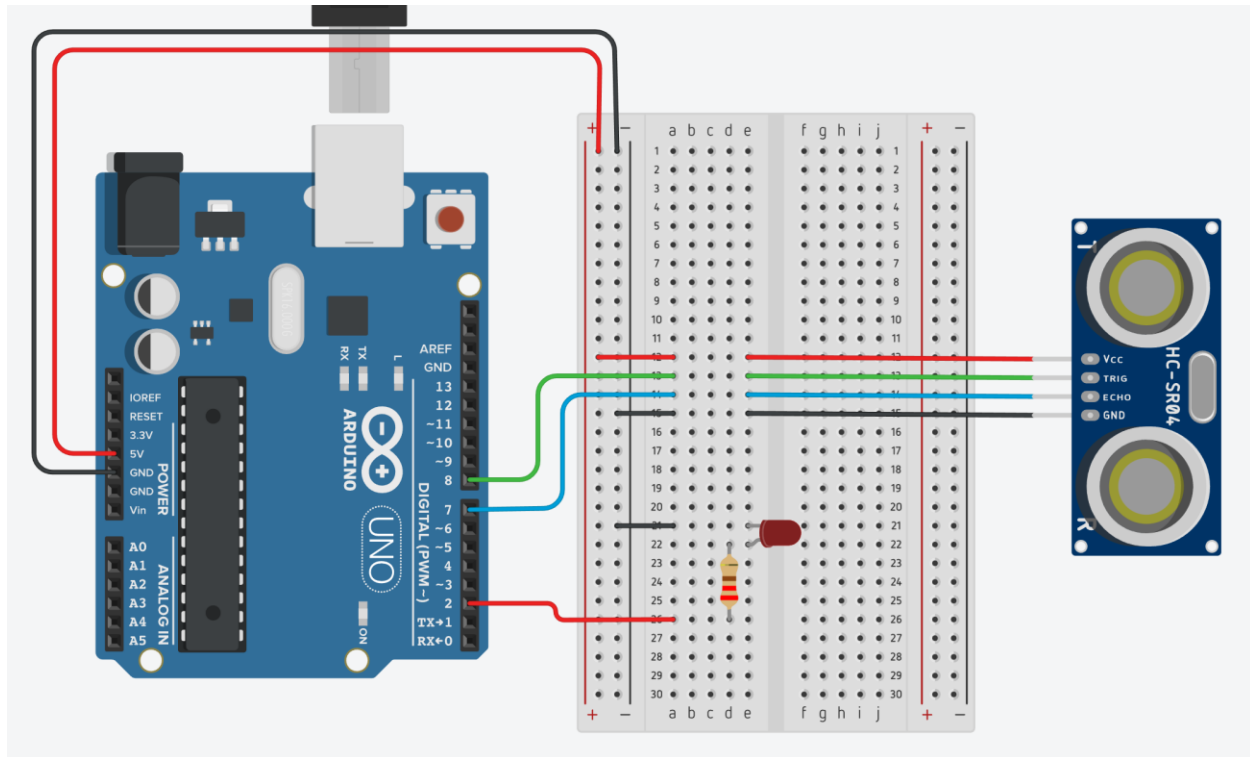


Ultrasonic Sensor Circuit and Example Code



```

/*
  HC-SR04 demonstration code
  based on Ping example code available from
  File > Examples > 06.Sensors > Ping
  https://www.arduino.cc/en/Tutorial/BuiltInExamples/Ping
*/

// define variables for sensor pins as constants because they
// won't change
const int triggerPin = 8;
const int echoPin = 7;
const int ledPin = 2;
const int threshold = 150;

// define variables for duration of the ping and distance
long duration; // time for echo to return in microseconds
long cm;       // distance to target in centimeters
  
```



In Partnership With



```
void setup() { // code that only runs once
  Serial.begin(9600);      // initialize serial communication:
  pinMode(triggerPin,OUTPUT); // set trigger pin as output
  pinMode(echoPin,INPUT);   // set echo pin as input
  pinMode(ledPin,OUTPUT);   // set LED pin as output
}

void loop() {
  // The HC-SR04 is triggered by a HIGH pulse of 10
  // microseconds. Give a short LOW pulse beforehand to ensure
  // a clean HIGH pulse:
  digitalWrite(triggerPin, LOW);
  delayMicroseconds(2);
  digitalWrite(triggerPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(triggerPin, LOW);

  // use pulseIn command to measure the duration of the echo
  // pulse in microseconds
  duration = pulseIn(echoPin, HIGH);

  // convert the time into a distance in centimeters
  cm = duration/58;

  if(cm < threshold){ // if object is closer than threshold
    digitalWrite(ledPin,HIGH); // turn LED on
  }
  else{ // otherwise, object is farther than threshold
    digitalWrite(ledPin,LOW); // turn LED off
  }

  // print measurement to serial monitor
  Serial.print(cm);
  Serial.print("cm");
  Serial.println();
}
```



In Partnership With



```
    delay(100); // short delay before next reading  
}
```