Assignment-4
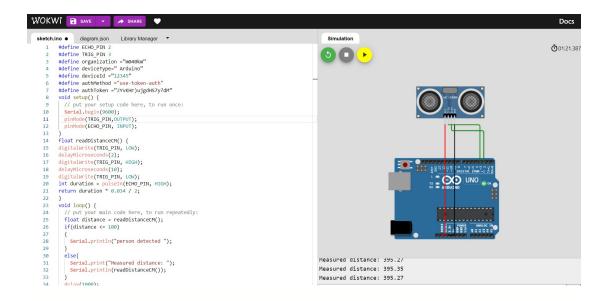
Write code and connections in wokwi for the ultrasonic sensor.Whenever the distance is less than 100 cms send an "alert" to the IBM cloud and display in the device recent events.

Code:

```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization ="m040km"
#define deviceType=" Arduino"
#define deviceId ="12345"
#define authMethod ="use-token-auth"
#define authToken ="2YvKHr)ujgdHS7y?dM"
void setup() {
  // put your setup code here, to run once:
  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() {
  // put your main code here, to run repeatedly:
  float distance = readDistanceCM();
  if(distance <= 100)
  {
    Serial.println("person detected ");
  }
  else{
    Serial.print("Measured distance: ");
    Serial.println(readDistanceCM());
  }
  delay(1000);
}
```

Wokwi: https://wokwi.com/projects/347222429060301394

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Measured distance: 395.27
Measured distance: 395.35
Measured distance: 395.27

IBM CLOUD:

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Device Drilldown - 12345

Connection Information
Recent Events
State
Device Information
Metadata
Diagnostics
Connection Logs
Device Actions

Recent Events

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	{"version":1,"author":"CURIE M","editor":"wokwi...	json	a few seconds ago
event_1	{"version":1,"author":"CURIE M","editor":"wokwi...	json	a few seconds ago
event_1	{"version":1,"author":"CURIE M","editor":"wokwi...	json	a few seconds ago
event_1	{"version":1,"author":"CURIE M","editor":"wokwi...	json	a few seconds ago
event_1	{"version":1,"author":"CURIE M","editor":"wokwi...	json	a few seconds ago

State

This table shows a list of data points that are reported by this device.

6 Simulations running

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