Assignment-4

Assignment Date	25 October 2022
Student Name	Mr.M.Nandha kumar
Student Roll Number	AC19UEC084
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);
 }
}
```