

Assignment -4
WOKWI

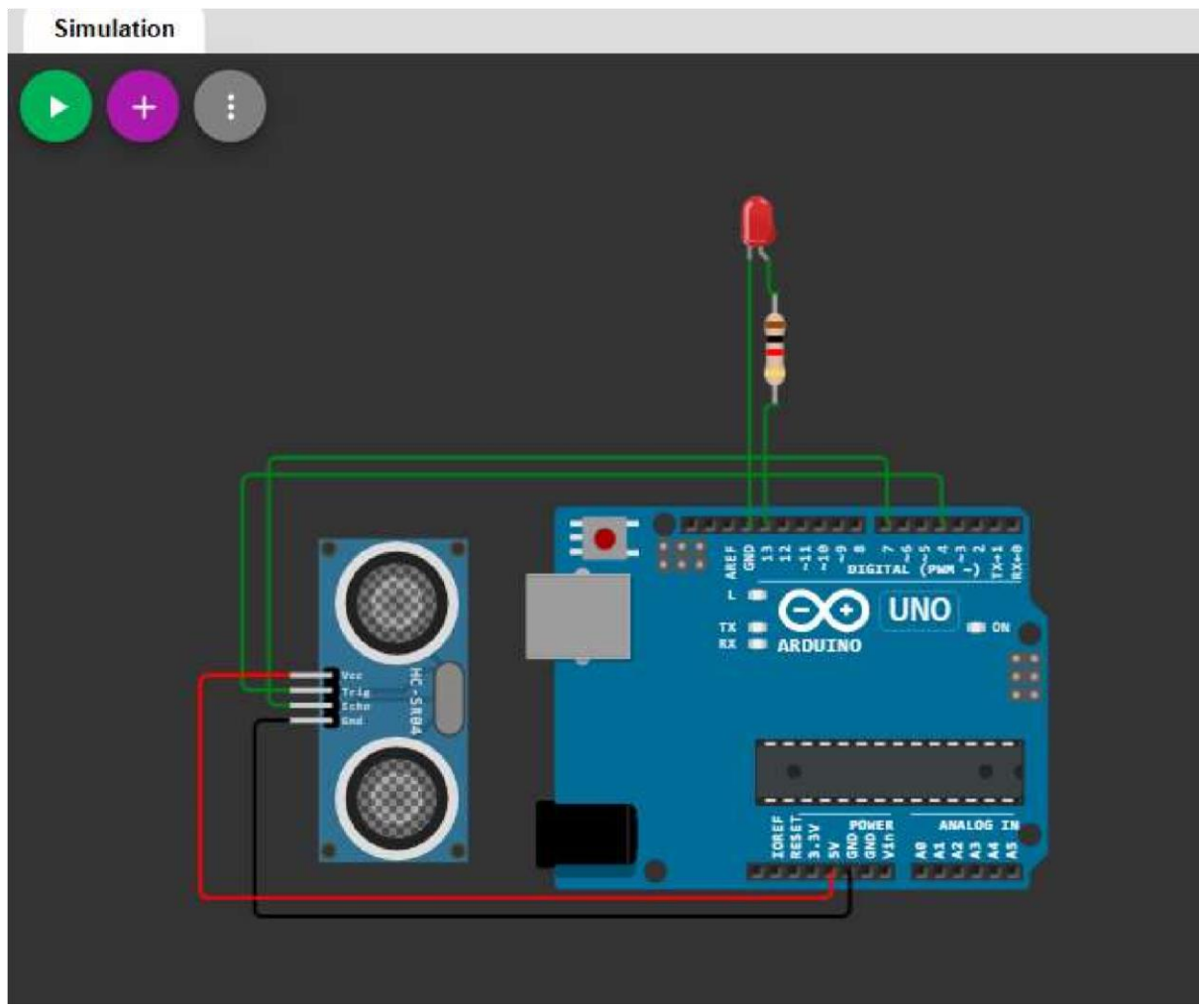
Assignment Date	28 October 2022
Student Name	GUNTHA HARSHAVARDHAN
Student Roll Number	721419106011
Maximum Marks	2 Marks

Question:

Write a code and connection in wokwi for ultrasonic sensor .whenever distance is less than 100 cms send alert

Solution:

[SIMULATION](#)



CODE

```
#define ECHO_PIN 2 #define
TRIG_PIN 9 void setup() {
Serial.begin(115200);
pinMode(LED_BUILTIN, OUTPUT);
pinMode(TRIG_PIN, OUTPUT);
pinMode(ECHO_PIN, INPUT);
}

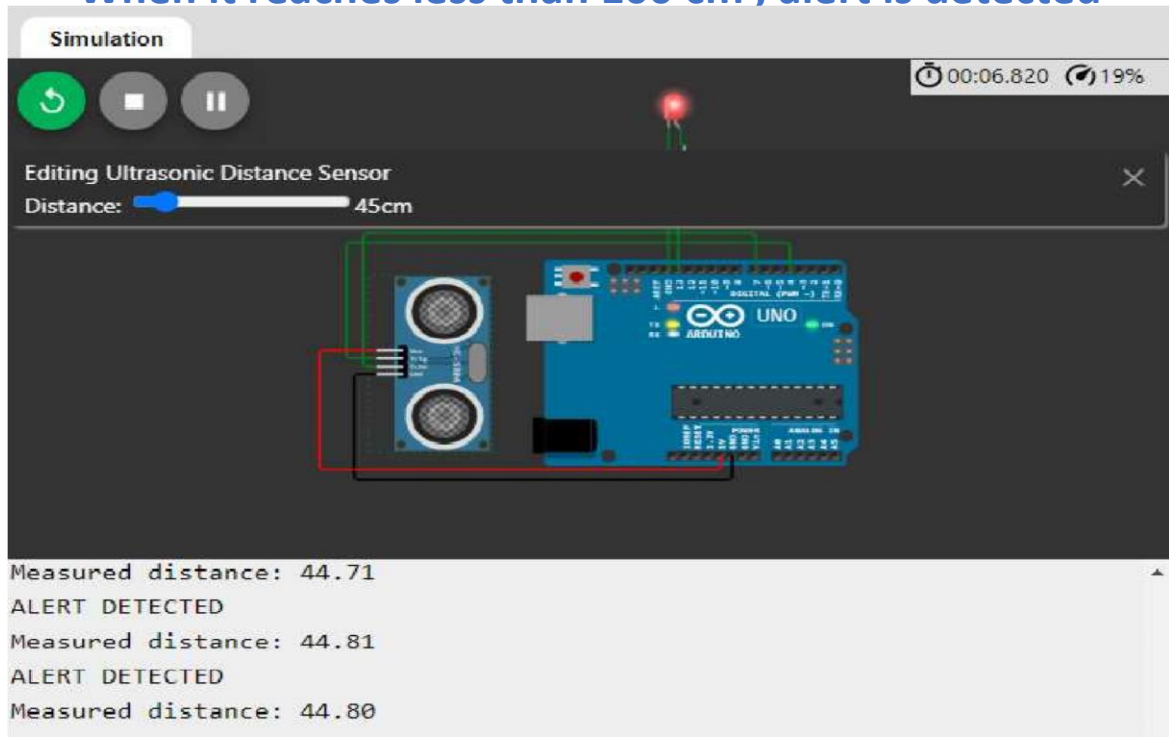
float readDistanceCM() {
digitalWrite(TRIG_PIN, LOW); delay(2);
digitalWrite(TRIG_PIN, HIGH); delay(10);
digitalWrite(TRIG_PIN, LOW); int
duration = pulseIn(ECHO_PIN, HIGH);
```

```
    return duration * 0.034 / 2;
}

void loop() { float distance =
readDistanceCM(); if (distance <
100){ bool isNearby = distance < 100;
digitalWrite(LED_BUILTIN, isNearby);
Serial.println("ALERT DETECTED ");
    Serial.print("Measured distance: ");
Serial.println(readDistanceCM()); delay(100);
}
else {
    bool isNearby = distance > 100;
digitalWrite(LED_BUILTIN, LOW); Serial.println("ALERT
NOT DETECTED");
    Serial.print("Measured distance: ");
Serial.println(readDistanceCM()); delay(100);
}
}
```

OUTPUT

When it reaches less than 100 cm , alert is detected



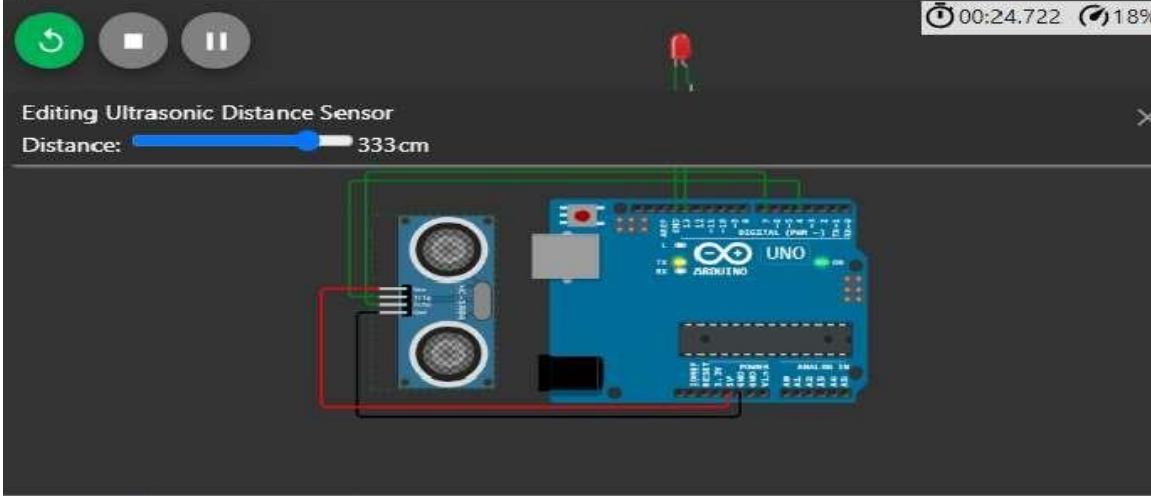
When the distance is greater than 100 cm , alert is not

detected

Simulation

00:24.722 18%

Editing Ultrasonic Distance Sensor
Distance: 333 cm



Measured distance: 331.06
ALERT NOT DETECTED
Measured distance: 331.04
ALERT NOT DETECTED
Measured distance: 330.94
ALERT NOT DETECTED

PROGRAM AND OUTPUT



REFERENCE LINK

<https://wokwi.com/projects/346757092672012882>