Date	20 October 2022
Student Name	ARSHA VARSHINEE.V
Student Register Number/Roll Number	211419106034/2019PECEC115
Maximum Marks	2 Marks

ASSIGNMENT-4

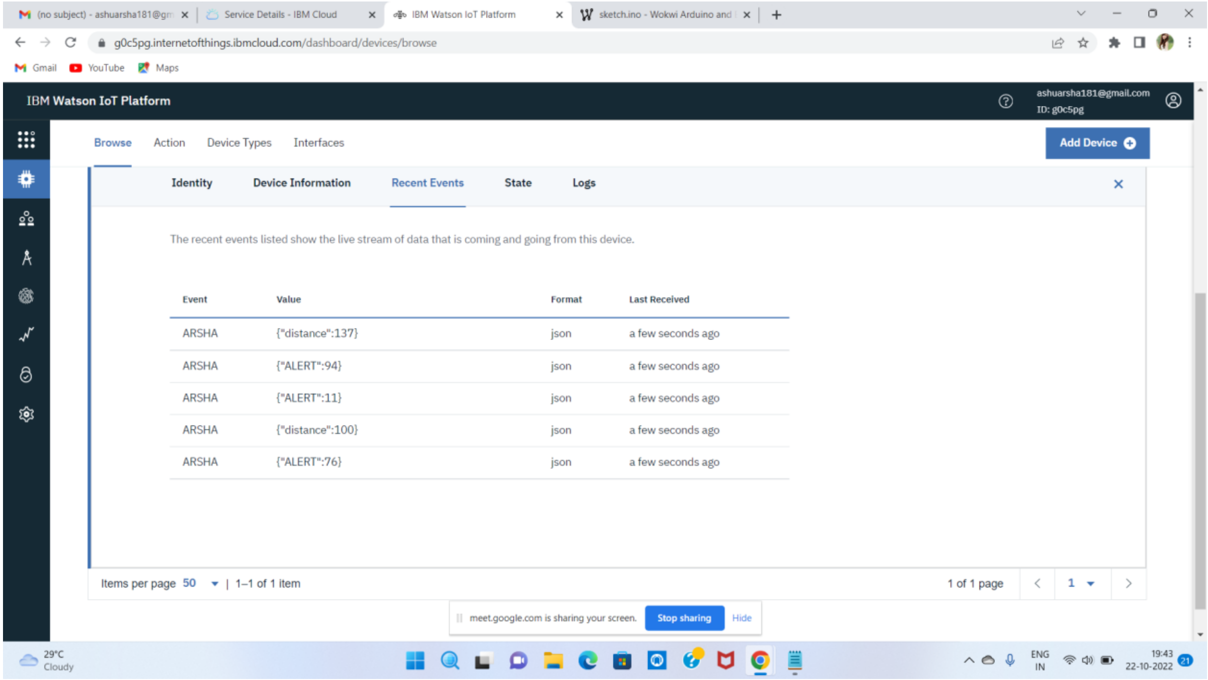
QUESTION:

Write code and connections in wokwi for ultrasonic sensor.Whenever distance is less than 100 cms send “alert” to ibm cloud and display in device recent events.Upload documents with wokwi share link and images of ibm cloud.

WOKWI LINK:

https://wokwi.com/projects/346227912198849107\

IBM CLOUD(DEVICE 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
ARSHA	{"distance":137}	json	a few seconds ago
ARSHA	{"ALERT":94}	json	a few seconds ago
ARSHA	{"ALERT":11}	json	a few seconds ago
ARSHA	{"distance":100}	json	a few seconds ago
ARSHA	{"ALERT":76}	json	a few seconds ago

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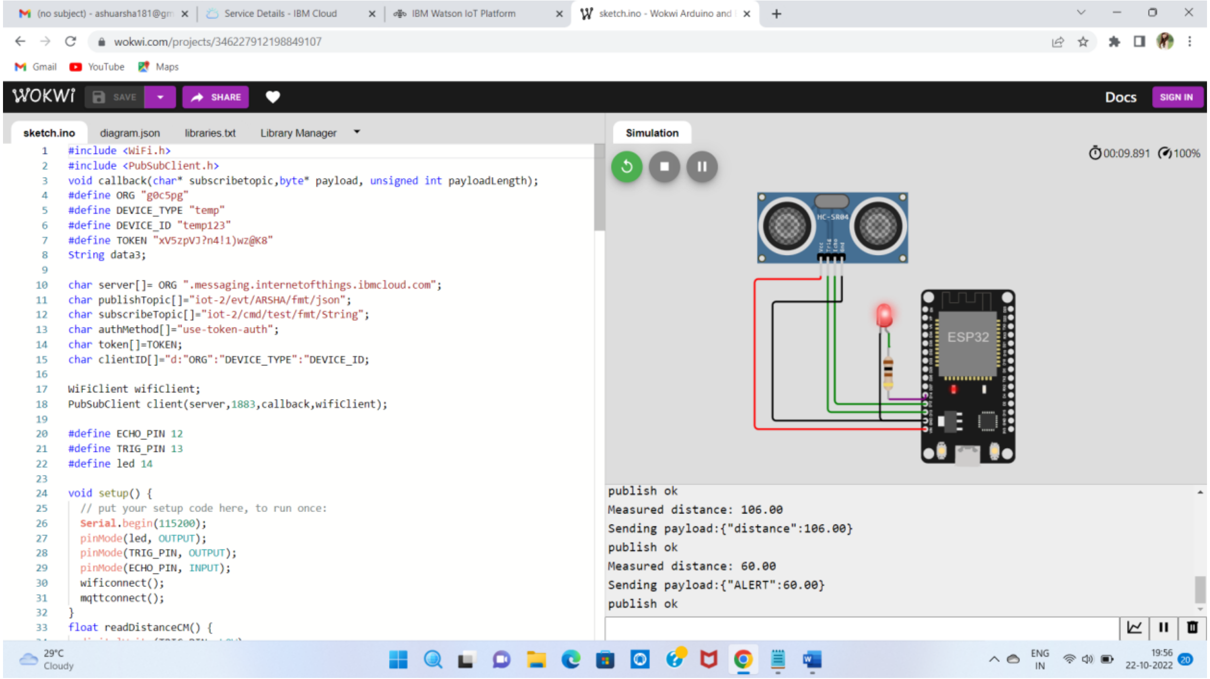
1
meet.google.com is sharing your screen.
Stop sharing
Hide
29°C
Cloudy
ENG
IN
19:43
22-10-2022

WOKWI SIMULATION:



```
#include <WiFi.h>
#include <PubSubClient.h>
void callback(char* subscribetopic,byte* payload, unsigned int payloadLength);
#define ORG "g0c5pg"
#define DEVICE_TYPE "temp"
#define DEVICE_ID "temp123"
#define TOKEN "xV5zpVJ?n4!1)wz@K8"
String data3;

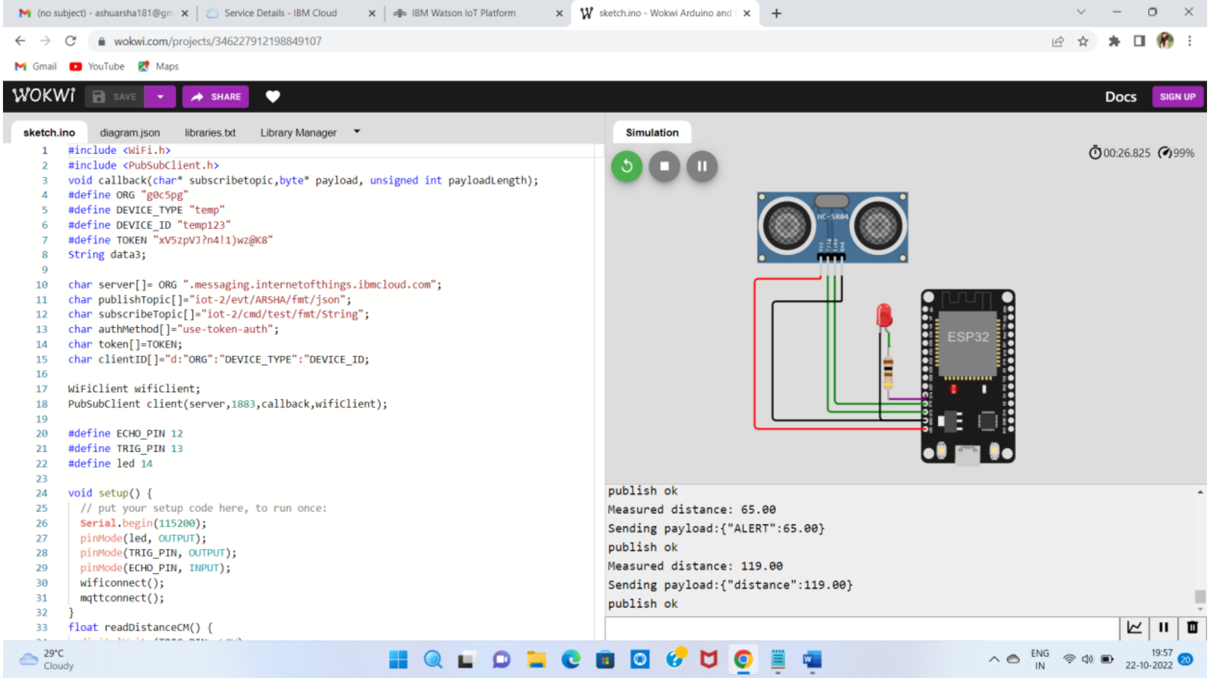
char server[]= ORG ".messaging.internetofthings.ibmcloud.com";
char publishTopic[]="iot-2/evt/ARSHA/fmt/json";
char subscribeTopic[]="iot-2/cmd/test/fmt/String";
char authMethod[]="use-token-auth";
char token[]=TOKEN;
char clientID[]="d:"ORG":"DEVICE_TYPE":"DEVICE_ID;

WiFiClient wifiClient;
PubSubClient client(server,1883,callback,wifiClient);

#define ECHO_PIN 12
#define TRIG_PIN 13
#define led 14

void setup() {
  // put your setup code here, to run once:
  Serial.begin(115200);
  pinMode(led, OUTPUT);
  pinMode(TRIG_PIN, OUTPUT);
  pinMode(ECHO_PIN, INPUT);
  wificonnect();
  mqttconnect();
}
float readDistanceCM() {
```

```
publish ok
Measured distance: 106.00
Sending payload:{"distance":106.00}
publish ok
Measured distance: 60.00
Sending payload:{"ALERT":60.00}
publish ok
```



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float readDistanceCM() {
```

```
publish ok
Measured distance: 65.00
Sending payload:{"ALERT":65.00}
publish ok
Measured distance: 119.00
Sending payload:{"distance":119.00}
publish ok
```