SMART FARMER – IoT ENABLED SMART FARMER APPLICATION ASSIGNMENT – 4

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| **Team ID** | PNT2022TMID12810 |
| **Name** | SNEHA S |
| **Roll No.** | 718019L135 |

**1. Write Code and connections in wokwi for ultrasonic sensor. Whenever distance is less than 100 centimetres send an *‘alert’* to the ibm cloud and display in device recent events.**

**Program:**

#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(); if(distance<100)

{

**Serial**.println("Alert!!!!!!!!!");

}

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

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

delay(100);

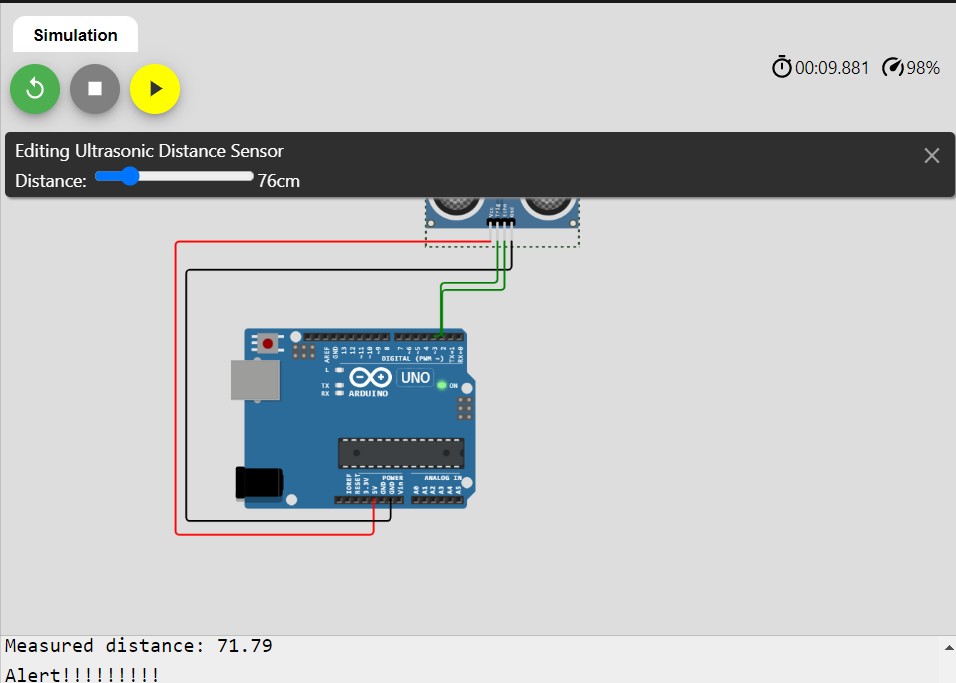
}

**Wokwi Editor window:**

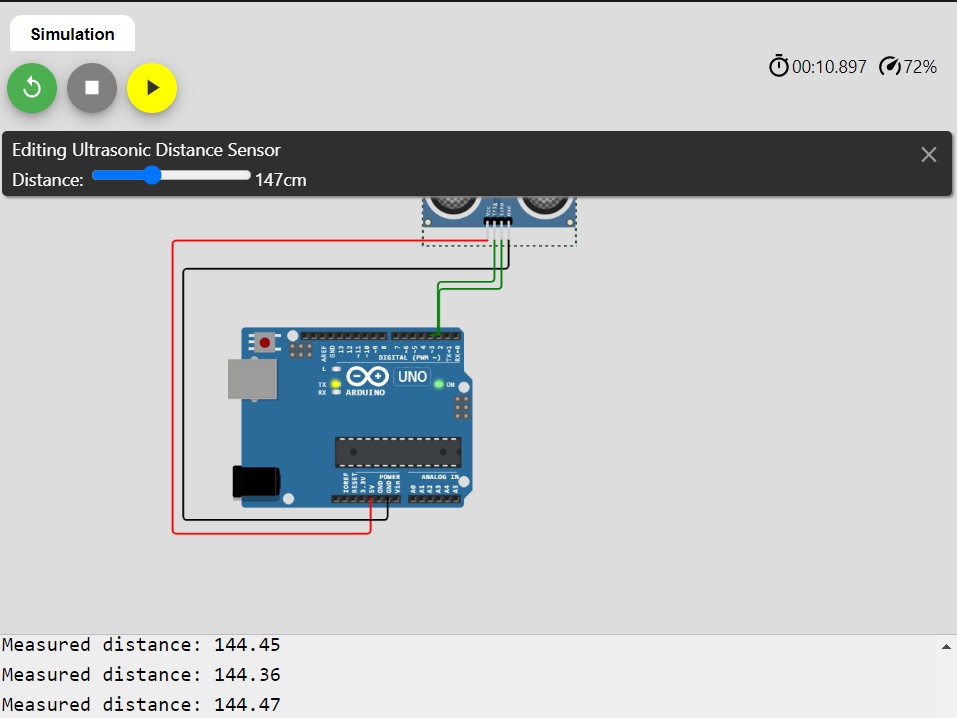
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**Results:**

1. The measured distance is less than 100 centimetres, it gives alert message



1. The measured distance is more than 100 centimetres, it will not give alert message



**Wokwi Link:** [**https://wokwi.com/projects/346951499588305491**](https://wokwi.com/projects/346951499588305491)