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Topic	Signs With smart connectivity for better road safety
Assignment	Write code and connections in wokwi 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(12,13);
int distance;
void setup() {
  Serial.begin(9600);
}
void loop() {
  distance = ultrasonic.read();
  Serial.print("Distance in CM: ");
  Serial.println(distance);
  If(distance<100);
  Serial.print("alert ");
  Serial.println();
  delay(1000);
}

```

Output :

Wokwi IDE interface showing the simulation of an Arduino Uno connected to an HC-SR04 ultrasonic sensor.

Code (hc-sr04-Ultrasonic-Simulation.ino):

```
38 #include "Ultrasonic.h"
39
40 /*
41  * Pass as a parameter the trigger and echo pin, respectively,
42  * or only the signal pin (for sensors 3 pins), like:
43  * Ultrasonic ultrasonic(13);
44  */
45 Ultrasonic ultrasonic(12, 13);
46 int distance;
47 void setup() {
48   Serial.begin(9600);
49 }
50 void loop() {
51   // Pass INC as a parameter to get the distance in inches
52   distance = ultrasonic.read(CM);
53   Serial.print("Distance in CM: ");
54   Serial.println(distance);
55   if(distance < 100);
56   Serial.print("alert ");
57   Serial.println();
58   delay(1000);
59 }
```

Simulation Output:

```
Distance in CM: 105
alert
Distance in CM: 105
alert
Distance in CM: 105
alert
```

The simulation shows the Arduino Uno board connected to the HC-SR04 sensor. The output displays the distance measured in centimeters (105 CM) and triggers an alert when the distance is less than 100 CM.

