Assignment-4

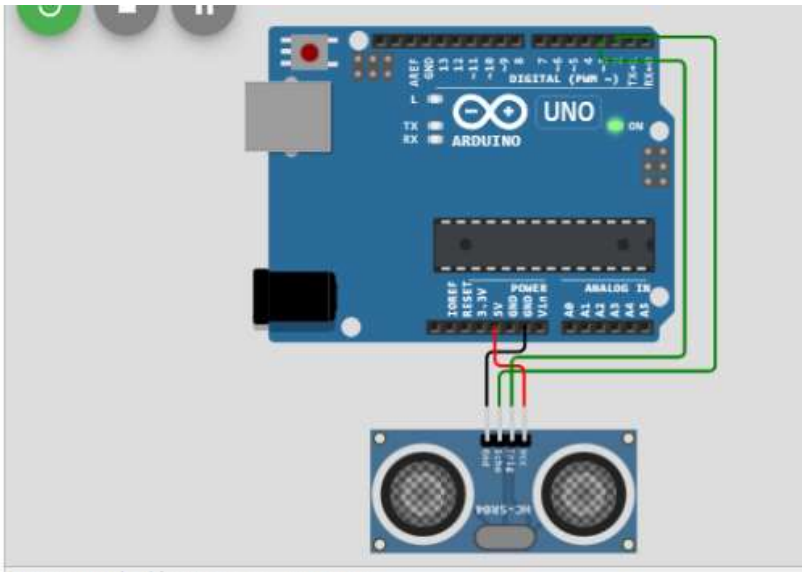
Question-1:

Write code and connectionsinwokwifor ultrasonic.Wheneverdistance islessthan100 cmssend“alert” to ibmcloud and display indevice recent events.

Solution:

```
#define ECHO_PIN 2

#define TRIG_PIN 3

#define organization = “fkxdqs”

#define deviceType = “Arduino”

#define deviceId = “1200”

#define authMethod =“use-token-auth”#define

authToken = “00000000” 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("Measureddistance: ");

Serial.println(readDistanceCM());

}

delay(1000);

}
```

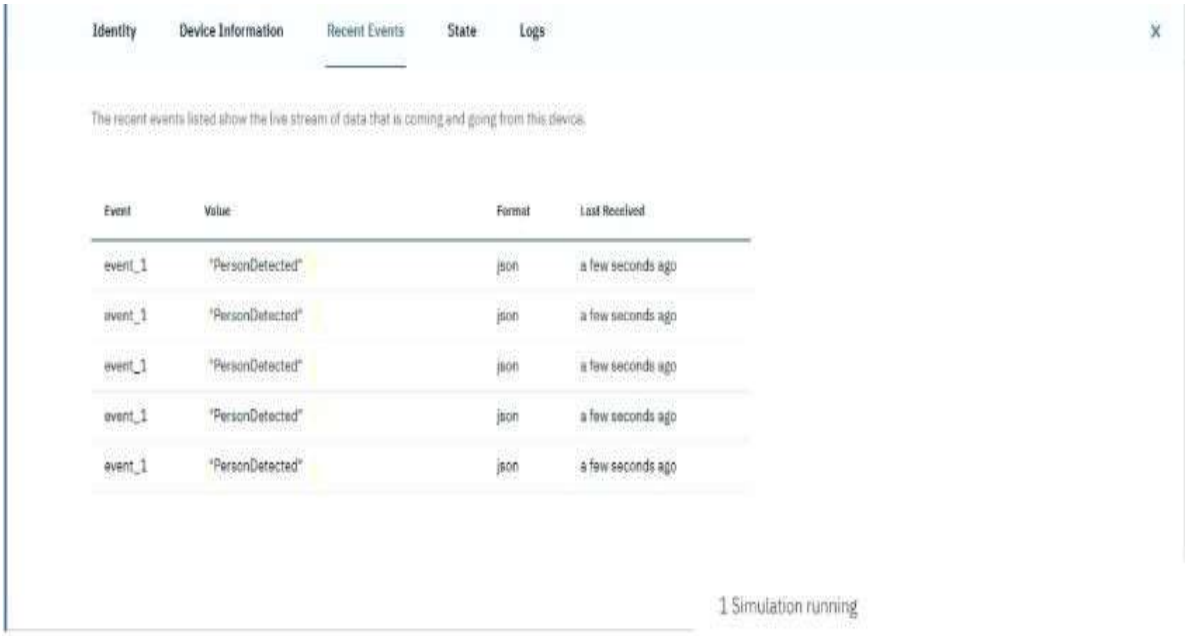



```
Measured distance: 227.95
Measured distance: 227.85
Measured distance: 227.95
Measured distance: 227.95
Measured distance: 227.95
```

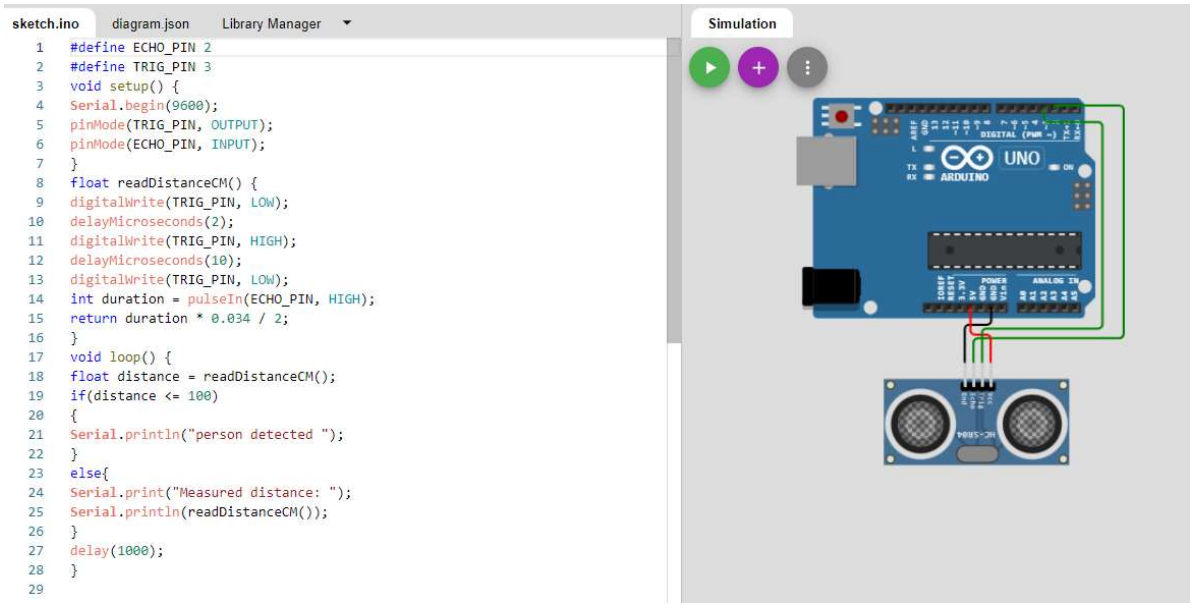
Wokwi Link: https://wokwi.com/projects/347653583594848852

IBM Cloud

Device Recent Events



WOWKI EXECUTIONPART WITH ANOTHER CODE:




```
#define ECHO_PIN 2
#define TRIG_PIN 3
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);
}

```