

THIRUNAVUKKARASU.P

732720121036

<https://wokwi.com/projects/364312239351635969>

```
// defines arduino pins numbers
const int trigPin = 12;
const int echoPin = 11;
// defines variables
long duration;
int distance;
void setup()
{
  pinMode(trigPin, OUTPUT); // Sets the trigPin as an Output
  pinMode(echoPin, INPUT); // Sets the echoPin as an Input
  Serial.begin(9600); // Starts the serial communication
}
void loop() {
  // Clears the trigPin
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  // Sets the trigPin on HIGH state for 10 micro seconds
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  // Reads the echoPin, returns the sound wave travel time in microseconds
  duration = pulseIn(echoPin, HIGH);
  // Calculating the distance
  distance= duration*0.002/2;
  // Prints the distance on the Serial Monitor
  Serial.print("Distance from the object = ");
  Serial.print(distance);
  Serial.println(" cm");
  delay(1000);
}
```

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ultrasonic sensor and detect the distance from the object.

Docs

sketch Simulation

diagram

Libraries

Managed

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Distance from the object = 23 cm

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The diagram illustrates the wiring of an HC-SR04 ultrasonic sensor to an Arduino Uno. The sensor's VCC pin is connected to the 5V power pin of the Arduino. The GND pin of the sensor is connected to a GND pin on the Arduino. The TRIG pin of the sensor is connected to digital pin 2 of the Arduino, and the ECHO pin is connected to digital pin 3. The simulation output shows the distance from the object as 23 cm.