| Assignment Date | 08 November 2022 |
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| Student Name | Divya Dharshini S |
| Student Roll Number | 920819106017 |
| Maximum Marks | 2 Marks |

## Question:

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.

## Code:

```
#define trigPin 12
#define echoPin 13
int Buzzer = 8; // Connect buzzer
pin to 8int 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 greater than or equal to 200 OR less than or equal
to 0,the buzzerand LED are off
  if (distance >= 200 || distance <= 0)
    {
    Serial.println("no object
    detected");
    digitalWrite(Buzzer,LOW);
```
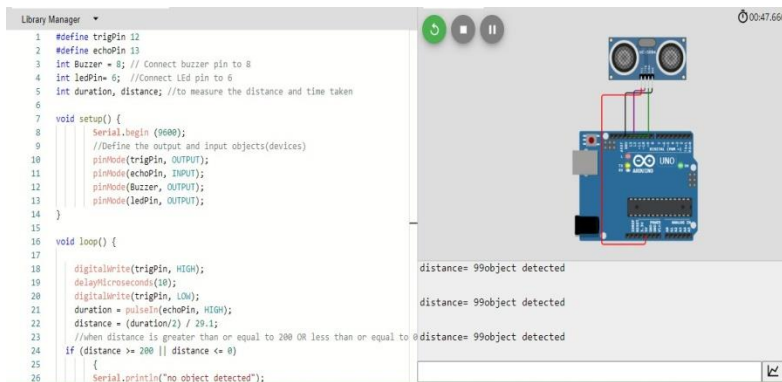
```
digitalWrite(ledPin,LOW);
}
else {
Serial.println("object detected \n"); Serial.print("distance= ");
Serial.print(distance);     //prints the distance if it is between the range 0 to 200
tone(Buzzer,400); // play tone of 400Hz for 500 ms digitalWrite(ledPin,HIGH);
}
}
```

## Output: