

VELAMMAL ENGINEERING COLLEGE
ELECTRONICS AND COMMUNICATION ENGINEERING

**SMART FARMERS - IOT
ENABLED FARMING
APPLICATION
ASSIGNMENT – 4**

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Question:

WRITE CODE AND CONNECTIONS IN WOKWI FOR ULTRASONIC. 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
#define organization = "mmbh4c"

#define deviceType = "Ultrasonic"
#define deviceId = "pga460_sensor"
#define authMethod = "use-token-auth"
#define authToken = "123456789"

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("person detected ");  
  }  
  else{  
    Serial.print("Measured distance: ");  
    Serial.println(readDistanceCM());  
  }  
  delay(1000);  
}
```

OUTPUT:

