

IBM ASSIGNMENT-4

Assignment Date	24 October 2022
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ASSIGNMENT DETAILS:

Technology: IOT

Domain: Smart solution for railways

ASSIGNMENT QUESTION:-

Write a 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.

Note: I couldn't complete the assignment as told due to some issues in IBM cloud. I have mentioned my query in both rocket chat and chat with mentor.

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);
}
```

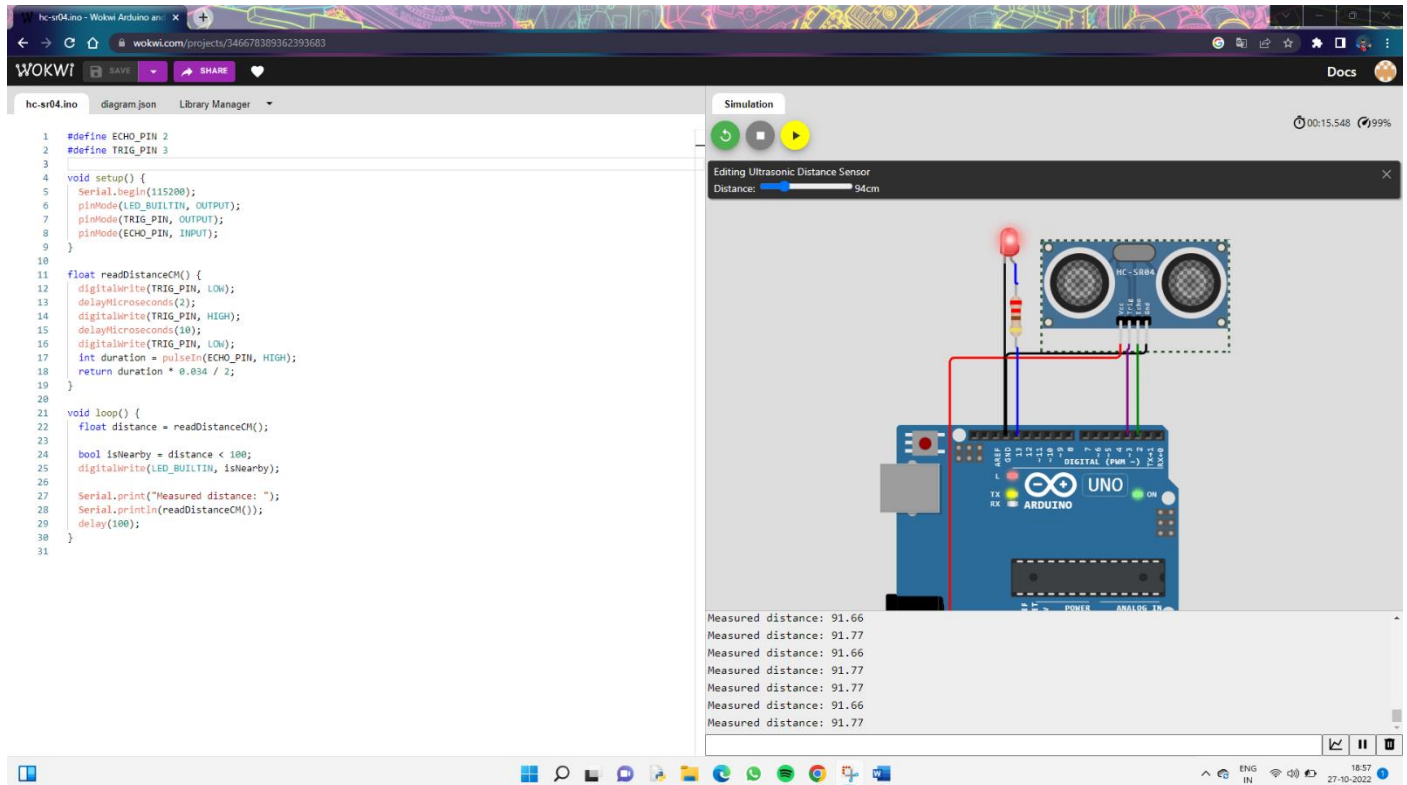
```

Serial.print("Measured distance: ");
Serial.println(readDistanceCM());
delay(100);
}

```

OUTPUT:

When the distance is less than 100cms LED glows as an alert



Whenever the distance is above 100cms it shows normal and LED is off

