Assignment 4

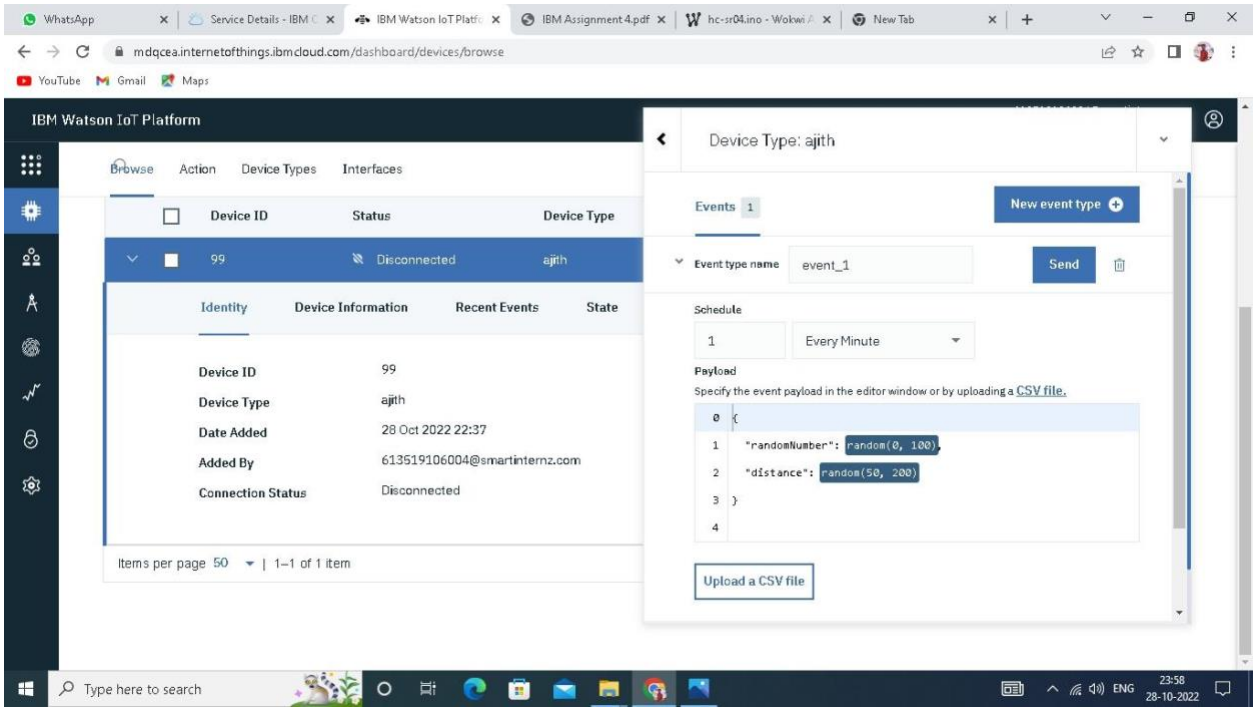
Wokwi link:

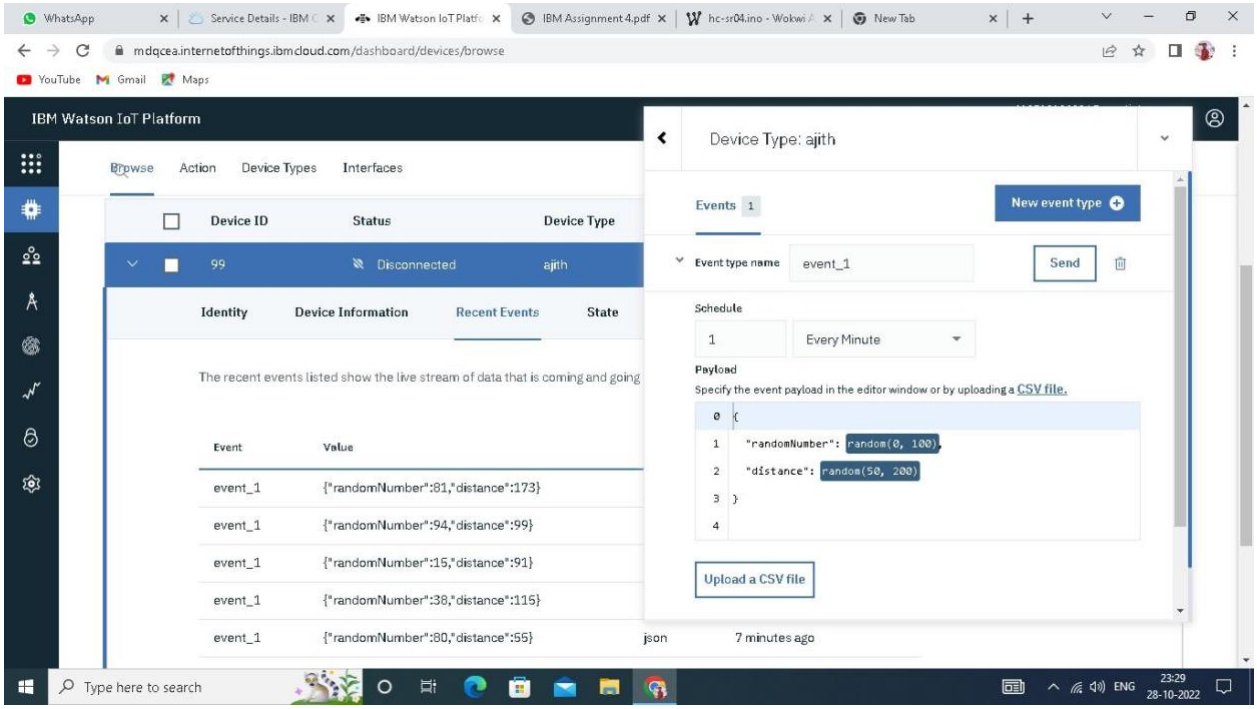
https://wokwi.com/projects/346786452420428370

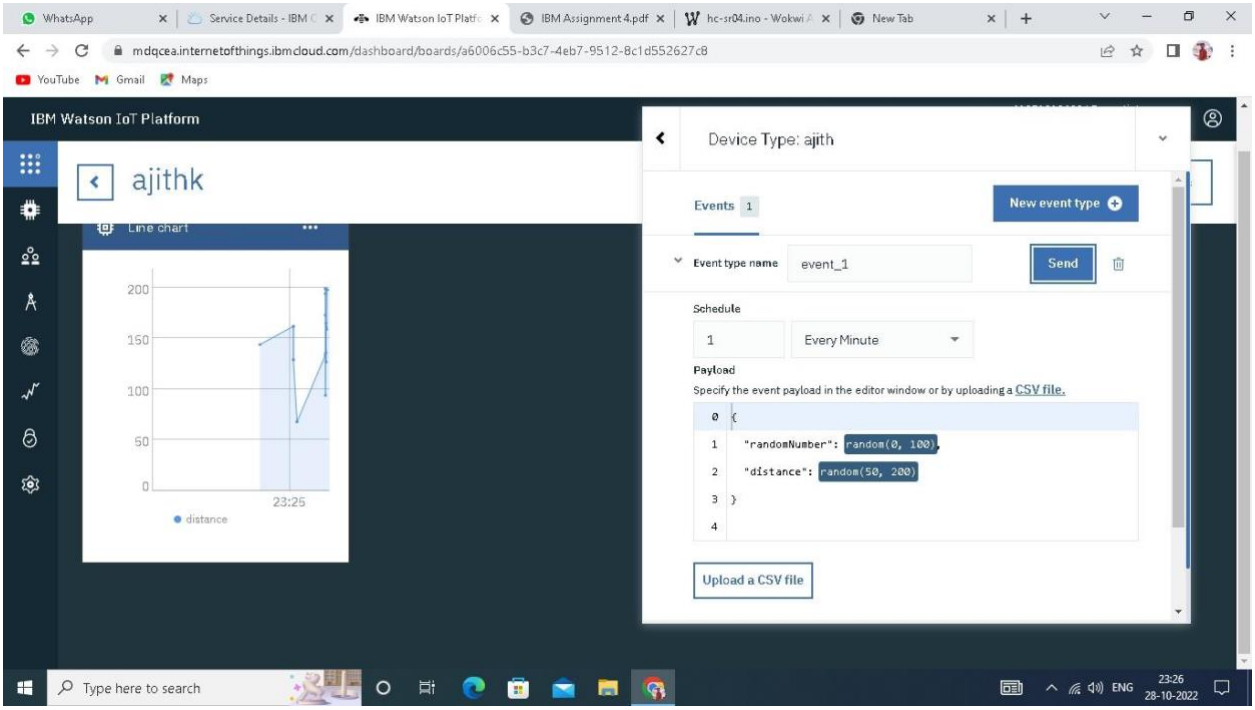
Program code:

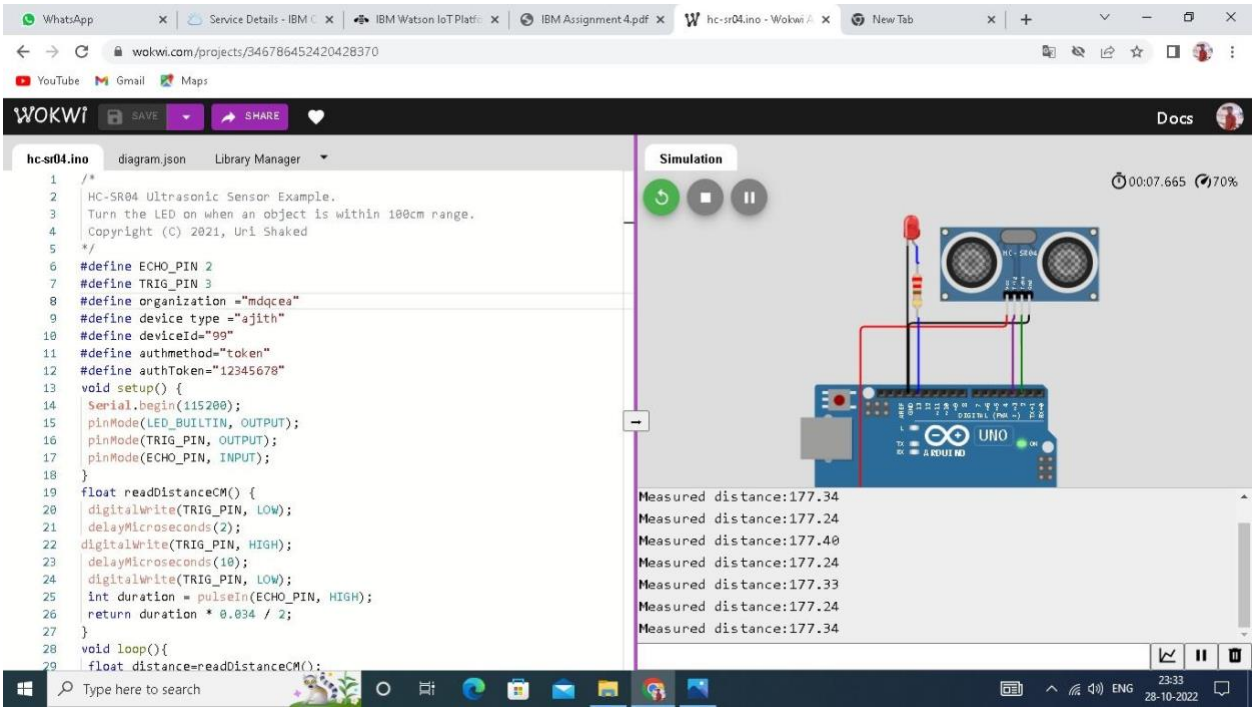
```
/*
 HC-SR04 Ultrasonic Sensor Example.
 Turn the LED on when an object is within 100cm range.
 Copyright (C) 2021, Uri Shaked
*/


#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization ="mdqcea"
#define device type ="ajith"
#define deviceId="99"
#define authmethod="token"
#define authToken="12345678"

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("person detected");
 }
 else{
 Serial. Print("Measured distance:");
 Serial.println(readDistanceCM());
 }
 delay(1000);
}
```


IBM Watson IoT Platform
Browse
Action
Device Types
Interfaces
Device ID
Status
Device Type
99
Disconnected
ajith
Identity
Device Information
Recent Events
State
Device ID 99
Device Type ajith
Date Added 28 Oct 2022 22:37
Added By 613519106004@smartinternz.com
Connection Status Disconnected
Items per page 50 | 1–1 of 1 item
Device Type: ajith
Events 1
New event type
Event type name event_1
Send
Schedule
1
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
{
"randomNumber": random(0, 100),
"distance": random(50, 200)
}
Upload a CSV file


IBM Watson IoT Platform
Browse
Action
Device Types
Interfaces
Device ID
Status
Device Type
99
Disconnected
ajith
Identity
Device Information
Recent Events
State
The recent events listed show the live stream of data that is coming and going
Event
Value
event_1 {"randomNumber":81,"distance":173}
event_1 {"randomNumber":94,"distance":99}
event_1 {"randomNumber":15,"distance":91}
event_1 {"randomNumber":38,"distance":115}
event_1 {"randomNumber":80,"distance":55} json 7 minutes ago
Device Type: ajith
Events 1
New event type
Event type name event_1
Send
Schedule
1
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
{
"randomNumber": random(0, 100),
"distance": random(50, 200)
}
Upload a CSV file


IBM Watson IoT Platform
ajithk
Line chart
200
150
100
50
0
23:25
distance
Device Type: ajith
Events 1
New event type
Event type name
event_1
Send
Schedule
1
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
{
"randomNumber": random(0, 100),
"distance": random(50, 200)
}
Upload a CSV file
Type here to search
ENG
23:26
28-10-2022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Library Manager
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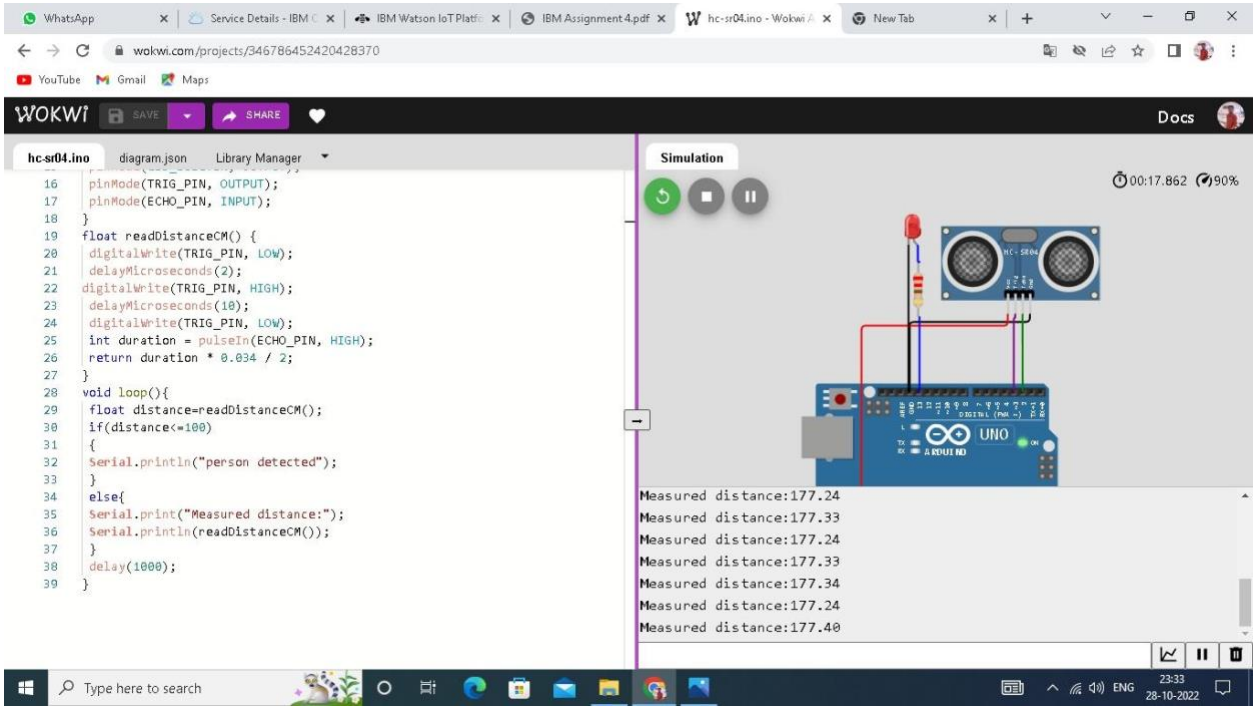
#define TRIG_PIN 3
#define organization "mdqcea"
#define device type "ajith"
#define deviceId "99"
#define authmethod "token"
#define authToken "12345678"
void setup() {
Serial.begin(115200);
pinMode(LED_BUILTIN, OUTPUT);
pinMode(TRIG_PIN, OUTPUT);
pinMode(ECHO_PIN, INPUT);
}
float readDistanceCM() {
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();
Simulation
00:07.665
70%
UNO
Measured distance:177.34
Measured distance:177.24
Measured distance:177.40
Measured distance:177.24
Measured distance:177.33
Measured distance:177.24
Measured distance:177.34
Type here to search
ENG
23:33
28-10-2022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Maps
WOKWI
SAVE
SHARE
Docs
hc-sr04.ino
diagram.json
Library Manager
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("person detected");
}
else{
Serial.print("Measured distance:");
Serial.println(readDistanceCM());
}
delay(1000);
}
Simulation
00:17.862
90%
UNO
Measured distance:177.24
Measured distance:177.33
Measured distance:177.24
Measured distance:177.33
Measured distance:177.34
Measured distance:177.24
Measured distance:177.40
Type here to search
ENG
23:33
28-10-2022