

Assignment -4

Assignment Date	26 October 2022
Student Name	VASANTH N
Team ID	PNT2022TMID33110
Project Name	Project-Smart Farmer-IoT Enabled Smart Farming Application
Maximum Marks	2 Marks

Question-1:

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 = “fkxdqs”

#define deviceType = “Arduino”

#define deviceId = “1200”

#define authMethod = “use-token-auth”

#define authToken = “000000000”

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);

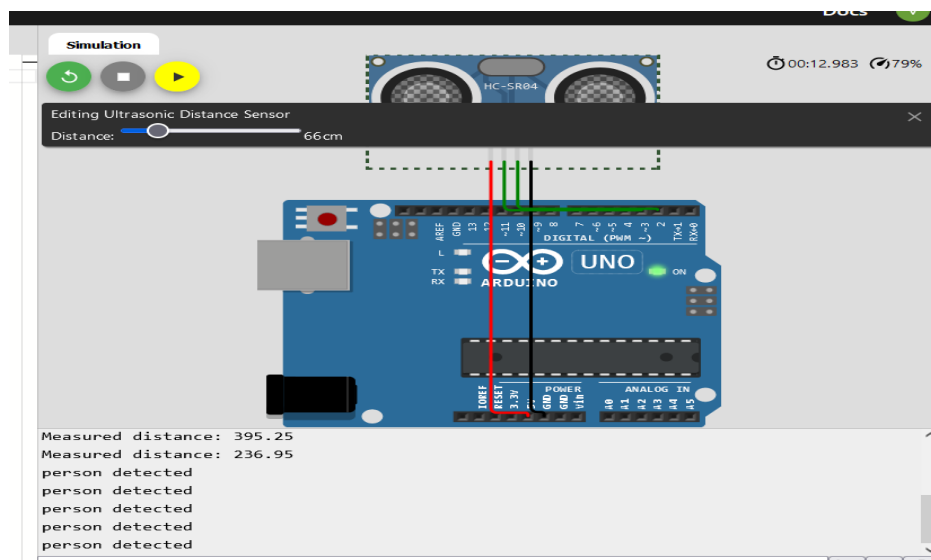
  return duration * 0.034 / 2;
```

```

}

void loop() {
  float distance = readDistanceCM();
  if(distance <= 100)
  {
    Serial.println("person detected ");
  }
  else{
    Serial.print("Measured distance: ");
    Serial.println(readDistanceCM());
  }
  delay(1000);
}

```



Wokwi Link: <https://wokwi.com/projects/346567349532361298>

IBM Cloud

Device Recent Events

← → ↻ <https://foxids.internetofthings.ibmcloud.com/dashboard/devices/browse>

IBM Watson IoT Platform 820419205065@smartinternz.com
ID: foxids

[Browse](#) [Action](#) [Device Types](#) [Interfaces](#) [Add Device](#)

Criteria: To get started, you can add devices by using the Add Device button, or by using API.

🔍 Search by Device ID Device Simulator

<input type="checkbox"/>	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By	
▼ <input type="checkbox"/>	1200	Disconnected	Arduino	Device	Oct 26, 2022 1:10 PM		820419205065@smartinternz.com	→ ...
<div> <div>Identity</div> <div>Device Information</div> <div>Recent Events</div> <div>State</div> <div>Logs</div> <div>✕</div> </div> <div> <div>Device ID</div> <div>Device Type</div> <div>Date Added</div> <div>Added By</div> <div>Connection Status</div> </div> <div> <div>1200</div> <div>Arduino</div> <div>Oct 26, 2022 1:10 PM</div> <div>820419205065@smartinternz.com</div> <div>Disconnected</div> </div>								

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The screenshot displays the IBM Watson IoT Platform interface. At the top, the navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present with the text 'Search by Device ID'. The main content area shows a table of devices. The selected device is ID 1200, status 'Disconnected', type 'Arduino', and class 'Device'. It was added on 'Oct 26, 2022 1:10 PM' by '820419205065@smartintenz.com'. Below the device details, the 'Recent Events' tab is selected, showing a list of events. Each event is labeled 'event_1' with the value '"PersonDetected"' and the format 'json', all received 'a few seconds ago'. A notification at the bottom right indicates '1 Simulation running'.

Event	Value	Format	Last Received
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago
event_1	"PersonDetected"	json	a few seconds ago