IBM ASSIGNMENT

Project Title: Signs with Smart Connectivity for Better Road Safety

IBM GitHub Repo: IBM-EPBL/**IBM-Project-29724-1660128910**

Team Member:

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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.

Python Code:

```
#define ECHO_PIN 2
#define TRIG_PIN 3

void setup() {
  Serial.begin(115200);
  pinMode(LED_BUILTIN, OUTPUT);
  pinMode(TRIG_PIN, OUTPUT);
  pinMode(ECHO_PIN, INPUT);
}

float readDistanceCM() {
  digitalWrite(TRIG_PIN, LOW);
  delayMicroseconds(2);
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
  int duration = pulseIn(ECHO_PIN, HIGH);
  return duration * 0.034 / 2;
```

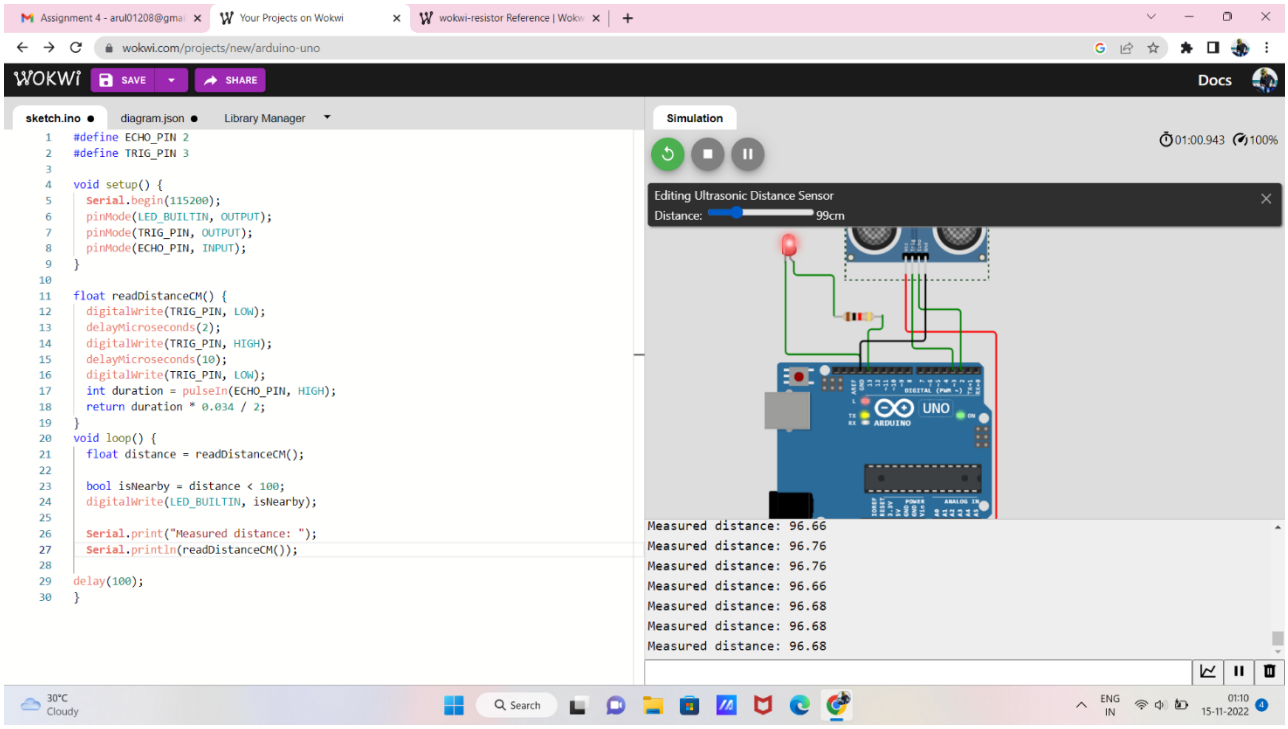
```
}
void loop() {
  float distance = readDistanceCM();

  bool isNearby = distance < 100;
  digitalWrite(LED_BUILTIN, isNearby);

  Serial.print("Measured distance: ");
  Serial.println(readDistanceCM());

delay(100);
}
```

OUTPUT:


Assignment 4 - arul01208@gmai
Your Projects on Wokwi
wokwi-resistor Reference | Wokw
wokwi.com/projects/new/arduino-uno
WOKWI
SAVE
SHARE
Docs
sketch.ino
diagram.json
Library Manager
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Serial.print("Measured distance: ");
Serial.println(readDistanceCM());
delay(100);
}
Simulation
01:00.943
100%
Editing Ultrasonic Distance Sensor
Distance:
99cm
UNO
ARDUINO
Measured distance: 96.66
Measured distance: 96.76
Measured distance: 96.76
Measured distance: 96.66
Measured distance: 96.68
Measured distance: 96.68
Measured distance: 96.68
30°C
Cloudy
Search
ENG
IN
01:10
15-11-2022

IBMcloud Output