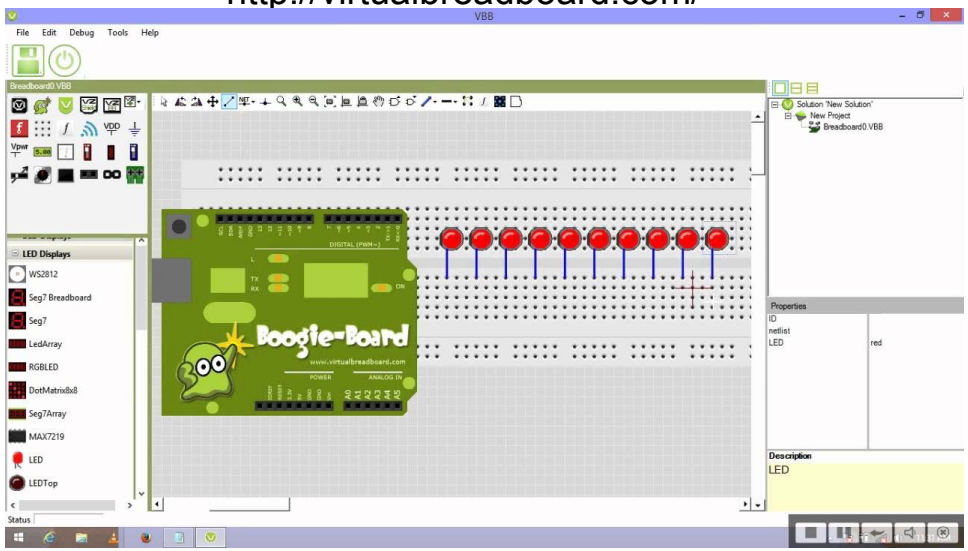
- No se puede simular todo el hardware
- No se puede simular todo el código (librerías)
- Necesitas la práctica real

Simuladores:Productos comerciales

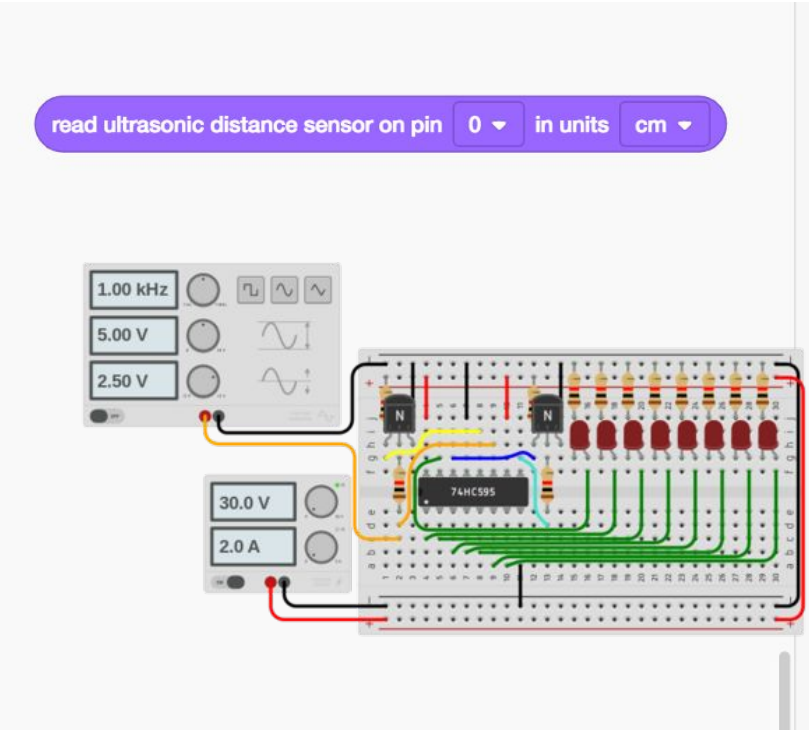
Arduino Simulator
http://www.virtronics.com.au/Simulator-for-Arduino.html



Virtual Breadboard
http://virtualbreadboard.com/



Tinkercad circuits: http://tinkercad.com




```
long readUltrasonicDistance(int pin)
{
  pinMode(pin, OUTPUT);  // Clear the trigger
  digitalWrite(pin, LOW);
  delayMicroseconds(2);
  // Sets the pin on HIGH state for 10 micro seconds
  digitalWrite(pin, HIGH);
  delayMicroseconds(10);
  digitalWrite(pin, LOW);
  pinMode(pin, INPUT);
  // Reads the pin, and returns the sound wave travel time in m
  return pulseIn(pin, HIGH);
}

void setup()
{
  pinMode(0, INPUT);
}

void loop()
{
  0.01723 * readUltrasonicDistance(0);
  delay(10); // Delay a little bit to improve simulation perfor
}
```

Tinkercad circuits: registro

Tinkercad circuits: registro

http://tinkercad.com

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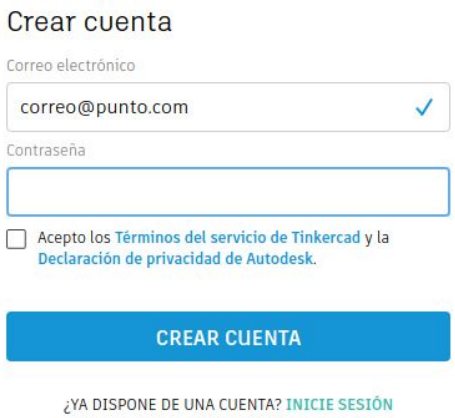

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Tinkercad circuits: Nuevo circuito

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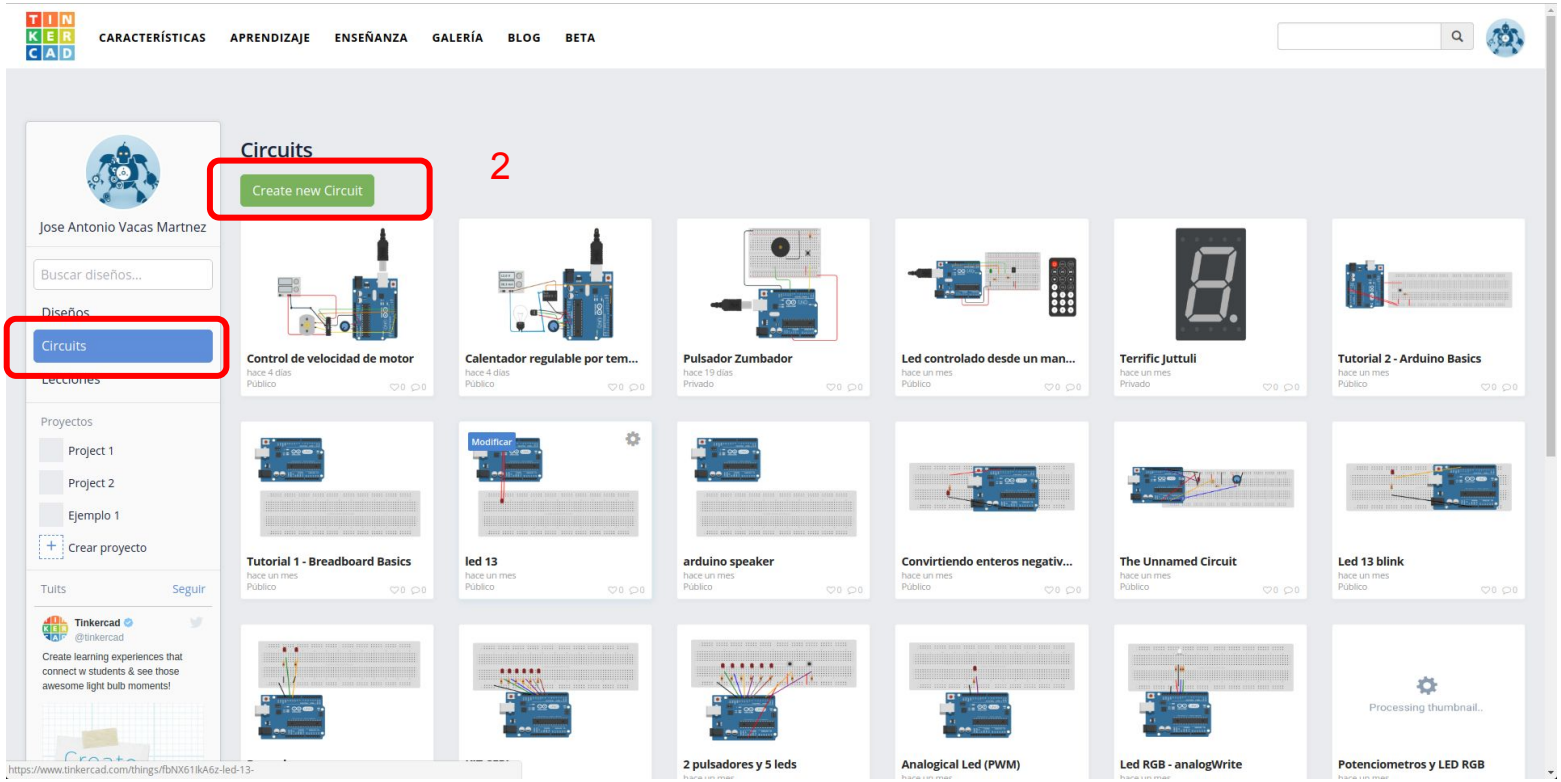
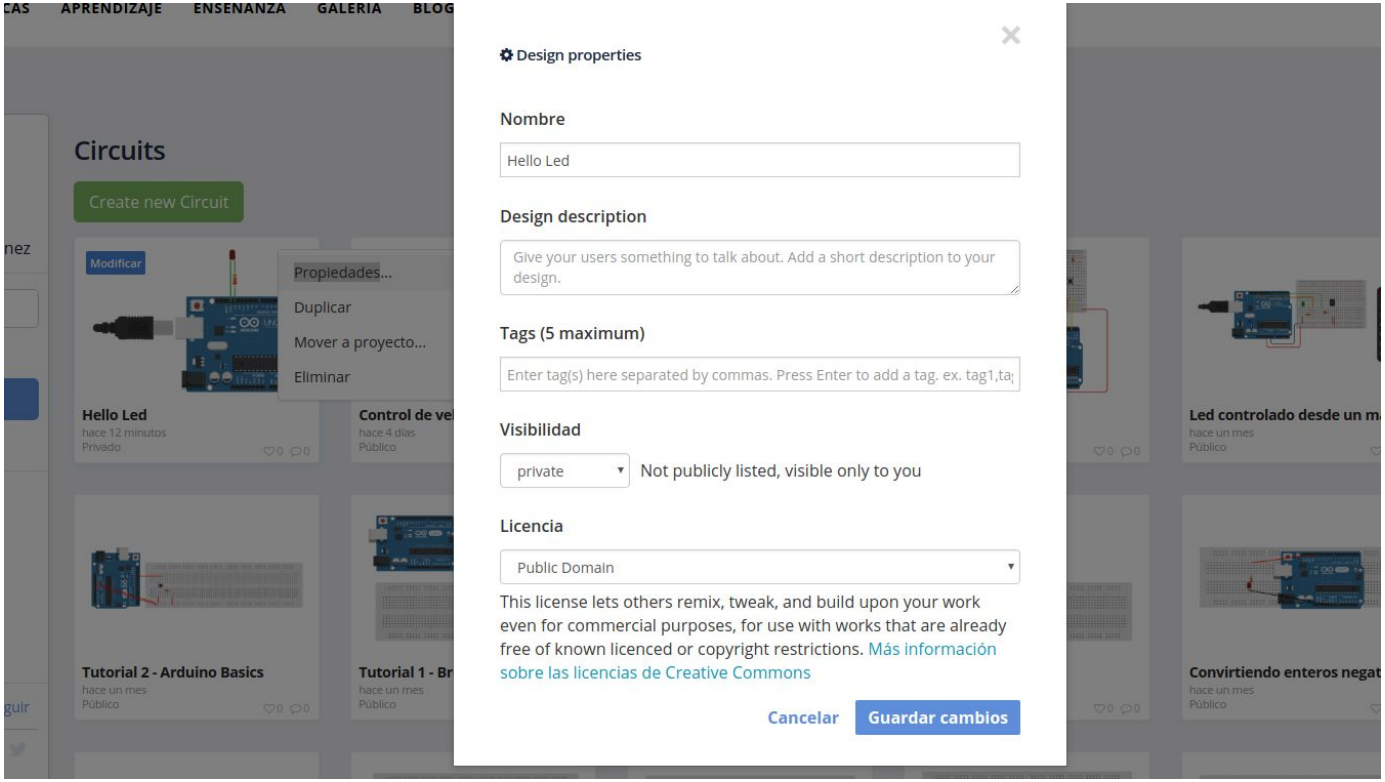
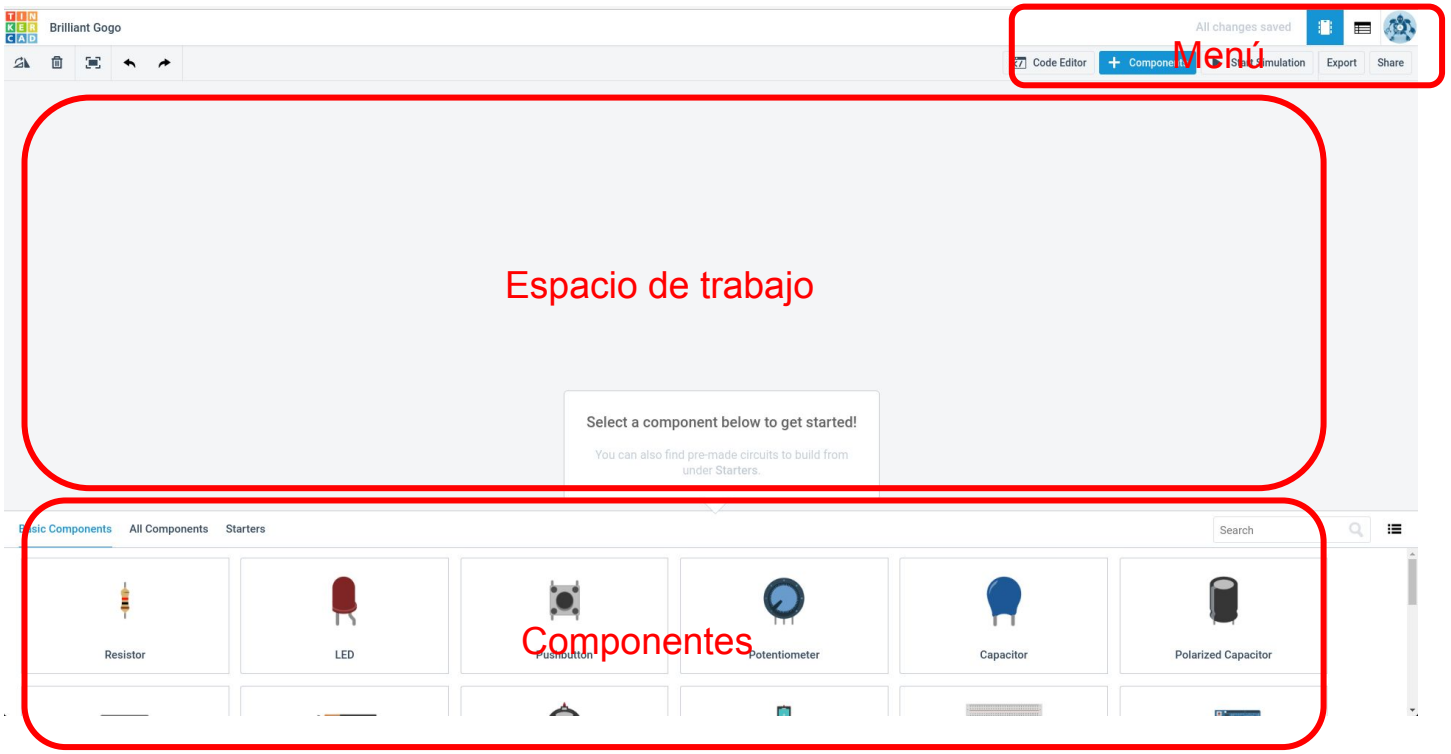


Tinkercad circuits: Propiedades



Tinkercad circuits: Partes



Tinkercad circuits: Código/bloques