**SMART FARMER – IoT ENABLED SMART FARMER APPLICATION**

**ASSIGNMENT – 4**

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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!!!!!!!!!");

  }

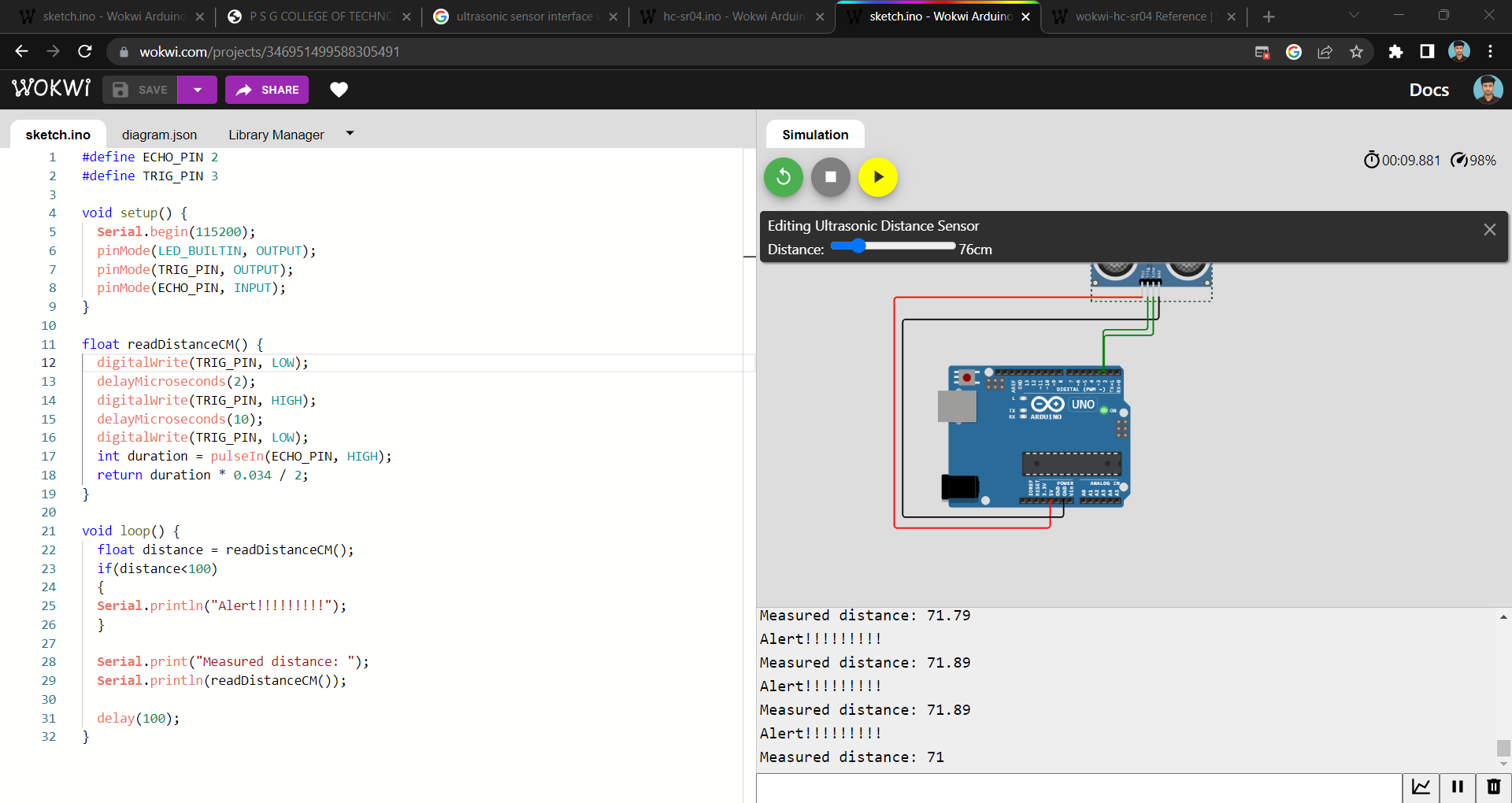
**Serial**.print("Measured distance: ");

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

  delay(100);

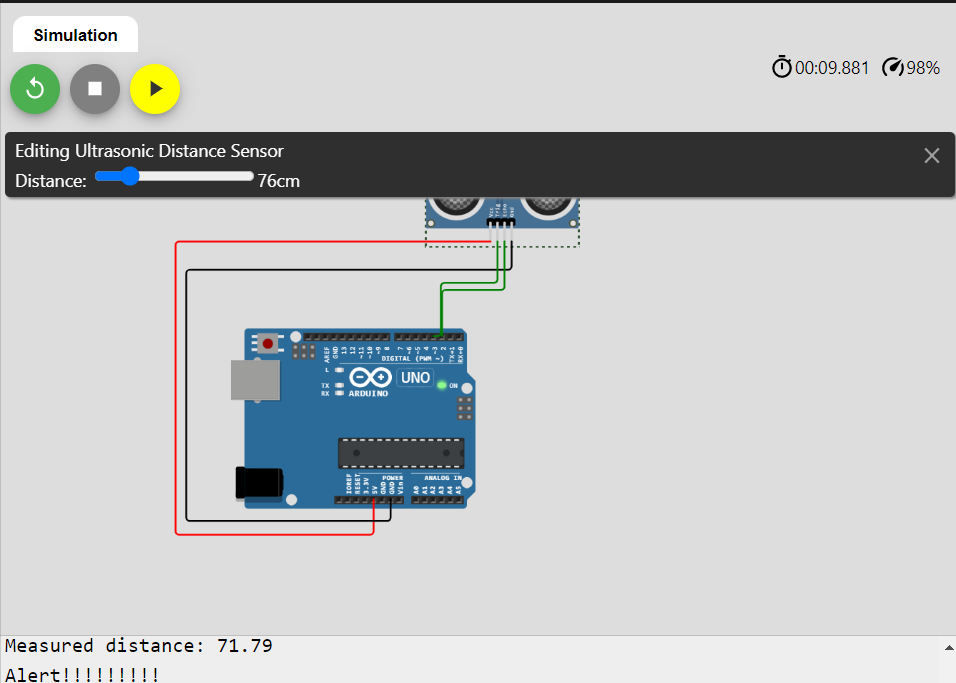
}

**Wokwi Editor window:**

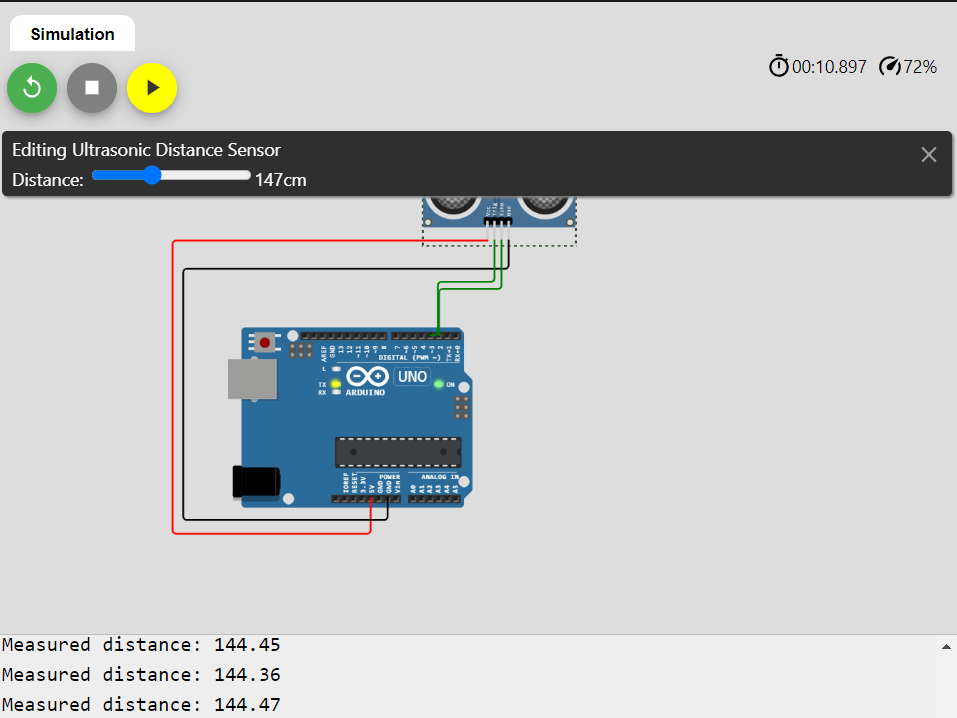
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**Results:**

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)