ASSIGNMENT - 4

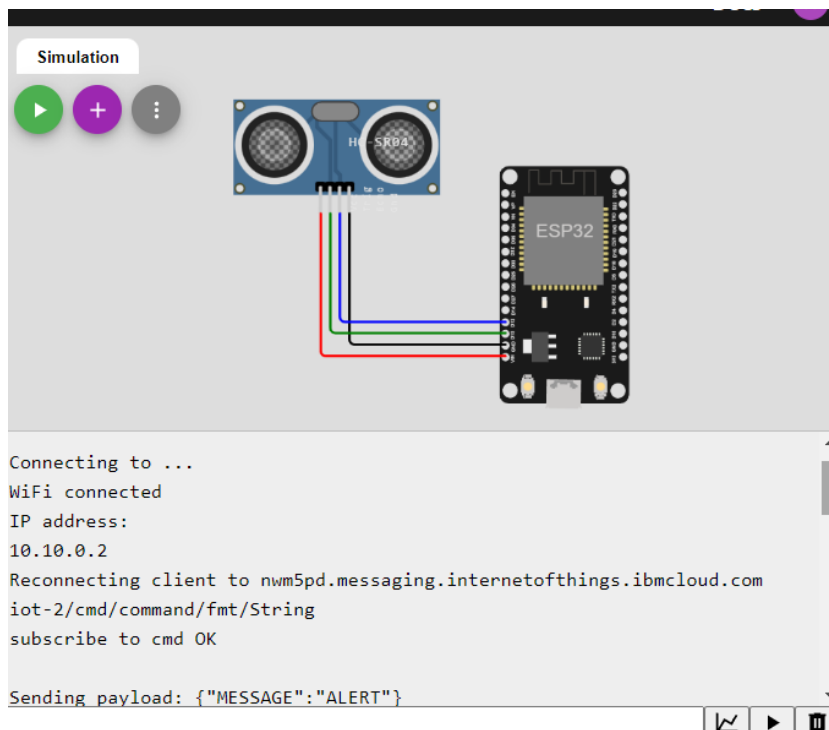| Date	28 September 2022
Student Name	Kauri Sheetal P
Student Roll Number	917719D038
Maximum Marks	2 marks

Question:

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.

Link: https://wokwi.com/projects/346784574540350036

Circuit Diagram:

sketch.ino   diagram.json   libraries.txt   Library Manager ▾

```
1   #include <WiFi.h>//library for wifi
2   #include <PubSubClient.h>//library for MQtt
3   #define TrigPIN 15
4   #define EchoPIN 4
5   #define MINDIST 100
6
7
8
9   void callback(char* subscribetopic, byte* payload, unsigned int payloadLength)
10
11  //-------credentials of IBM Accounts------
12
13  #define ORG "nwm5pd"//IBM ORGANITION ID
14  #define DEVICE_TYPE "assign"//Device type mentioned in ibm watson IOT Platform
15  #define DEVICE_ID "kauri"//Device ID mentioned in ibm watson IOT Platform
16  #define TOKEN "123456789"     //Token
17  String data3;
18  float h, t;
19
20
21  //-------- Customise the above values --------
22  char server[] = ORG ".messaging.internetofthings.ibmcloud.com";// Server Name
23  char publishTopic[] = "iot-2/evt/Data/fmt/json";// topic name and type of even
24  char subscribetopic[] = "iot-2/cmd/command/fmt/String";// cmd  REPRESENT comma
25  char authMethod[] = "use-token-auth";// authentication method
26  char token[] = TOKEN;
27  char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;//client id
```

Simulation

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ESP32

```
Connecting to ...
WiFi connected
IP address:
10.10.0.2
Reconnecting client to nwm5pd.messaging.internetofthings.ibmcloud.com
iot-2/cmd/command/fmt/String
subscribe to cmd OK

Sending payload: {"MESSAGE":"ALERT"}
```

OUTPUT:

Device Drilldown - kauri

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
Data	{"MESSAGE":"ALERT"}	json	a few seconds ago
Data	{"MESSAGE":"ALERT"}	json	a few seconds ago
Data	{"MESSAGE":"ALERT"}	json	a few seconds ago
Data	{"MESSAGE":"ALERT"}	json	a few seconds ago
Data	{"MESSAGE":"ALERT"}	json	a few seconds ago