

Assignment -4
Python Programming

Assignment Date	15 Oct 2022
Student Name	Ahmed yahya A
Student Roll Number	813819104005
Maximum Marks	2 Marks

Question-1

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. Upload document with wokwi share link and images of IBM cloud?

Code:

IOT based Smart crop protection system

Turn the LED on when an object is within 100cm range.

```
#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);  
}
```

