# Assignment -4

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| Assignment Date | 23 October 2022 |
| Student Name | Mr.R.Sharadh |
| Student Roll Number | AC19UCS103 |
| 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);

}

}