

ASSIGNMENT-4

TITLE: Smart Farmer - IOT Enabled Smart Farming Application

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.

```
#define ECHO_PIN 2

#define TRIG_PIN 3

#define organisation = "a09qmv"

#define deviceType = "device1"

#define deviceId ="1234"

#define authMethod ="use-token-auth"

#define authToken ="12345678"

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()

{

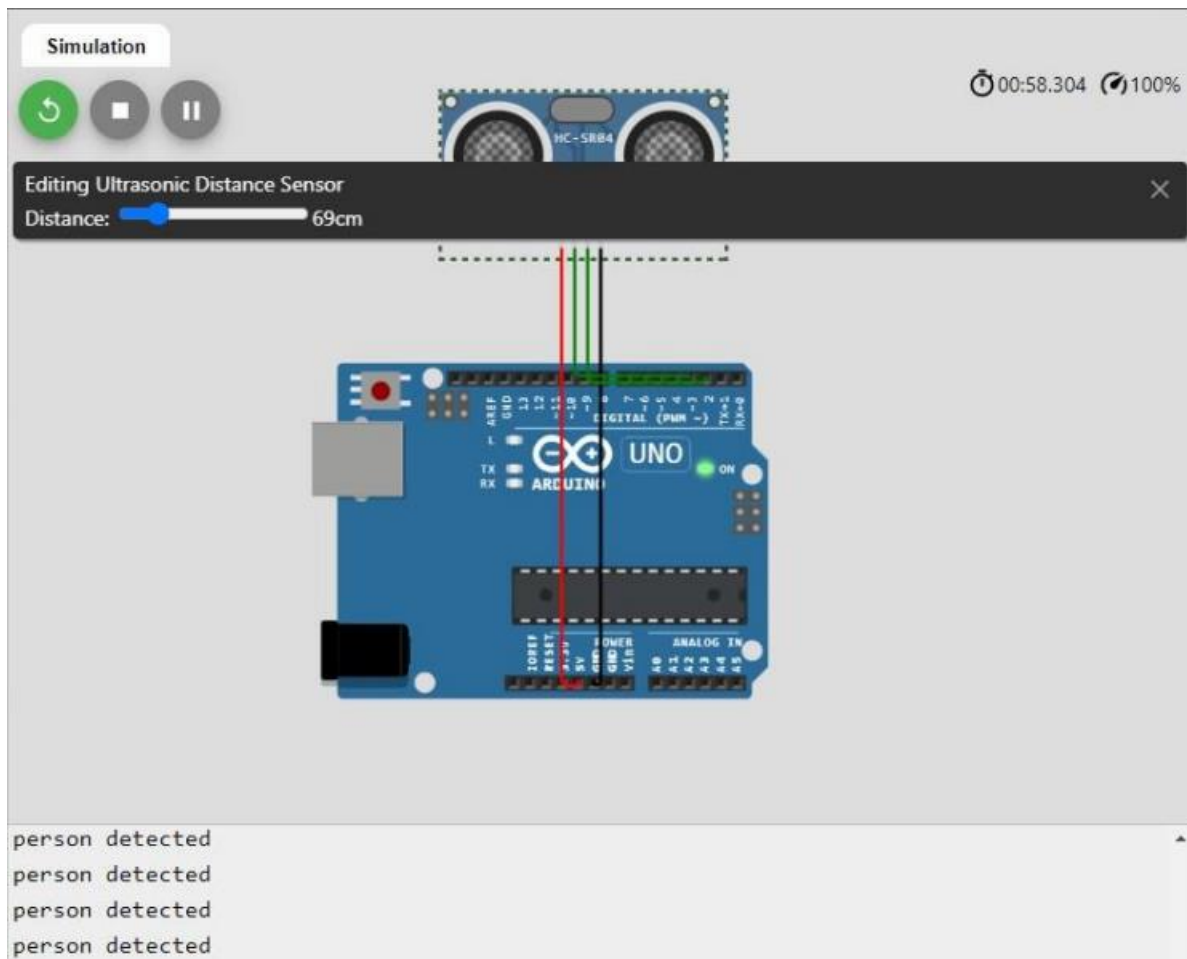
  float distance = readDistanceCM();

  if(distance <= 100)
```

```

{
  Serial.println("person detected ");
}
Else
{
  Serial.print("Measured distance: ");
  Serial.println(readDistanceCM());
}
delay(1000);
}

```



IBM Cloud

Device Recent Events

The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains various icons for navigation. The main content area displays a table of devices. The first device, ID 1234, is highlighted. Below the table, a detailed view for this device is shown, including its identity, device information, recent events, state, and logs. The 'Recent Events' tab is selected, showing a list of events. The device status is 'Disconnected'.

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By
1234	Disconnected	device1	Device	Oct 26, 2022 1:15 PM		820419205063@smartintenz.com

Identity	Device Information	Recent Events	State	Logs
Device ID	1234			
Device Type	device1			
Date Added	Oct 26, 2022 1:15 PM			
Added By	820419205063@smartintenz.com			
Connection Status	Disconnected			

The screenshot shows the IBM Watson IoT Platform interface with the 'Recent Events' tab selected for device 1234. The 'Device Simulator' toggle is turned on. The 'Recent Events' section displays a live stream of data. Below the text, a table lists recent events, showing the event name, value, format, and last received time.

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	"person detected"	json	a few seconds ago
event_1	"person detected"	json	a few seconds ago
event_1	"person detected"	json	a few seconds ago

2 Simulations running