

ASSIGNMENT - 4

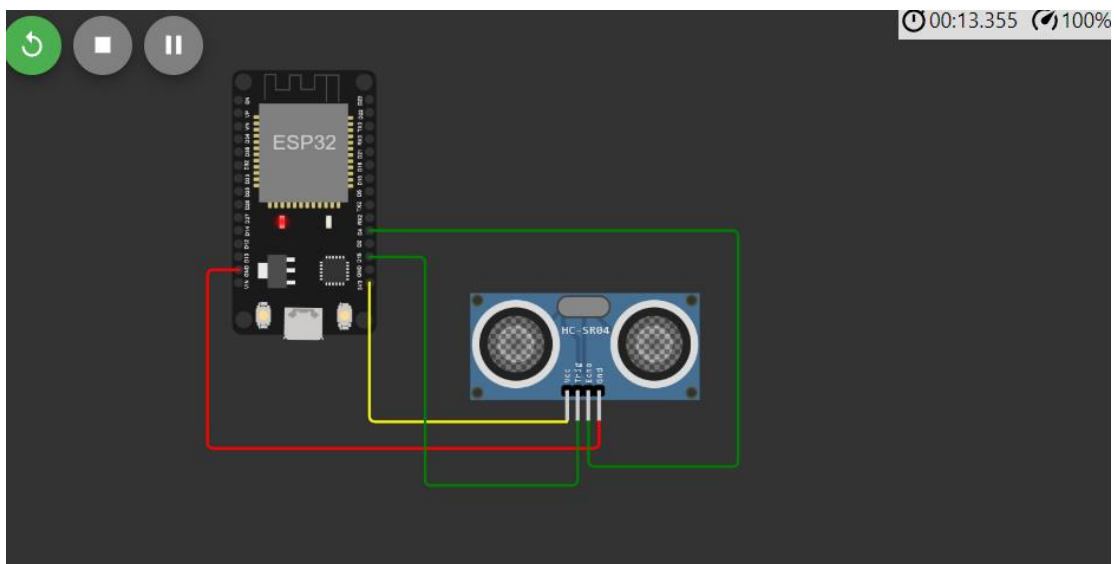
Date	19 September 2022
Team ID	PNT2022TMID21393
Project Name	Personal Assistance for Seniors Who Are Self-Reliant.
Maximum Marks	2 Marks

Objective:

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.

Circuit Diagram:

Link: <https://wokwi.com/projects/346775166279221842>



OUTPUT:

```
75 String payload = "{\"Distance\": ";
76 payload+=d;
77 payload+=" ";
78 payload+="MESSAGE\"";
79 payload+="\"";
80 payload+=s;
81 payload+="\"";
82 payload+="\"";
83
84
85 Serial.print("Sending payload: ");
86 Serial.println(payload);
87
88
89 if (client.publish(publishTopic, (char*) payload.c_str())) {
90   Serial.println("Publish ok");// if it successfully upload data on the cloud then it will
91 } else {
92   Serial.println("Publish failed");
93 }
94
95
96
97
98 void mqttconnect() {
99   if (!client.connected()) {
100     Serial.print("Reconnecting client to ");
101     Serial.println(server);
102     while (!client.connect(clientId, authMethod, token)) {
103       Serial.print(".");
104       delay(500);
105     }
106   }
107   initManualDevice();
108 }
```

Simulation

Editing Ultrasonic Distance Sensor
Distance: 135cm

Publish ok
Sending payload: {"Distance":134.96,"MESSAGE":"SAFE"}
Publish ok
Sending payload: {"Distance":134.96,"MESSAGE":"SAFE"}
Publish ok
Sending payload: {"Distance":134.98,"MESSAGE":"SAFE"}
Publish ok

```
75 String payload = "{\"Distance\": ";
76 payload+=d;
77 payload+=" ";
78 payload+="MESSAGE\"";
79 payload+="\"";
80 payload+=s;
81 payload+="\"";
82 payload+="\"";
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98 void mqttconnect() {
99   if (!client.connected()) {
100     Serial.print("Reconnecting client to ");
101     Serial.println(server);
102     while (!client.connect(clientId, authMethod, token)) {
103       Serial.print(".");
104       delay(500);
105     }
106   }
107   initManualDevice();
108 }
```

Simulation

Editing Ultrasonic Distance Sensor
Distance: 99cm

Publish ok
Sending payload: {"Distance":98.99,"MESSAGE":"ALERT"}
Publish ok
Sending payload: {"Distance":98.97,"MESSAGE":"ALERT"}
Publish ok
Sending payload: {"Distance":98.97,"MESSAGE":"ALERT"}
Publish ok

Browse Action Device Types Interfaces

ab cd Connected 123 Device Oct 28, 2022 9:18 PM

Identity Device Information Recent Events State Logs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
Data	{"Distance":126.96,"MESSAGE":"SAFE"}	json	a few seconds ago
Data	{"Distance":126.99,"MESSAGE":"SAFE"}	json	a few seconds ago
Data	{"Distance":120.99,"MESSAGE":"SAFE"}	json	a few seconds ago
Data	{"Distance":98.97,"MESSAGE":"ALERT"}	json	a few seconds ago
Data	{"Distance":98.97,"MESSAGE":"ALERT"}	json	a few seconds ago

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0 Simulations running