

Date	28 October 2022
Reg no.	511319106008
Team ID	PNT2022TMID39941
Project Name	Project - Smart Solutions for Railways
Maximum Marks	4 Marks

Question:

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.

CODE:

```
#define ECHO_PIN 2

#define TRIG_PIN 3

void setup() {
  Serial.begin(9600);
  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();
  if (distance <= 100)
  {
    Serial.println("Movement detected ");
  }
}
```

```

}

Else {
  Serial.print("Distance: ");
  Serial.println(readDistanceCM());

}

delay(100);

}

```

