**Assignment -4**

Python Programming

|  |  |
| --- | --- |
| Assignment Date | 15 Oct 2022 |
| Student Name | Boopathi N |
| Student Roll Number | 813819104018 |
| 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);

