

## **IBM Assingment-4**

Write code and connections in wokwi for ultrasonic sensor.

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

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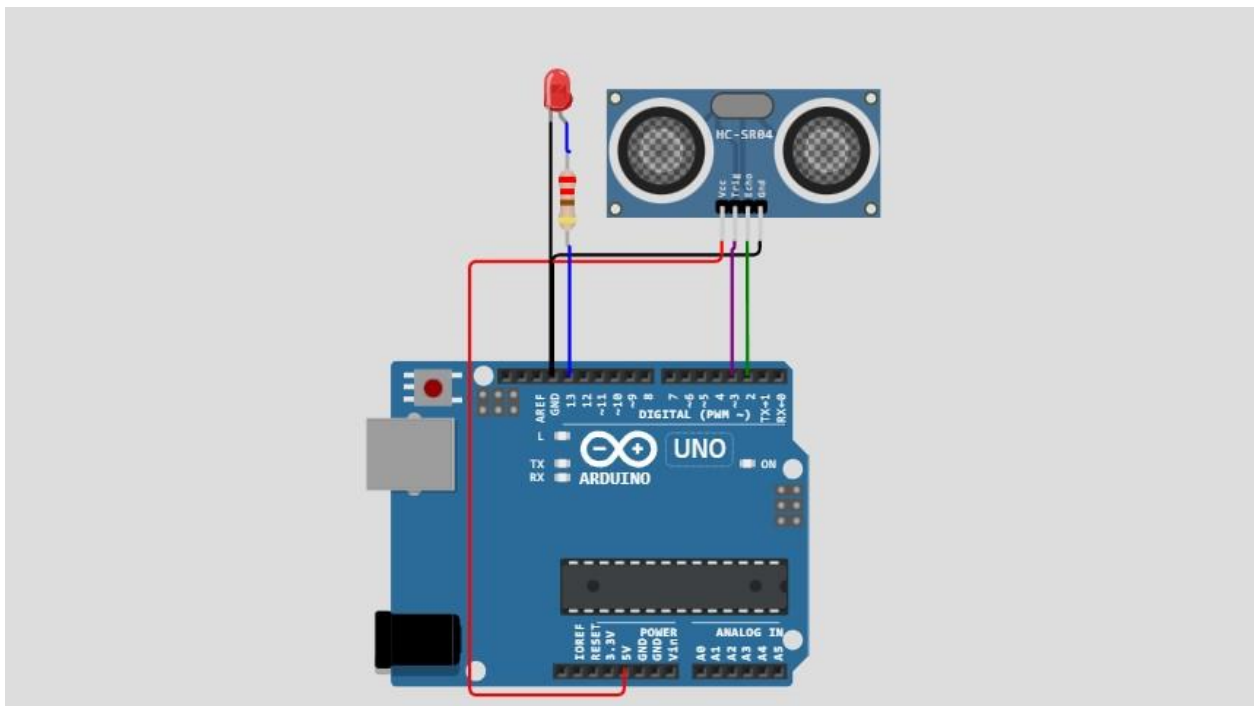
## CODING:

```
/*  
HC-SR04 Ultrasonic Sensor Example.  
  
Turn the LED on when an object is within 100cm range.  
  
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*/  
  
#define ECHO_PIN 2  
#define TRIG_PIN 3  
  
void setup() {  
  Serial.begin(115200);  
  pinMode(LED_BUILTIN, OUTPUT);  
  pinMode(TRIG_PIN, OUTPUT);  
  pinMode(ECHO_PIN, INPUT);  
}  
  
float readDistanceCM() {  
  digitalWrite(TRIG_PIN, LOW);  
  delayMicroseconds(2);  
  digitalWrite(TRIG_PIN, HIGH);  
  delayMicroseconds(10);  
  digitalWrite(TRIG_PIN, LOW);  int  
  duration = pulseIn(ECHO_PIN, HIGH);  
  return duration * 0.034 / 2;  
}  
void  
loop() {  
  float distance = readDistanceCM();
```

```
bool isNearby = distance < 100;
digitalWrite(LED_BUILTIN, isNearby);
Serial.print("Measured distance: ");
Serial.println(readDistanceCM());

delay(100);
}
```

OUTPUT:



Link:

<https://wokwi.com/projects/290056311044833800>