**ASSIGNMRNT 4**

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| --- | --- |
| Date | 31October2022 |
| TeamID | PNT2022TMID40997 |
| MaximumMarks | 2Marks |

**Question1:**

\*Write code and connections in wokwi for the ultrasonic sensor.

\*Write code and connections in work for ultrasonic sensor.Whenever distance is less than 100cms send"alert"to ibm cloud and display in device recent events.

**Code:**

#define ECHO\_PIN 1

#define TRIG\_PIN 9

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 \* 5.044/2;

}

void loop() {

float distance = readDistanceCM();

bool isNearby = distance < 100;

digitalWrite(LED\_BUILTIN, isNearby);

**Serial**.print("Measured distance: ");

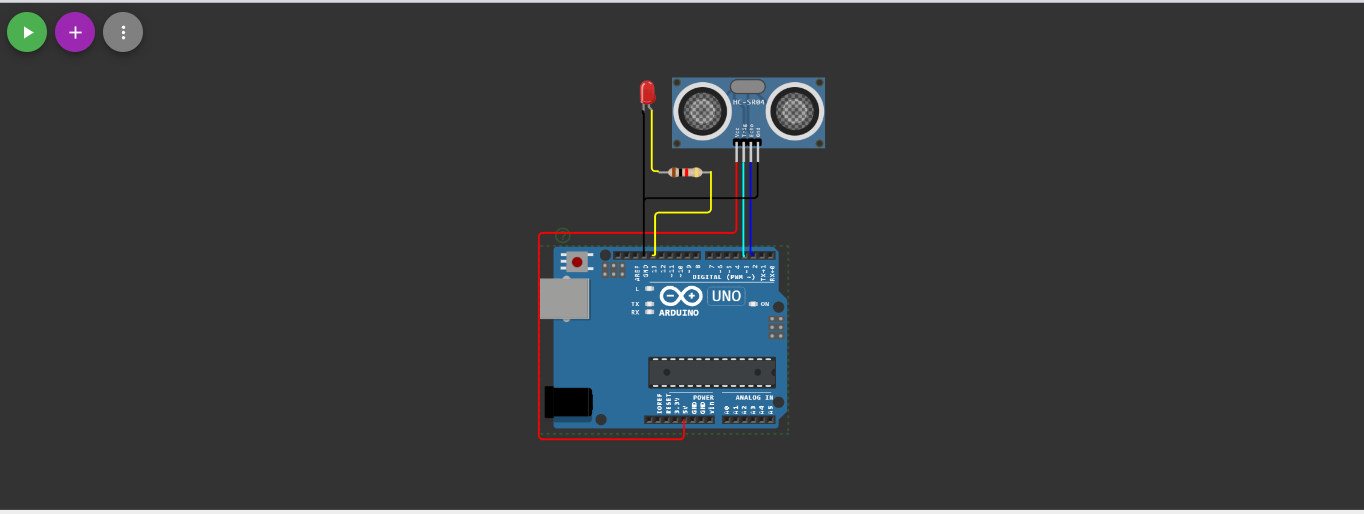
**Serial**.println(readDistanceCM());

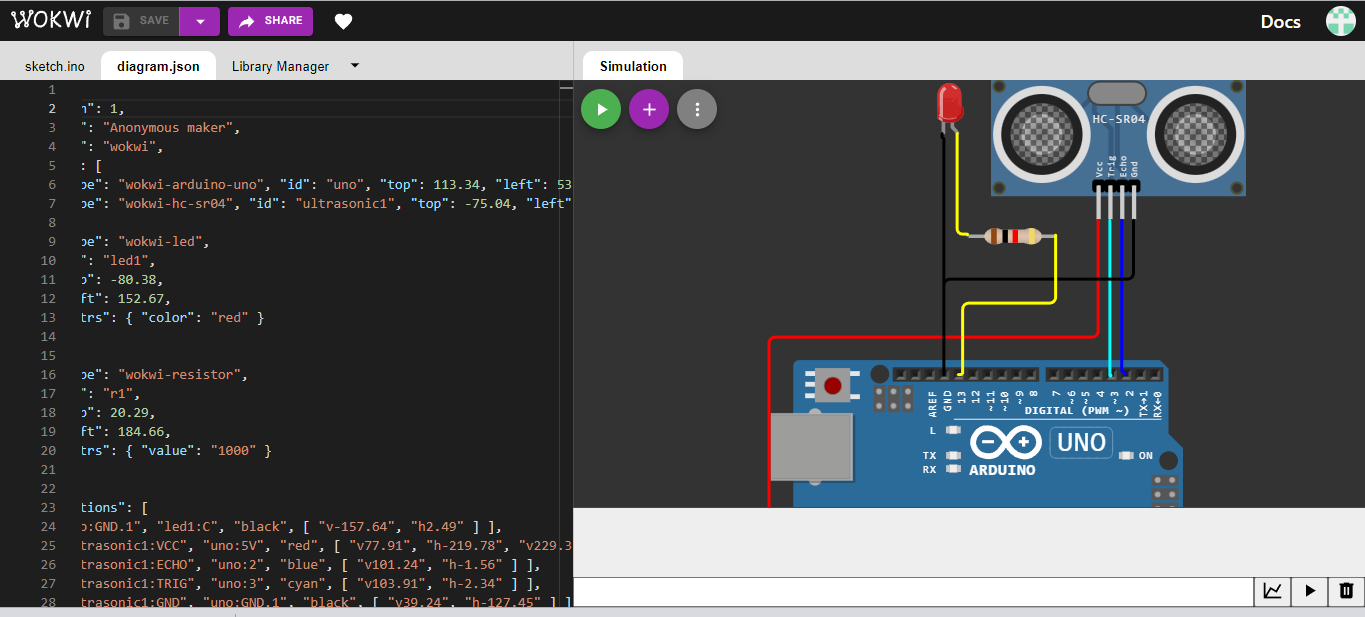
 delay(100);

}

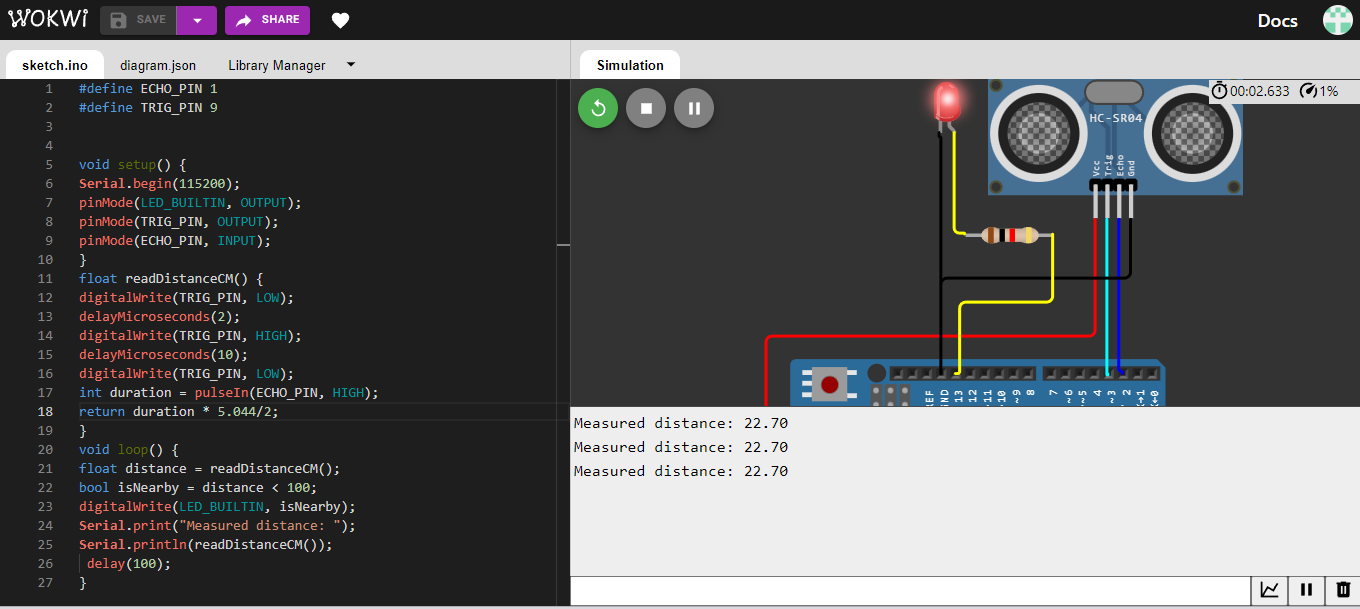
WOKWI LINK : https://wokwi.com/projects/347102827413242450

**Solution :**

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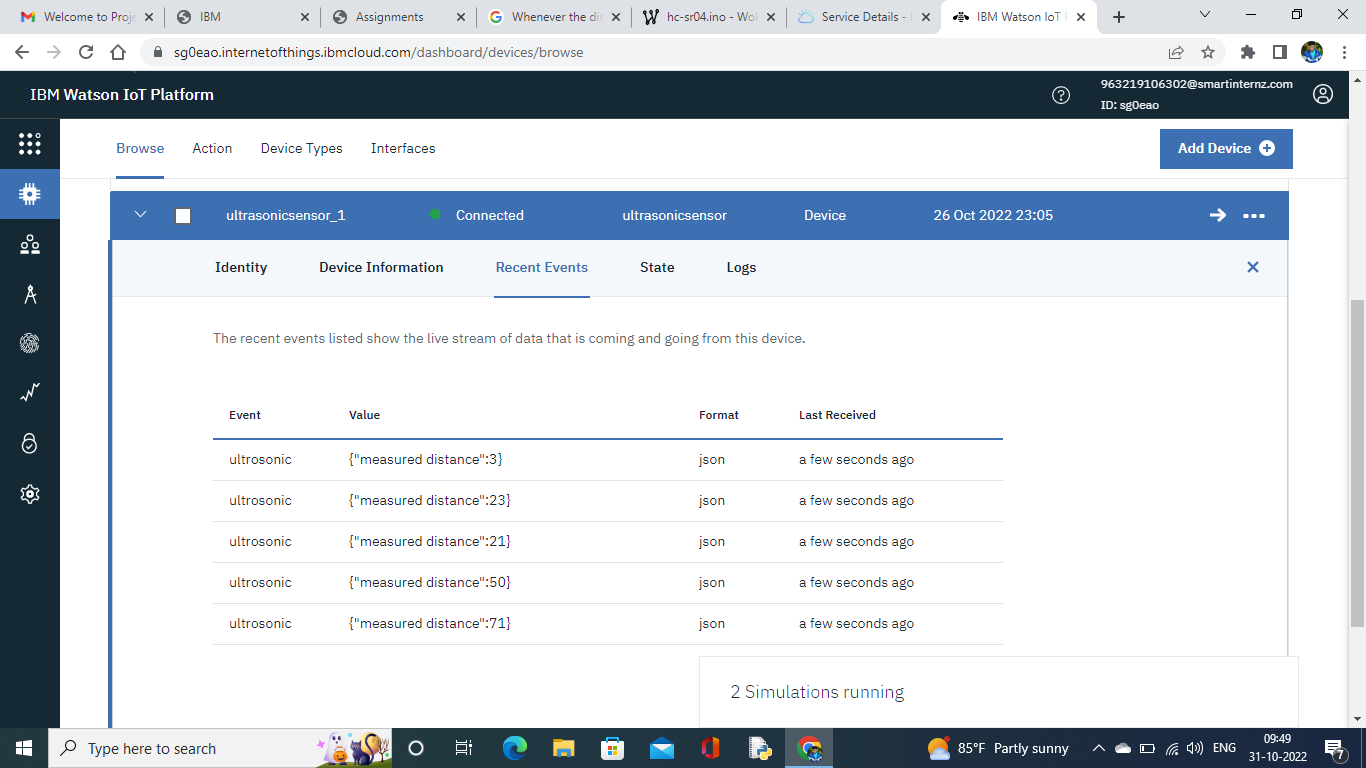
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**Solution run:**

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OUTPUT:

DATA IS SENT TO IBM CLOUD WHEN NO OBJECT IS DETECTED



When no object is detected :

