ASSIGNMENT-4

1. **CODE:**

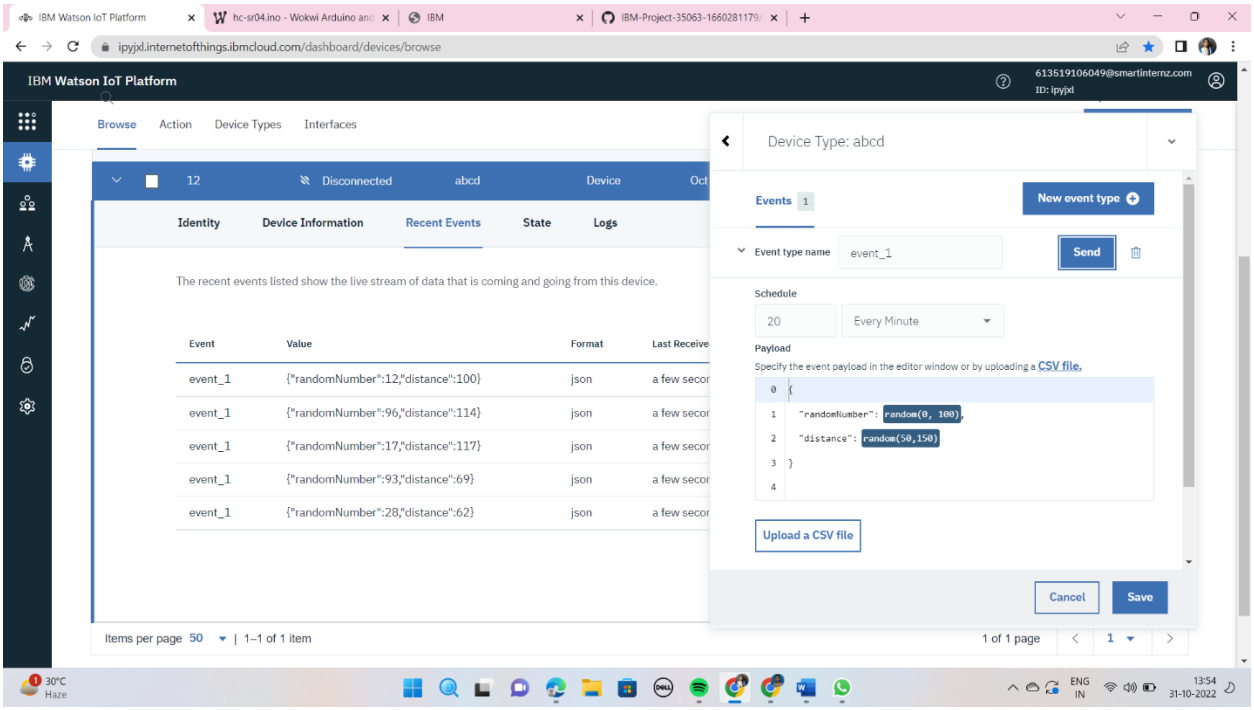
```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization = "ipyjxl"
#define deviceType = "abcd"
#define deviceId = "12"
#define authMethod = "token"
#define authToken = "12345678"

void setup(){
  Serial.begin(9600);
  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();
```

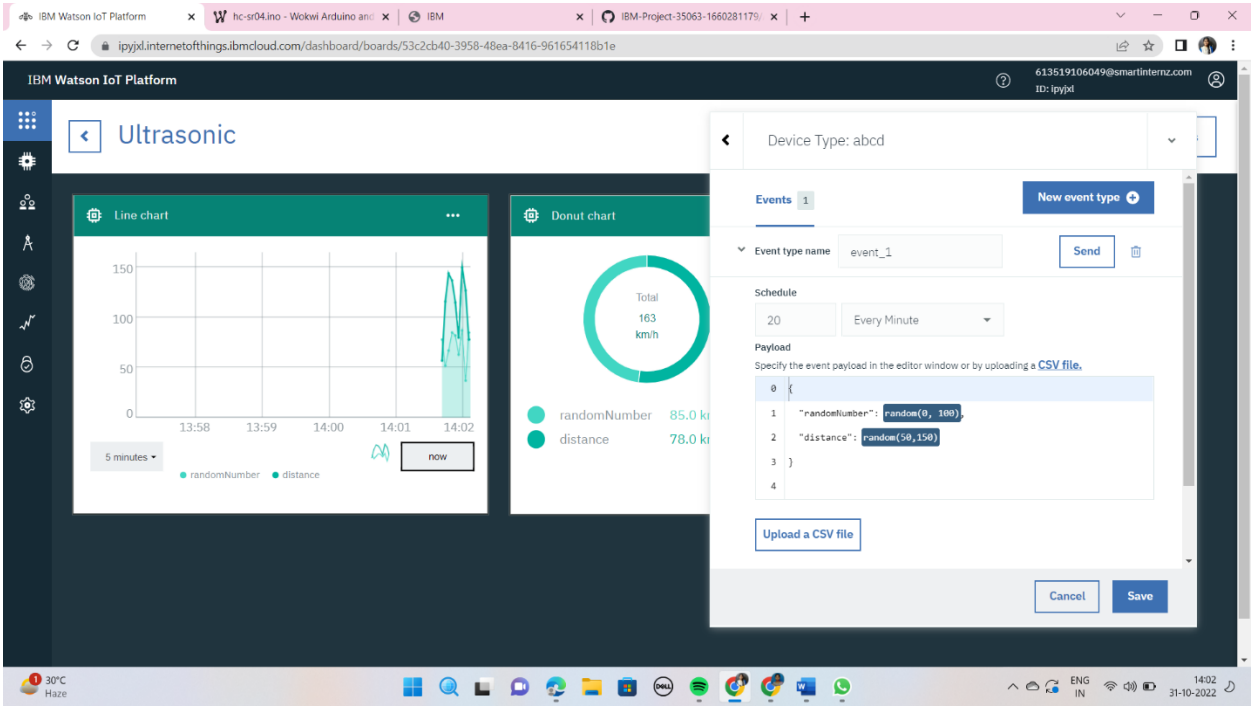
```
    if(distance<=100)
    {
      Serial.println("person detected");
    }
    else{
      Serial.print("Measured distance:");
      Serial.println(readDistanceCM());
    }
    delay(1000);
}
```

2. **LINK:**

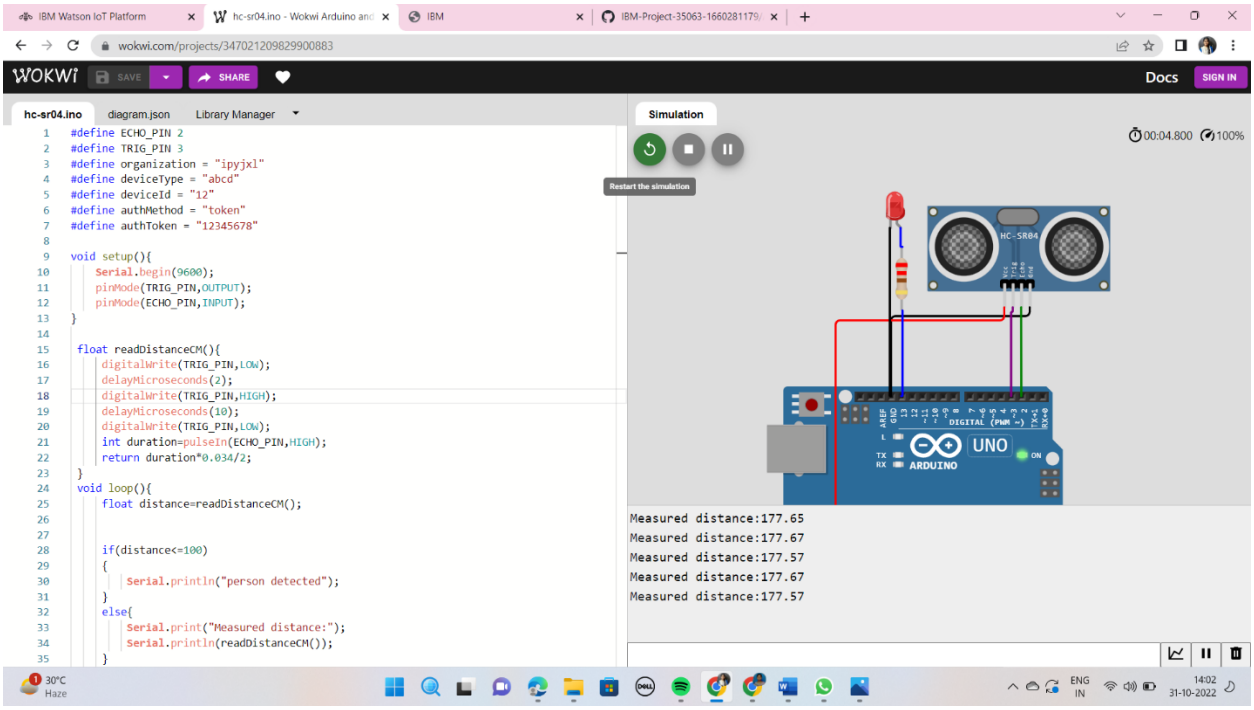
https://wokwi.com/projects/347021209829900883

3. IBM CLOUD:


IBM Watson IoT Platform
ipyjxl.internetofthings.ibmcloud.com/dashboard/devices/browse
Browse
Action
Device Types
Interfaces
Disconnected
abcd
Device
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
event_1
{"randomNumber":12,"distance":100}
{"randomNumber":96,"distance":114}
{"randomNumber":17,"distance":117}
{"randomNumber":93,"distance":69}
{"randomNumber":28,"distance":62}
json
Items per page 50
1–1 of 1 item
1 of 1 page
Device Type: abcd
Events 1
New event type
Event type name
event_1
Send
Schedule
20
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
"randomNumber": random(0, 100),
"distance": random(50,150)
Upload a CSV file
Cancel
Save


IBM Watson IoT Platform
ipyjxl.internetofthings.ibmcloud.com/dashboard/boards/53c2cb40-3958-48ea-8416-961654118b1e
Ultrasonic
Line chart
150
100
50
0
13:58
13:59
14:00
14:01
14:02
5 minutes
now
randomNumber
distance
Donut chart
Total
163
km/h
randomNumber
distance
Device Type: abcd
Events 1
New event type
Event type name
event_1
Send
Schedule
20
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
"randomNumber": random(0, 100),
"distance": random(50,150)
Upload a CSV file
Cancel
Save

4. WOOKI:


IBM Watson IoT Platform
hc-sr04.ino - Wokwi Arduino and
IBM
IBM-Project-35063-1660281179/
wokwi.com/projects/347021209829900883
WOKWI
SAVE
SHARE
Docs
SIGN IN
hc-sr04.ino
diagram.json
Library Manager
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization "ipyjxl"
#define deviceType "abcd"
#define deviceId "12"
#define authMethod "token"
#define authToken "12345678"
void setup(){
Serial.begin(9600);
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());
}
Simulation
00:04.800
100%
Restart the simulation
HC-SR04
UNO
ARDUINO
Measured distance:177.65
Measured distance:177.67
Measured distance:177.57
Measured distance:177.67
Measured distance:177.57
30°C
Haze
ENG
IN
14:02
31-10-2022