

ASSIGNMENT-4

Date	26 October 2022
Team ID	PNT2022TMID15074
Project Name	Real-Time River Water Quality Monitoring and Control system
Maximum Marks	2 Marks

Write code and connections in wokwi for ultrasonic. Whenever distance is less than 100 cms send “alert” to ibm cloud and display in device recent events.

Solution:

```
#define ECHO_PIN 2

#define TRIG_PIN 3

#define organization = "mmbh4c"

#define deviceType = "Ultrasonic"

#define deviceId = "1112"

#define authMethod = "use-token-auth"

#define authToken = "123456789"

void
setup() {
  Serial.begin(9600); pinMode(TRIG_PIN,
    OUTPUT); pinMode(ECHO_PIN, INPUT);
}

float readDistanceCM() {
  digitalWrite(TRIG_PIN, LOW);
```

```
    delayMicroseconds(2);

    digitalWrite(TRIG_PIN, HIGH);

    delayMicroseconds(10);

    digitalWrite(TRIG_PIN, LOW); int

    duration = pulseIn(ECHO_PIN, HIGH);

    return duration * 0.034 / 2;
} void loop()

{

    float distance = readDistanceCM(); if(distance

<= 100)

    {

        Serial.println("person detected ");

    }

    else{

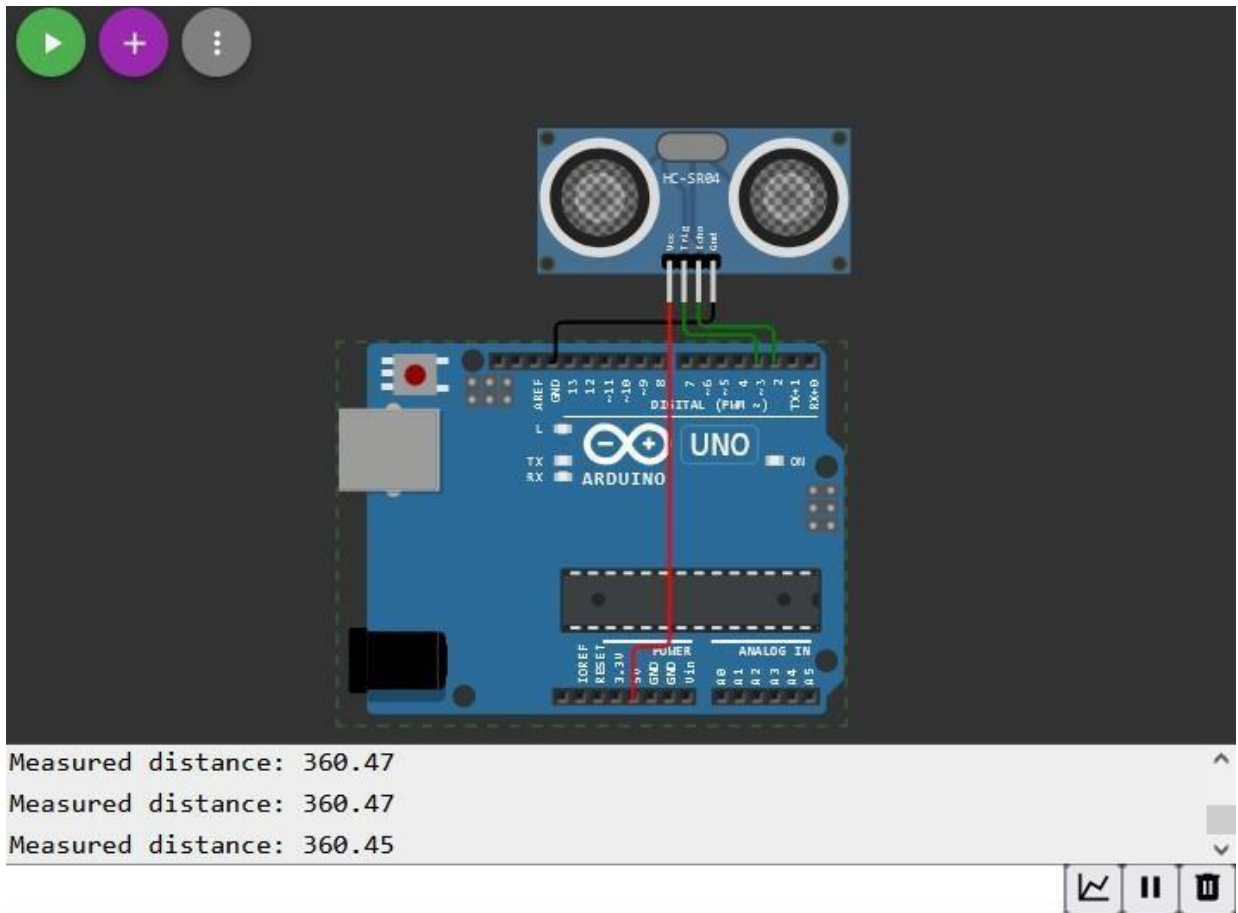
        Serial.print("Measured distance: ");

        Serial.println(readDistanceCM());

    }

    delay(100);

}
```



IBM Cloud

Device Recent Events

IBM Cloud IoT Platform interface showing the "Recent Events" tab for a device named "Ultrasonic_1". The device is connected and the interface displays a live stream of data events.

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	{"status": "Person Detected"}	json	a few seconds ago
event_1	{"status": "Person Detected"}	json	a few seconds ago
event_1	{"status": "Person Detected"}	json	a few seconds ago
event_1	{"status": "Person Detected"}	json	a few seconds ago

1 Simulation running