ASSIGNMENT-4

Code and connections using wokwi

Assignment Date	25th October 2022
Student Name	Ms. Keerthana Dhanachezian
Student Roll Number	510119106005
Maximum Marks	4 Marks

Question:

Write code and connections in Wokwi for ultrasonic sensor whenever distance is less than 100m send alert message.

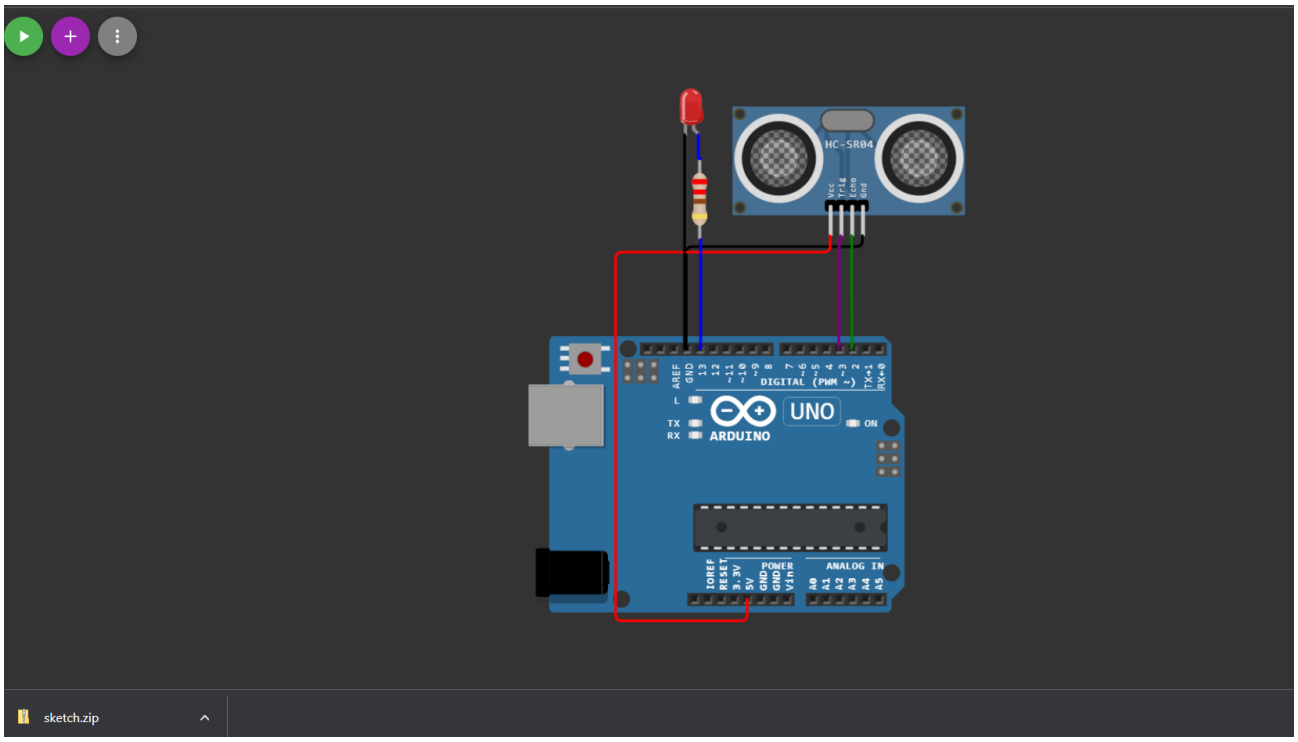
Solution:

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);
}
```

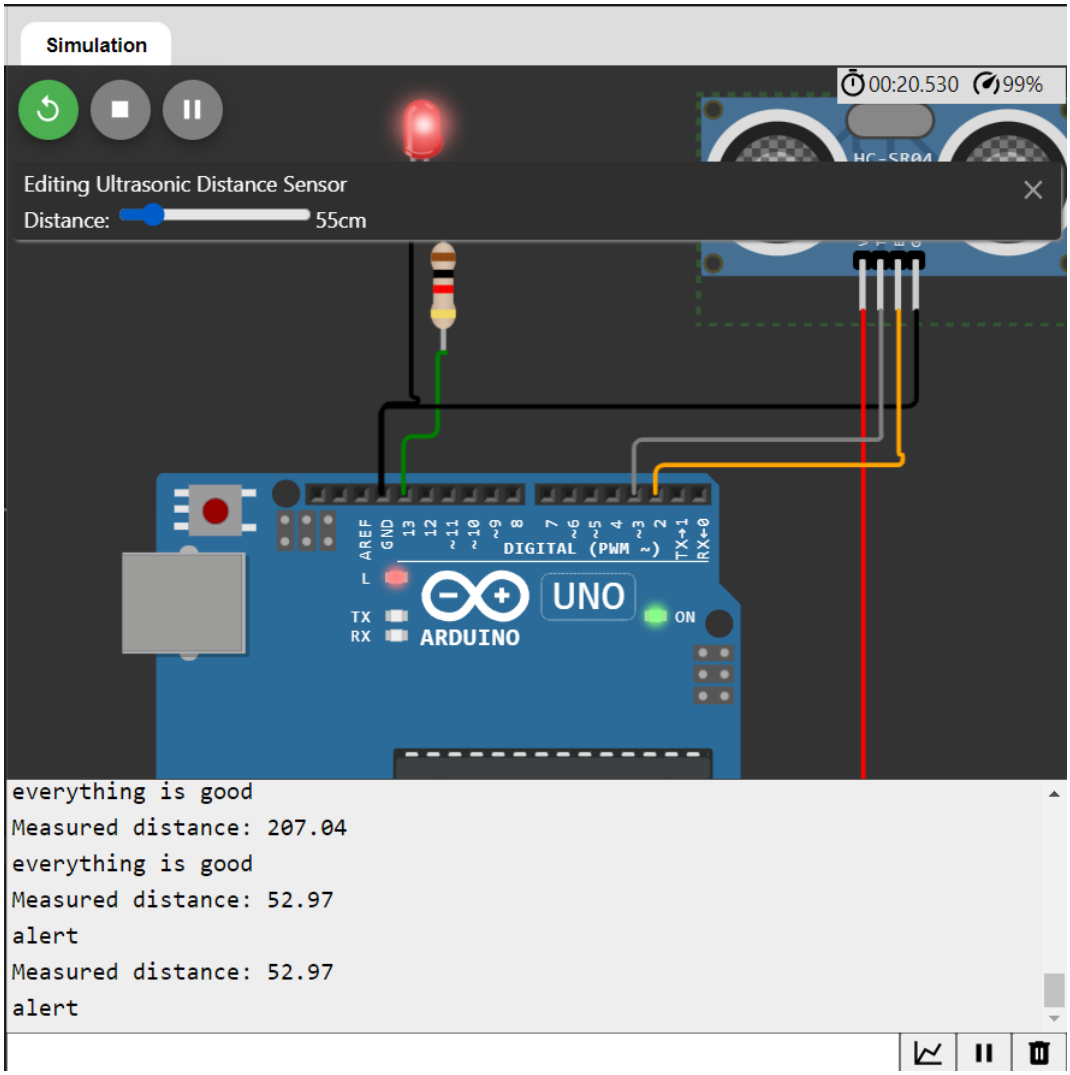
Circuit connections:



URL link : https://wokwi.com/projects/290056311044833800

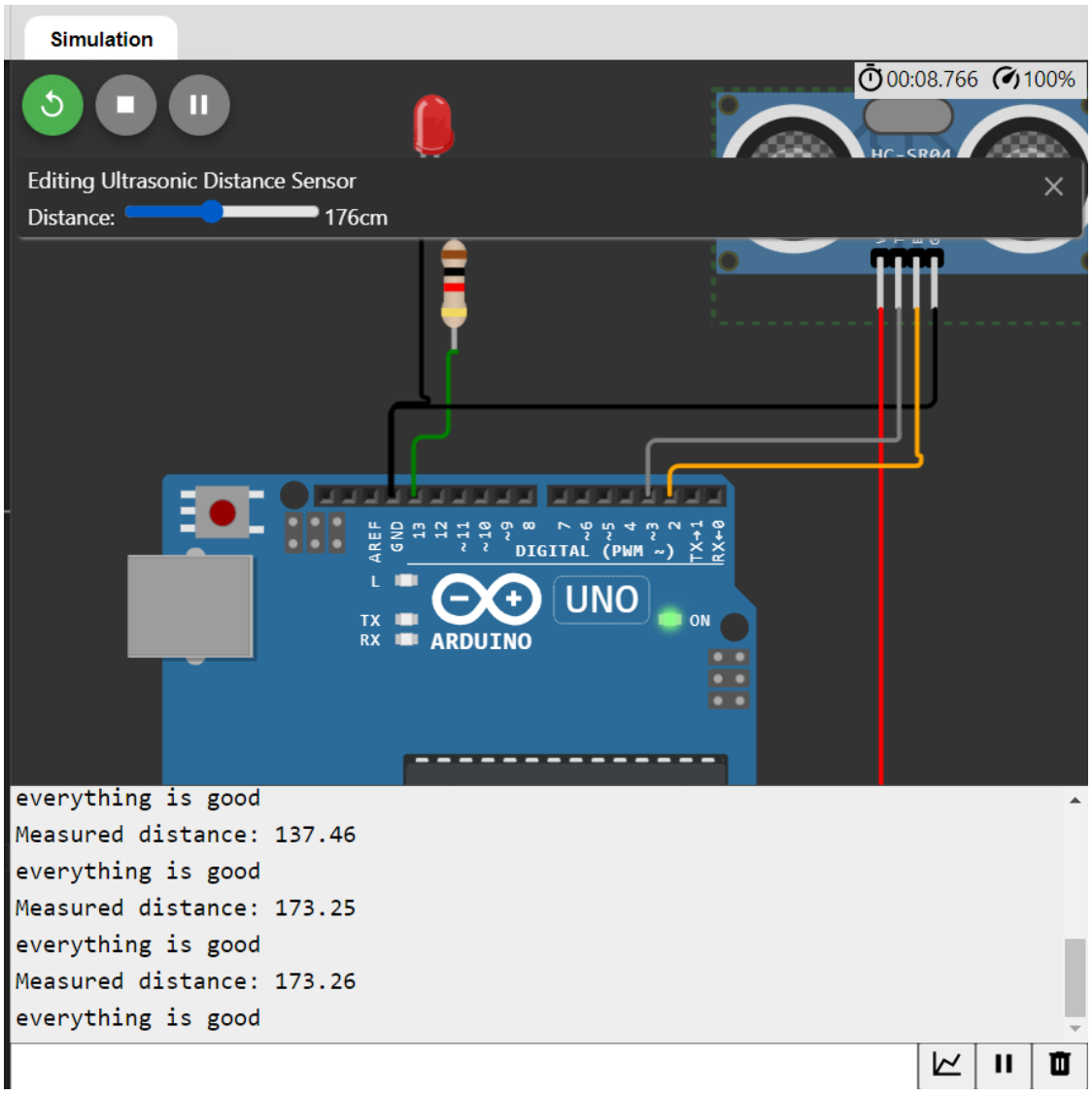
Case (i):

When distance is less than 100m sends “alert” message.



Case (ii):

When distance is greater than 100m sends “everything is good” message.



Hereby I had some problems in working with ibm cloud so, that I did not attach the images of using ibm cloud. So I’m attaching only the wokwi link.