

ASSIGNMENT-4

Write code and connections in wokwi for the ultrasonic sensor.

Whenever the distance is less than 100 cms send an "alert" to the IBM cloud and display in the device recent events.

Upload document with wokwi share link and images of IBM cloud.

LINK:

<https://wokwi.com/projects/new/arduino-uno>

CODE:

```
long int echoPin=7;
```

```
long int trigPin=5;
```

```
void setup()
```

```
    Serial.begin(9600);
```

```
    pinMode(7,OUTPUT);
```

```
    pinMode(5,INPUT);
```

```
void loop()
```

```
    int duration, distance;
```

```
    digitalWrite(3,LOW);
```

```
    delayMicroseconds(2);
```

```
    digitalWrite(3,HIGH);
```

```
    delayMicroseconds(10);
```

```
    digitalWrite(3,LOW);
```

```
    duration=pulseIn(7,HIGH);
```

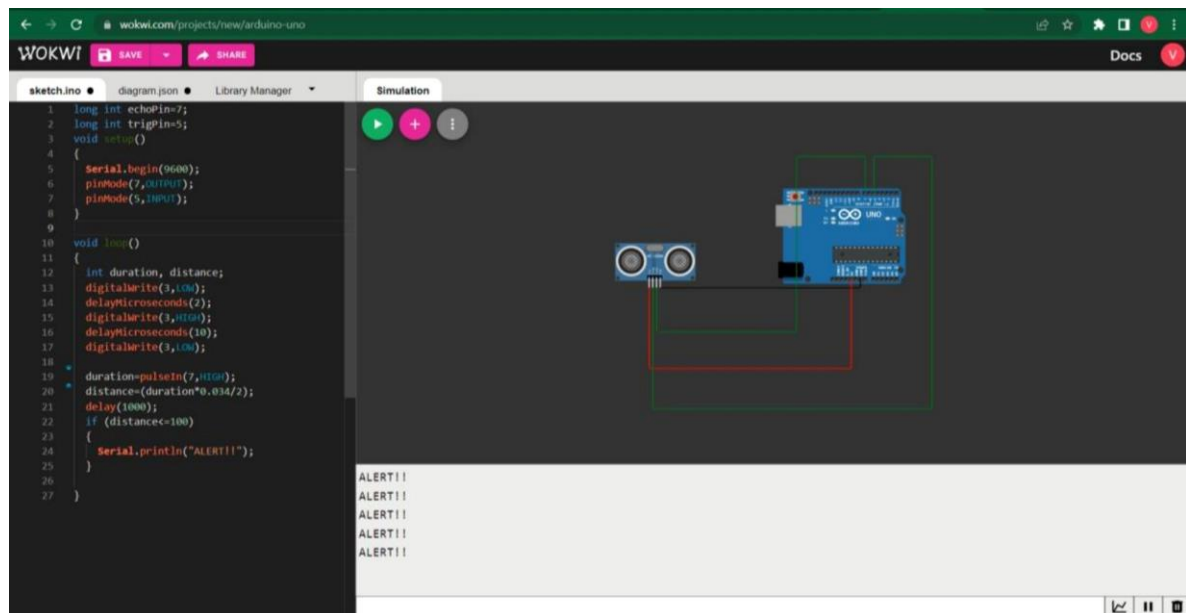
```
    distance=(duration*0.034/2);
```

```
    delay(1000);
```

```
    if (distance<=100)
```

```
        Serial.println("ALERT!!");
```

SIMULATIONS:



```
1 pH = random.r
2
3
4 turbidity = random.randint(1, 5)
5
6 temperature = random.randint(0, 100)
7
8 data = {'pH': pH, 'turbid': turbidity, 'temp': temperature}
9
10 # print(data)
11 def myOnPublishCallback():
12 while True:
```

Event	Value
demo	{\"pH\":12,\"turbid\":93,\"temp\":87}
demo	{\"pH\":7,\"turbid\":873,\"temp\":94}
demo	{\"pH\":3,\"turbid\":204,\"temp\":19}
demo	{\"pH\":11,\"turbid\":304,\"temp\":77}
demo	{\"pH\":13,\"turbid\":16,\"temp\":50}

