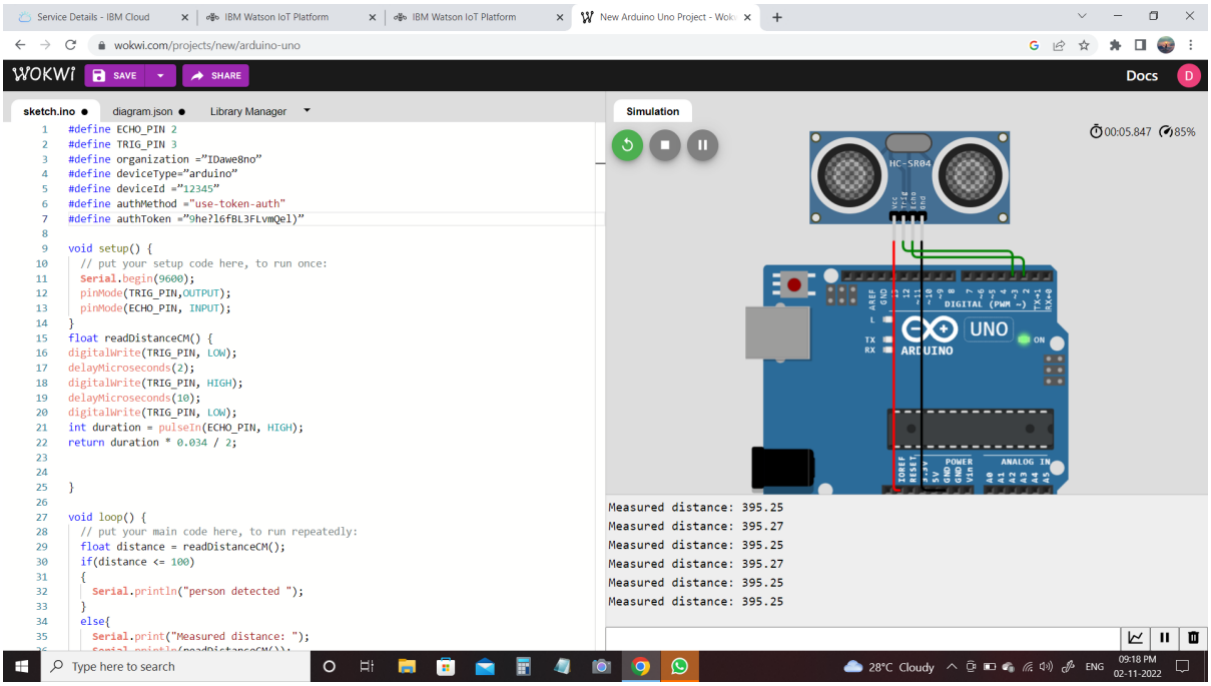
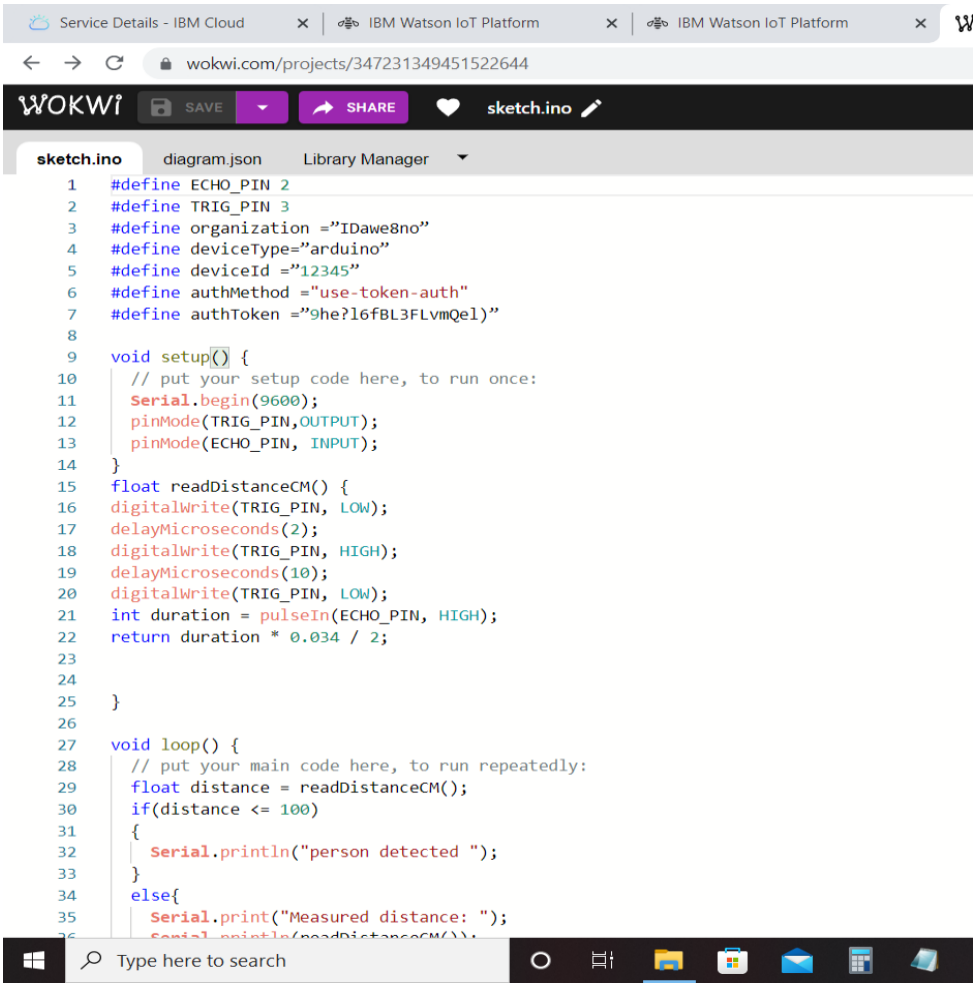
ASSIGNMENT 4

Question-1: Write code and connections in wokwi for ultrasonic. Whenever distance is less than 100 cm's send "alert" to IBM cloud and display in device recent events.

```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization ="IDawe8no"
#define deviceType="arduino"
#define deviceId ="12345"
#define authMethod ="use-token-auth"
#define authToken ="9he?l6fBL3FLvmQel)"

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);



}
```



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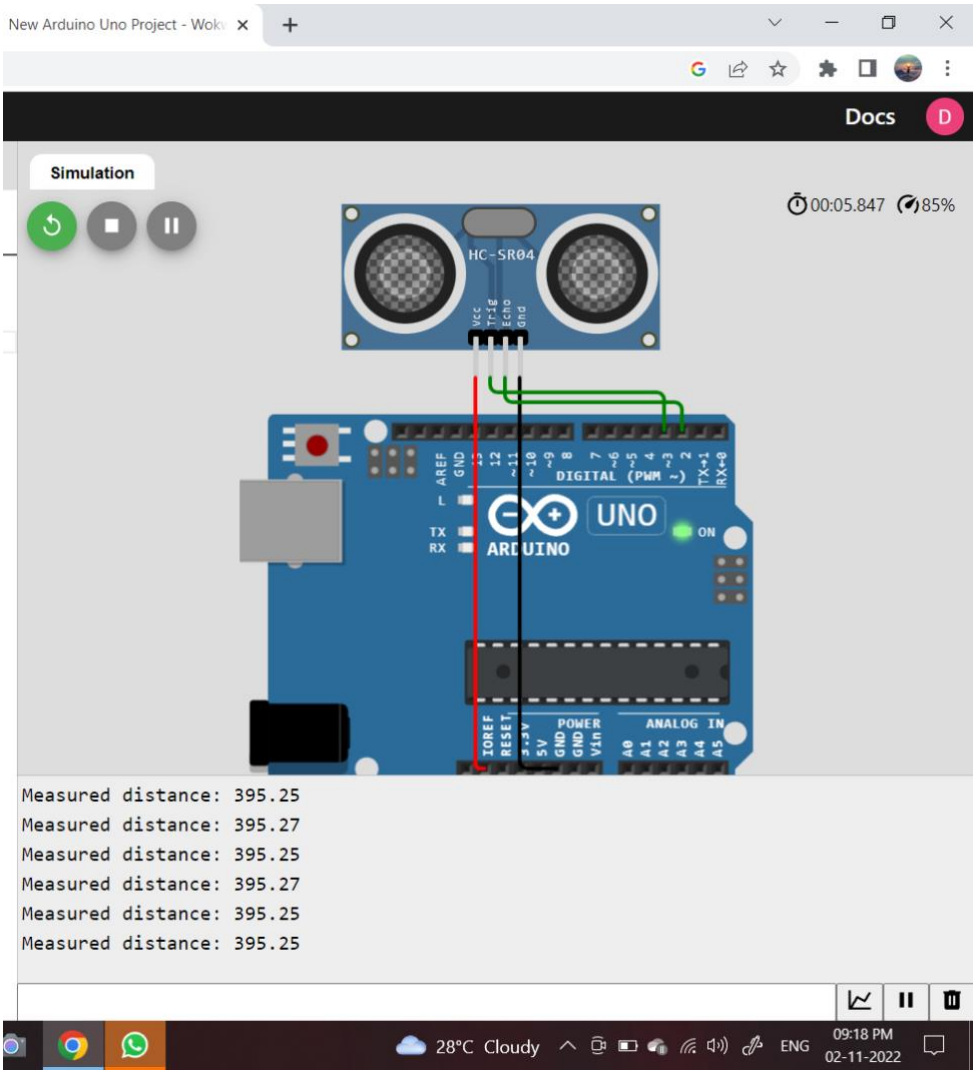
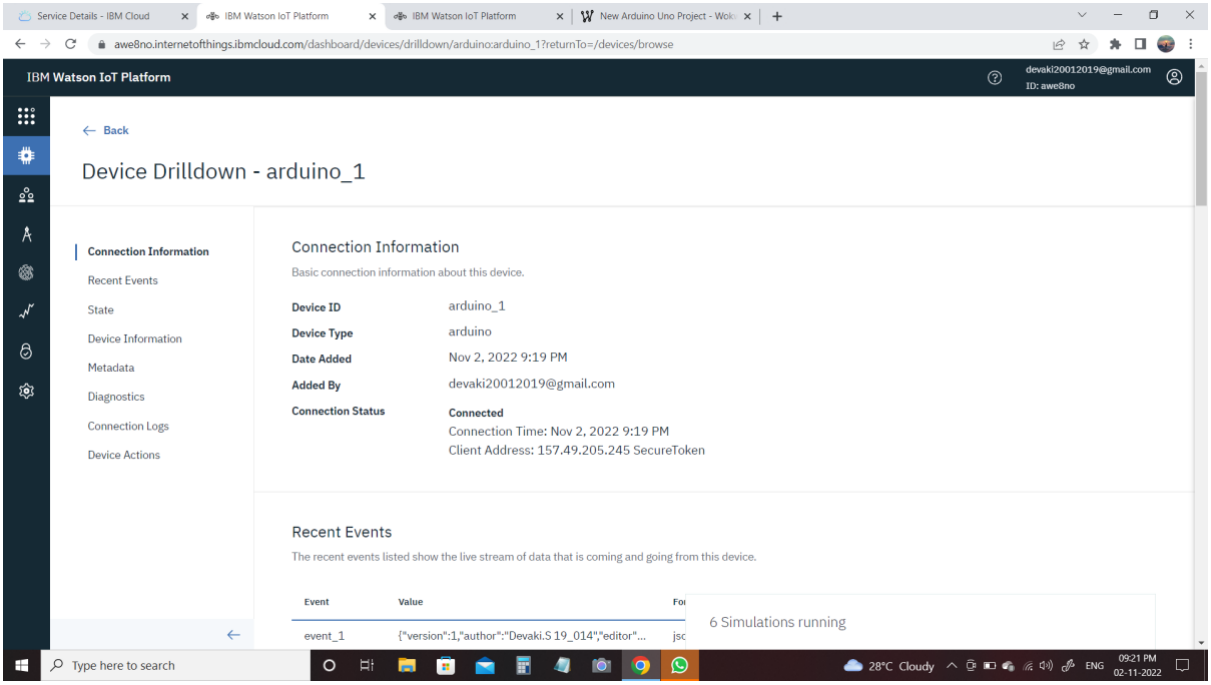
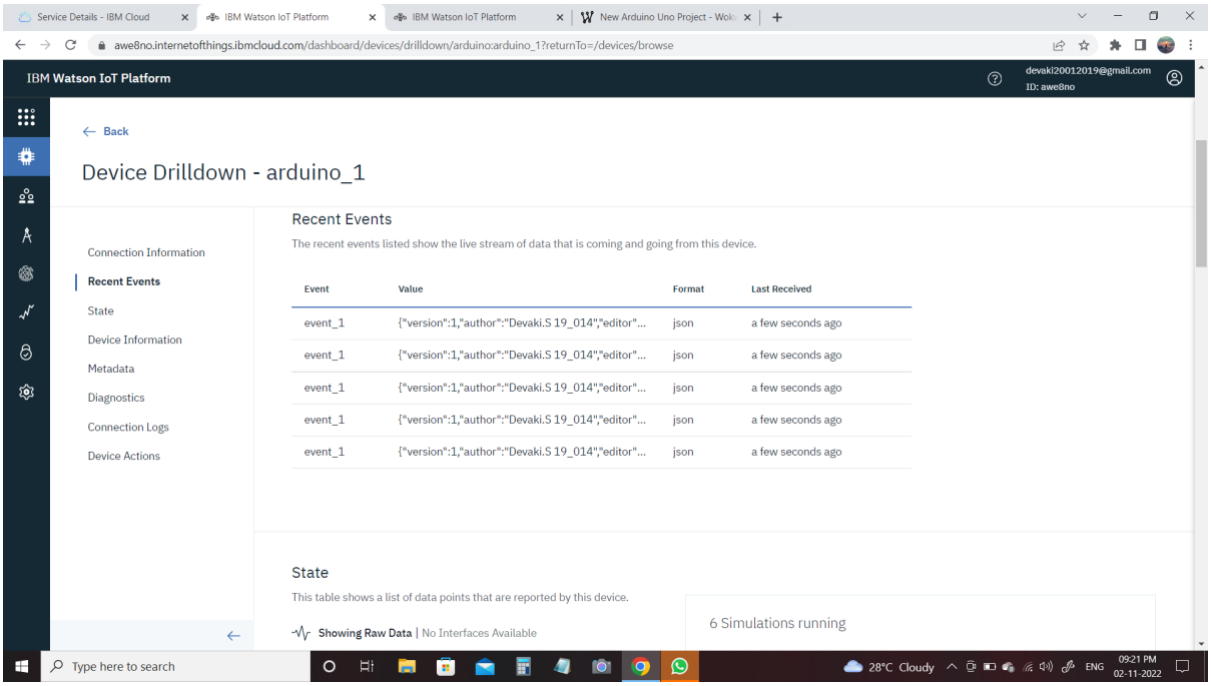

New Arduino Uno Project - Wok
Docs
D
Simulation
00:05.847
85%
HC-SR04
Vcc
Trig
Echo
Gnd
DIGITAL (PWM ~)
UNO
ARDUINO
ON
TX
RX
L
POWER
ANALOG IN
Measured distance: 395.25
Measured distance: 395.27
Measured distance: 395.25
Measured distance: 395.27
Measured distance: 395.25
Measured distance: 395.25
28°C Cloudy
ENG
09:18 PM
02-11-2022


Service Details - IBM Cloud
IBM Watson IoT Platform
IBM Watson IoT Platform
New Arduino Uno Project - Wok
awe8no.internetofthings.ibmcloud.com/dashboard/devices/drilldown/arduino:arduino_1?returnTo=/devices/browse
IBM Watson IoT Platform
devaki20012019@gmail.com
ID: awe8no
Back
Device Drilldown - arduino_1
Connection Information
Recent Events
State
Device Information
Metadata
Diagnostics
Connection Logs
Device Actions
Connection Information
Basic connection information about this device.
Device ID
arduino_1
Device Type
arduino
Date Added
Nov 2, 2022 9:19 PM
Added By
devaki20012019@gmail.com
Connection Status
Connected
Connection Time: Nov 2, 2022 9:19 PM
Client Address: 157.49.205.245 SecureToken
Recent Events
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
event_1
{"version":1,"author":"Devaki.S 19_014","editor"...
6 Simulations running
Type here to search
28°C Cloudy
ENG
09:21 PM
02-11-2022


Service Details - IBM Cloud
IBM Watson IoT Platform
IBM Watson IoT Platform
New Arduino Uno Project - Wok
awe8no.internetofthings.ibmcloud.com/dashboard/devices/drilldown/arduino:arduino_1?returnTo=/devices/browse
IBM Watson IoT Platform
devaki20012019@gmail.com
ID: awe8no
Back
Device Drilldown - arduino_1
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":"Devaki.S 19_014","editor"...
json
a few seconds ago
event_1
{"version":1,"author":"Devaki.S 19_014","editor"...
json
a few seconds ago
event_1
{"version":1,"author":"Devaki.S 19_014","editor"...
json
a few seconds ago
event_1
{"version":1,"author":"Devaki.S 19_014","editor"...
json
a few seconds ago
event_1
{"version":1,"author":"Devaki.S 19_014","editor"...
json
a few seconds ago
State
This table shows a list of data points that are reported by this device.
Showing Raw Data | No Interfaces Available
6 Simulations running
Type here to search
28°C Cloudy
ENG
09:21 PM
02-11-2022