

## Assignment-4

Assignment Date	25 October 2022
Student Name	Mr.S.Karan
Student Roll Number	AC19UEC067
Maximum Marks	2 Marks

### Question-1:

Write code and connection in wokwi for ultrasonic sensor . whenever the distance is less than 100cms send "alert" to IBM cloud and display in device recent events

Solution :

```
#define trigPin 12
```

```
#define echoPin 13
```

```
int Buzzer = 8; // Connect buzzer pin to
```

```
8 int ledPin= 6; //Connect LEd pin to 6
```

```
int duration, distance; //to measure the distance and time taken
```

```
void setup() {
```

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

```
    //Define the output and input
```

```
    objects(devices)      pinMode(trigPin,  
    OUTPUT);
```

```
    pinMode(echoPin,  
    INPUT);
```

```
    pinMode(Buzzer,  
    OUTPUT);
```

```
    pinMode(ledPin,  
    OUTPUT);
```

```
}
```

```
void loop() {
```

```

digitalWrite(trigPin, HIGH);
delayMicroseconds(10);
digitalWrite(trigPin, LOW);
duration = pulseIn(echoPin,
HIGH); distance = (duration/2) /
29.1;
//when distance is less than or equal to 100,the buzzer and LED
are off if (distance <= 100)
{
  Serial.println("no object detected");
  digitalWrite(Buzzer,LOW);
  digitalWrite(ledPin,LOW);
}
else {
  Serial.println("object detected \n");
  Serial.print("distance= ");
  Serial.print(distance); //prints the distance if it is between the
range less than 100
  tone(Buzzer,400); // play tone of 400Hz for 500
ms digitalWrite(ledPin,HIGH);
}
}

```