

Assignment – 4

Wokwi for the ultrasonic sensor

Assignment Date	05 November 2022
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Maximum Marks	2 Marks

Question-1:

Write code and connection in wokwi for the ultrasonic sensor.

PROGRAM

Ultrasonic Simple

Prints the distance read by an ultrasonic sensor in centimeters. They are supported to four pins ultrasound sensors (like HC-SC04) and three pins (like PING))) and Sseed Studio sensors).

The circuit:

* * Module HR-SC04 (four pins) or PING))) (and other with three pins), attached to digital pins as follows:

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HC-SC04	Arduino			3 pins	Arduino		
-----				-----			
Vcc	5V			Vcc	5V		
Trig	12	OR		SIG	13		
Echo	13			Gnd	GND		
Gnd	GND			-----			

Note: You do not obligatorily need to use the pins defined above

By default, the distance returned by the read() method is in centimeters. To get the distance in inches, pass INC as a parameter.

Example: ultrasonic.read(INC)

created 3 Apr 2014
by Erick Simões (github: @ErickSimoess | twitter: @AloErickSimoess)
modified 23 Jan 2017
by Erick Simões (github: @ErickSimoess | twitter: @AloErickSimoess)
modified 03 Mar 2017
by Erick Simões (github: @ErickSimoess | twitter: @AloErickSimoess)
modified 11 Jun 2018
by Erick Simões (github: @ErickSimoess | twitter: @AloErickSimoess)

This example code is released into the MIT License.

*/

#include "Ultrasonic.h"

/*

Pass as a parameter the trigger and echo pin, respectively,
or only the signal pin (for sensors 3 pins), like:

Ultrasonic ultrasonic(13);

*/

Ultrasonic ultrasonic(12, 13);

int distance;

void setup() {

Serial.begin(9600);

}

void loop() {

// Pass INC as a parameter to get the distance in inches

distance = ultrasonic.read(CM);

Serial.print("Distance in CM: ");

Serial.println(distance);

distance = ultrasonic.read(INC);

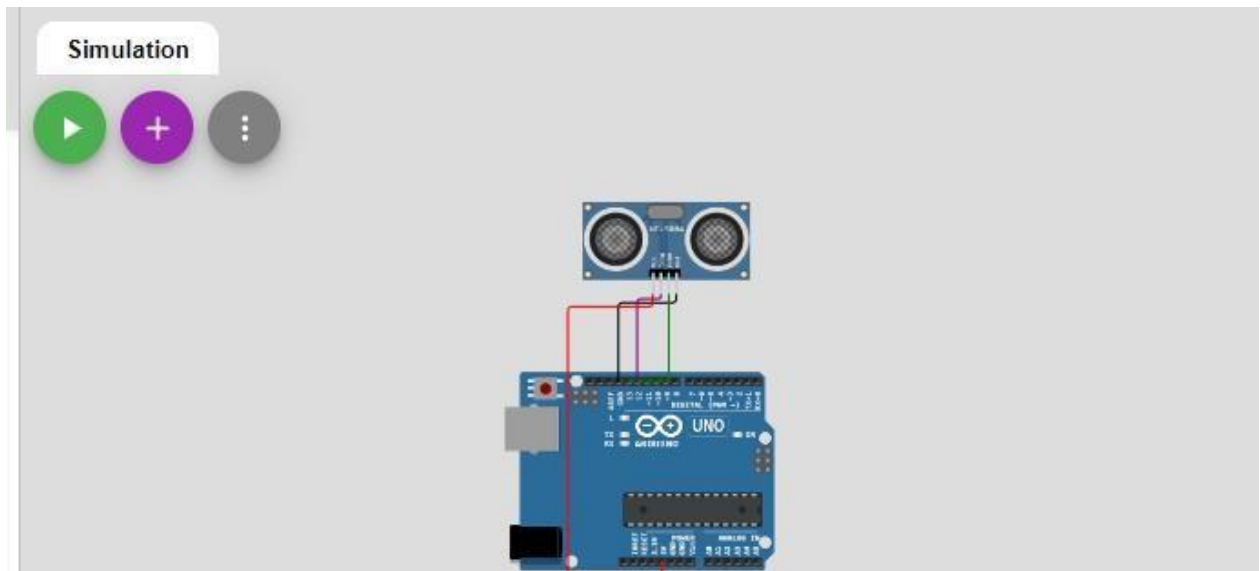
Serial.print("Distance in Inches: ");

Serial.println(distance);

delay(1000);

}

OUTPUT



Ibm cloud output

IBM cloud output:

Event	Value	Format	Last Received
event_1	["distance":17,"Alert":"Distance less than 10"]	json	a few seconds ago
event_1	["distance":9,"Alert":"Distance less than 10"]	json	a few seconds ago
event_1	["distance":8,"Alert":"Distance less than 10"]	json	a few seconds ago
event_1	["distance":9,"Alert":"Distance less than 10"]	json	a few seconds ago