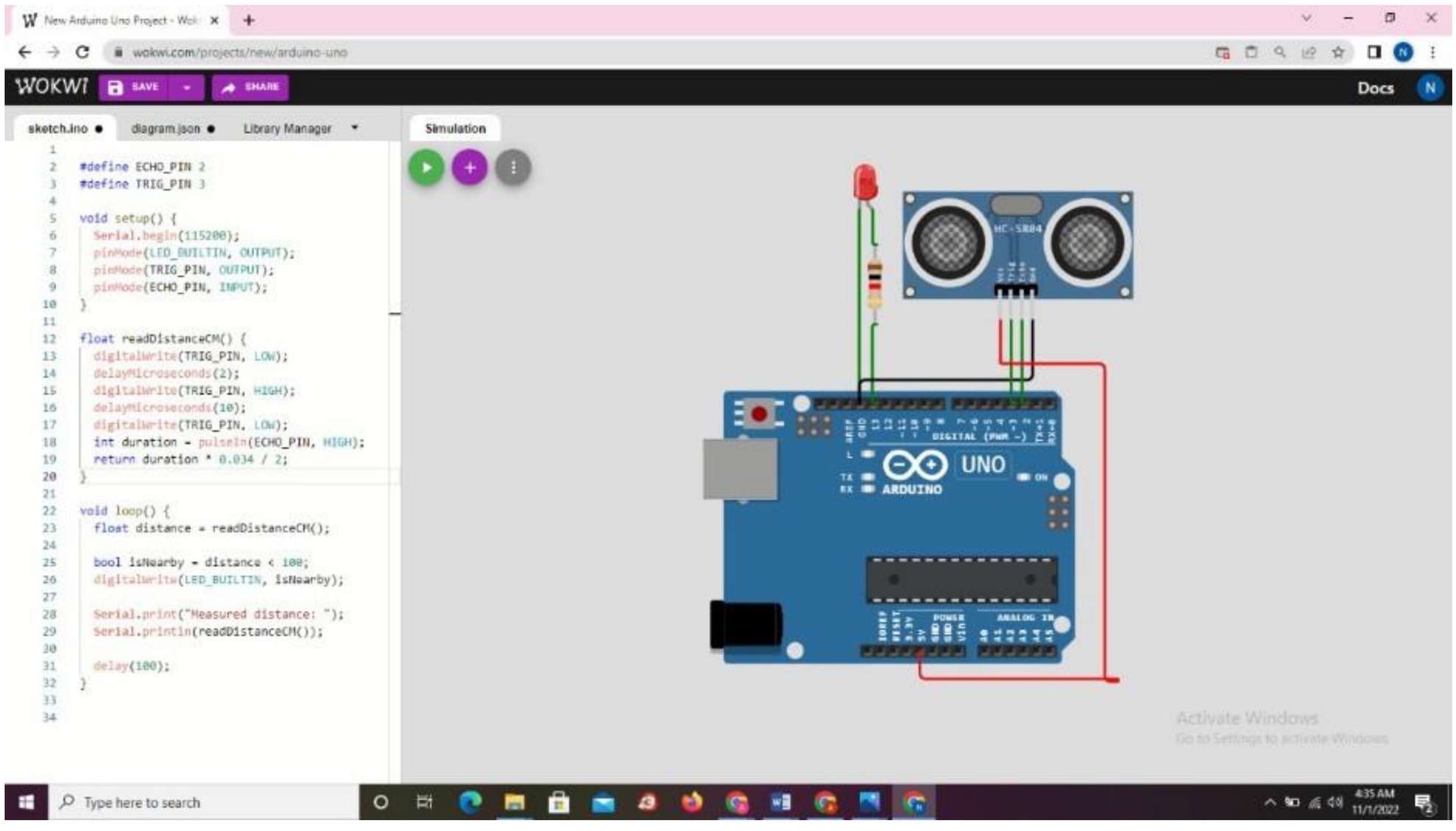
ASSIGNMENT-4

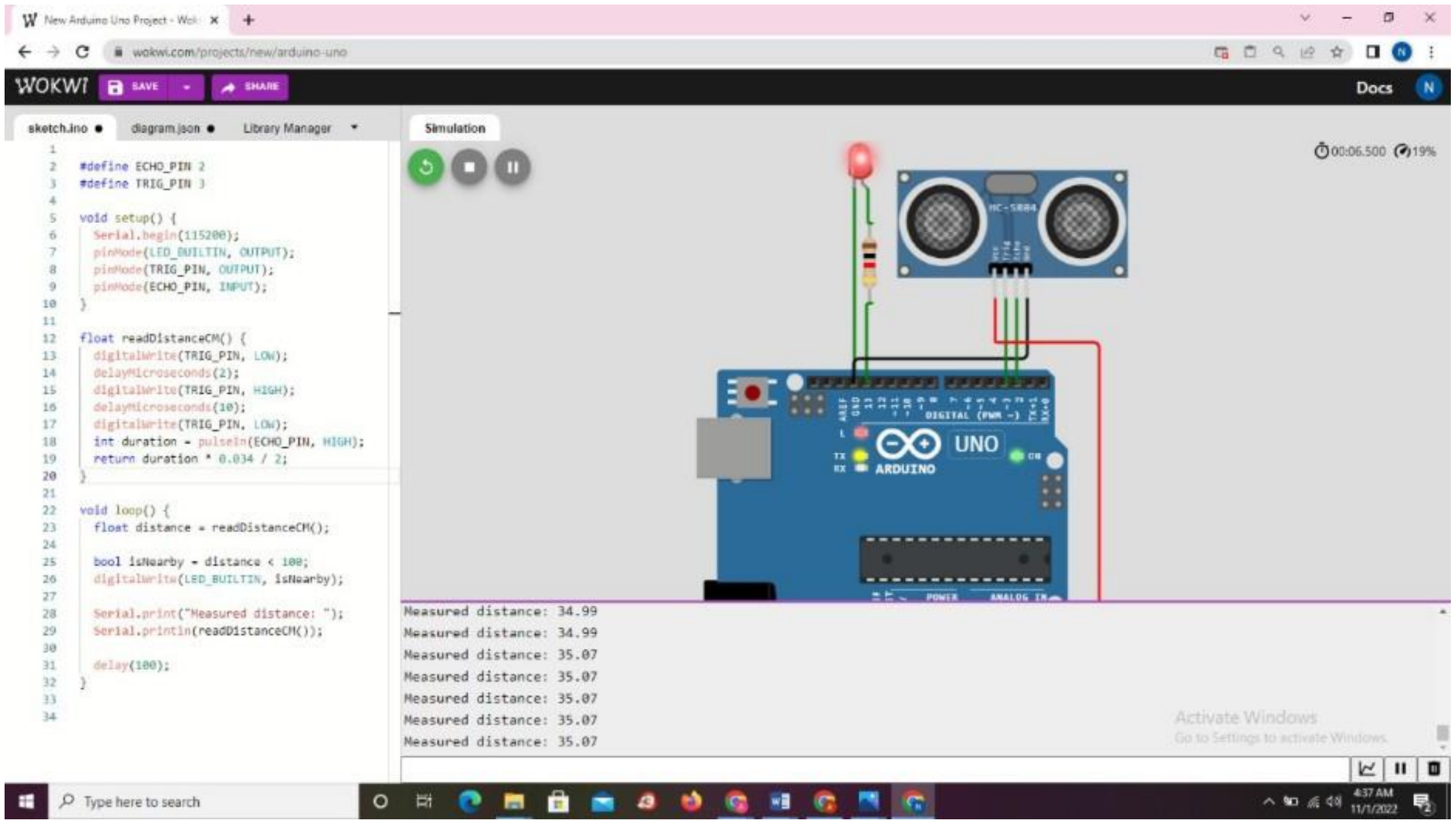
Code:

```
#defineECHO_PIN2
#defineTRIG_PIN3

voidsetup(){
 Serial.begin(115200);
 pinMode(LED_BUILTIN,OUTPUT;
 pinMode(TRIG_PIN,OUTPUT);pin
 Mode(ECHO_PIN,INPUT);
}

float readDistanceCM()
 {digitalWrite(TRIG_PIN,LOW);
 delayMicroseconds(2);
 digitalWrite(TRIG_PIN,HIGH);
 delayMicroseconds(10);
 digitalWrite(TRIG_PIN,LOW);
 intduration=pulseIn(ECHO_PIN,HIGH);
 returnduration*0.034/2;
}

voidloop(){
 floatdistance=readDistanceCM();

 boolisNearby=distance<100;
 digitalWrite(LED_BUILTIN,isNearby);

 Serial.print("Measured distance:");
 Serial.println(readDistanceCM());

 delay(100);
}
```

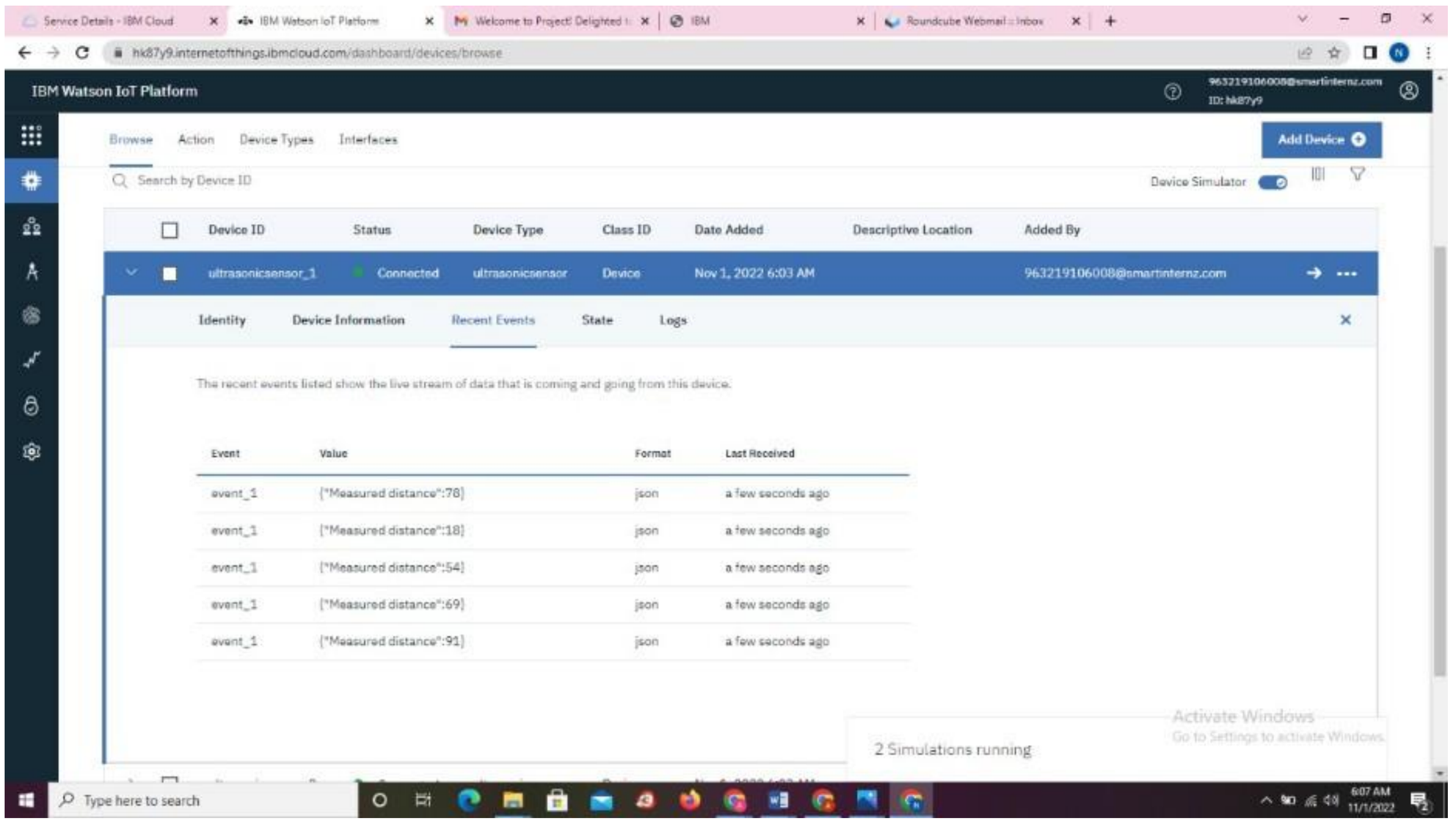
Solution:



Solutionrun:


New Arduino Uno Project - Wok
wokwi.com/projects/new/arduino-uno
WOKWI
SAVE
SHARE
Docs
sketch.ino
diagram.json
Library Manager
Simulation
00:06.500
19%
#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);
}
HC-SR04
UNO
ARDUINO
Measured distance: 34.99
Measured distance: 34.99
Measured distance: 35.07
Measured distance: 35.07
Measured distance: 35.07
Measured distance: 35.07
Measured distance: 35.07
Activate Windows
Go to Settings to activate Windows.
Type here to search
4:37 AM
11/1/2022

OUTPUT:


Service Details - IBM Cloud
IBM Watson IoT Platform
Welcome to Project Delighted !
IBM
Roundcube Webmail :: Inbox
hk87y9.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
Browse
Action
Device Types
Interfaces
Add Device
Search by Device ID
Device Simulator
Device ID
Status
Device Type
Class ID
Date Added
Descriptive Location
Added By
ultrasonicsensor_1
Connected
ultrasonicsensor
Device
Nov 1, 2022 6:03 AM
963219106008@smartinternz.com
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
event_1
{"Measured distance":78}
json
a few seconds ago
event_1
{"Measured distance":18}
json
a few seconds ago
event_1
{"Measured distance":54}
json
a few seconds ago
event_1
{"Measured distance":69}
json
a few seconds ago
event_1
{"Measured distance":91}
json
a few seconds ago
2 Simulations running
Activate Windows
Go to Settings to activate Windows.
Type here to search
6:07 AM
11/1/2022

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