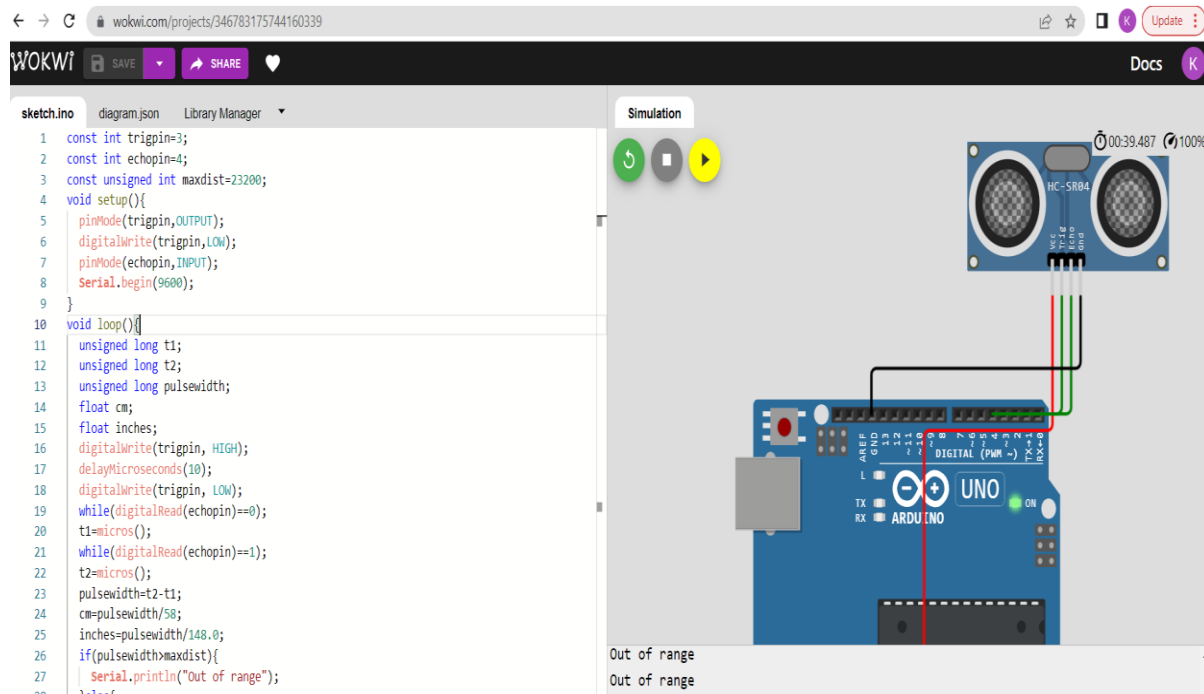


ASSIGNMENT-4

Write a code and connections in wokwi for ultrasonic sensor. Whenever distance is less than 100 cm "send" alert to IBM Cloud and display in device recent events.



```
const int trigpin=3;

const int echopin=4;

const unsigned int maxdist=23200;

void setup(){

    pinMode(trigpin,OUTPUT);

    digitalWrite(trigpin,LOW);

    pinMode(echopin,INPUT);

    Serial.begin(9600);

}

void loop(){

    unsigned long t1;

    unsigned long t2;

    unsigned long pulsewidth;

    float cm;
```

```
float inches;

digitalWrite(trigpin, HIGH);

delayMicroseconds(10);

digitalWrite(trigpin, LOW);

while(digitalRead(echopin)==0);

t1=micros();

while(digitalRead(echopin)==1);

t2=micros();

pulsewidth=t2-t1;

cm=pulsewidth/58;

inches=pulsewidth/148.0;

if(pulsewidth>maxdist){

    Serial.println("Out of range");

}else{

    Serial.println("Distance in cm: ");

    Serial.println(cm);

    if(cm<100){

        while(true){

            Serial.println("Alert");

        }

    }

}

delay(1000);

}
```

