ASSIGNMENT-4

ASSESSMENT DATE	05 November 2022
NAME	MENAGHA P
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MARKS	2 Marks

PROBLEM:

Write code and connections in wokwi for ultrasonic sensors.

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

Upload document with wokwi share link and images of ibm cloud.

CODE:

```cpp
#define ECHO_PIN 2
#define TRIG_PIN 3
#define Device_Id "1234"
#define Device_type "wokwi"
#define Token "12345678"

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);
}
```
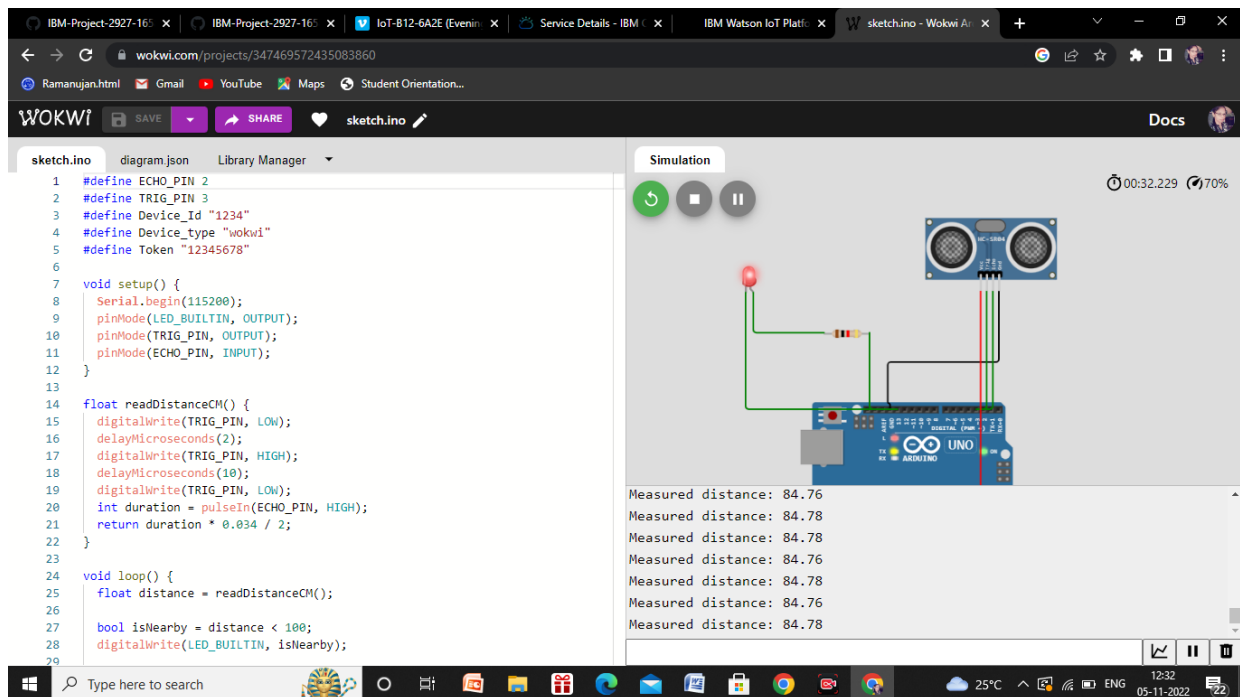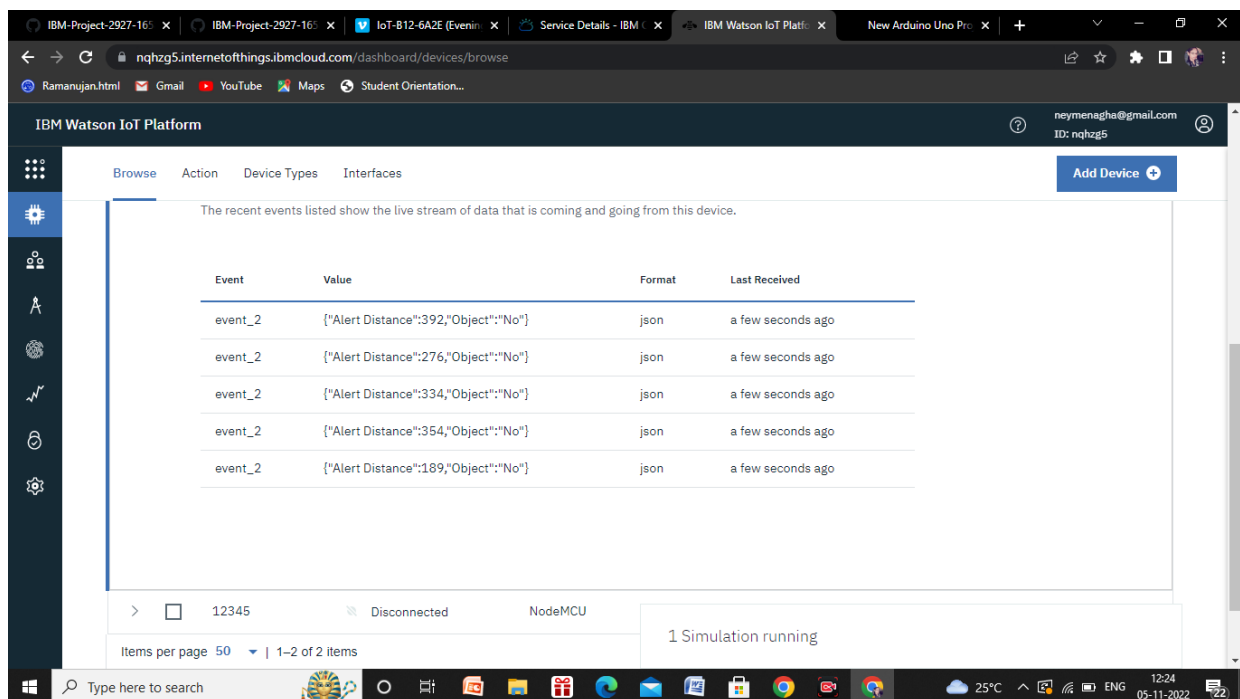
SIMULATION SCREENSHOT:

SIMULATION LINK:

https://wokwi.com/projects/347469572435083860

WHEN OBJECT >100:

WHEN OBJECT <100: