

## 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 Seeed Studio sensors).

The circuit:

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

-----				-----			
	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: @ErickSimoese | twitter: @AloErickSimoese)
modified 23 Jan 2017
by Erick Simões (github: @ErickSimoese | twitter: @AloErickSimoese)
modified 03 Mar 2017
by Erick Simões (github: @ErickSimoese | twitter: @AloErickSimoese)
modified 11 Jun 2018
by Erick Simões (github: @ErickSimoese | twitter: @AloErickSimoese)
```

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);
```

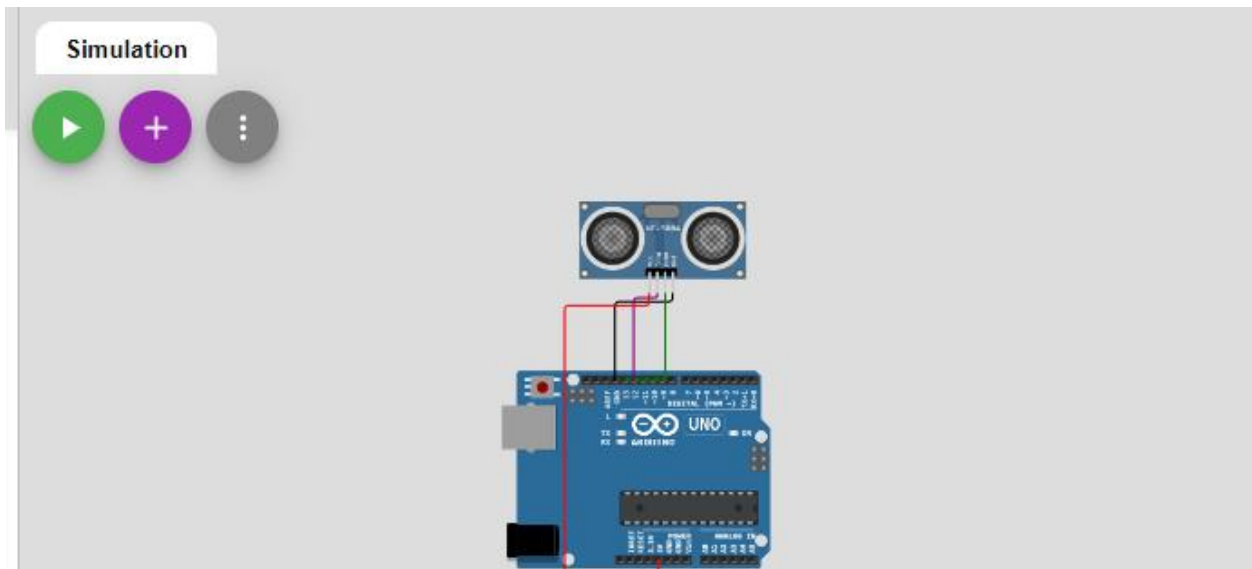
```
    Serial.print("Distance in Inches: ");
```

```
    Serial.println(distance);
```

```
    delay(1000);
```

```
}
```

## OUTPUT



## Ibm cloud output

IBM cloud output:

Browse Action Device Types Interfaces Add Device

Identity Device Information Recent Events State Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
event_1	["distance":7,"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":10,"Alert":"Distance less than 10"]	json	a few seconds ago
event_1	["distance":9,"Alert":"Distance less than 10"]	json	a few seconds ago