

ASSIGNMENT 4

Write code and connections in wowki for ultrasonic sensor.

Whenever distance is less than 100cms send “alert” to IBM cloud and display in device recent events.

Program Code:

```
#include "Ultrasonic.h"
Ultrasonic ultrasonic(6,2);
int distance; void setup()
{
  Serial.begin(9600);
}
void loop() {
  distance = ultrasonic.read(CM);
  Serial.print("Distance in CM: ");
  Serial.println(distance); if
  (distance < 100)
```

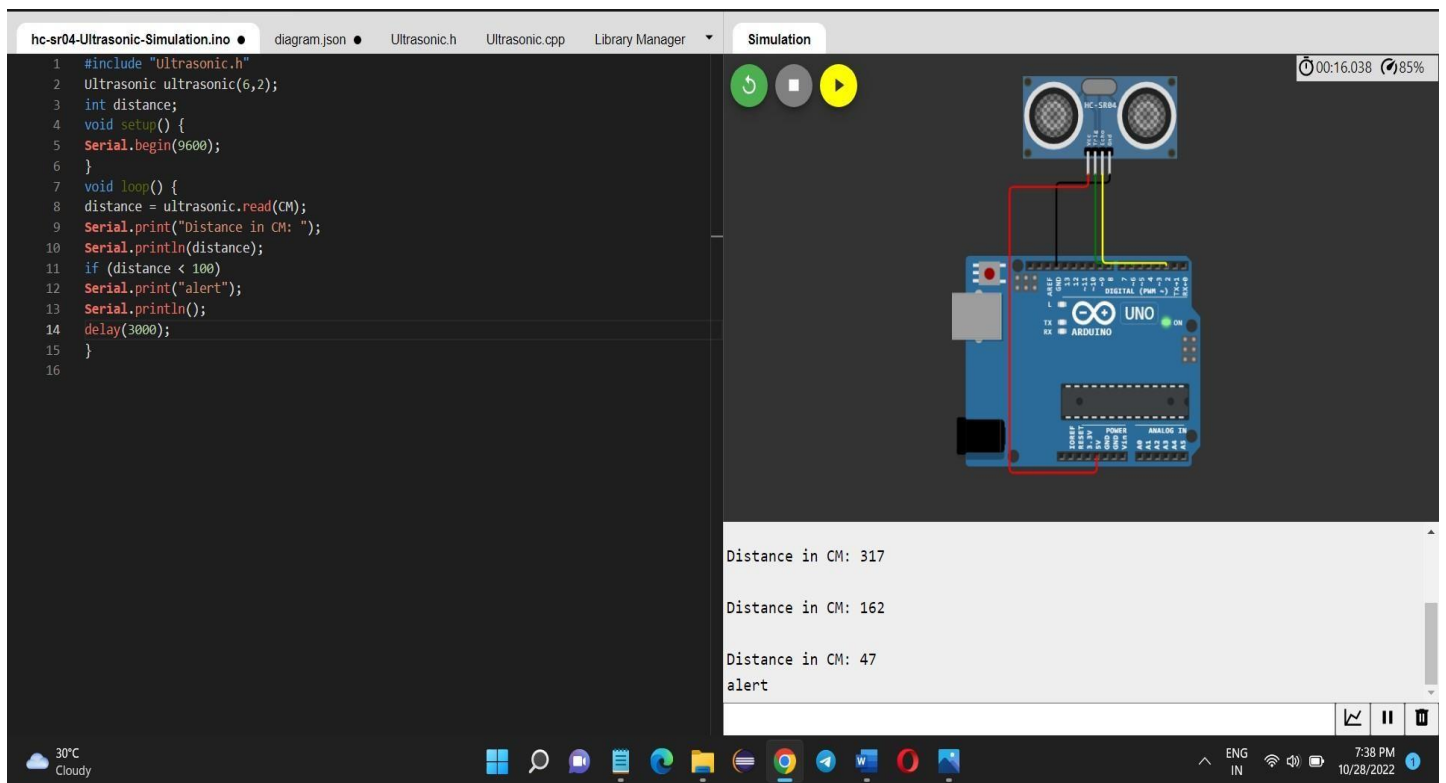
```
Serial.print("alert");
```

```
Serial.println();
```

```
delay(3000);
```

```
}
```

OUTPUT:



The screenshot displays the Arduino IDE interface with a simulation running. The left pane shows the code for `hc-sr04-Ultrasonic-Simulation.ino`, which includes the `Ultrasonic` library and implements a distance-measuring loop. The right pane shows a virtual circuit diagram of an HC-SR04 ultrasonic sensor connected to an Arduino Uno. The sensor's VCC pin is connected to the Arduino's 5V pin, GND to GND, Trig to digital pin 2, and Echo to digital pin 3. The simulation output window at the bottom right shows the serial monitor data.

```
1 #include "Ultrasonic.h"
2 Ultrasonic ultrasonic(6,2);
3 int distance;
4 void setup() {
5   Serial.begin(9600);
6 }
7 void loop() {
8   distance = ultrasonic.read(CM);
9   Serial.print("Distance in CM: ");
10  Serial.println(distance);
11  if (distance < 100)
12    Serial.print("alert");
13    Serial.println();
14    delay(3000);
15  }
16
```

Simulation output (Serial Monitor):

```
Distance in CM: 317
Distance in CM: 162
Distance in CM: 47
alert
```

System status bar: 30°C Cloudy, 7:38 PM, 10/28/2022.