Assignment – 4

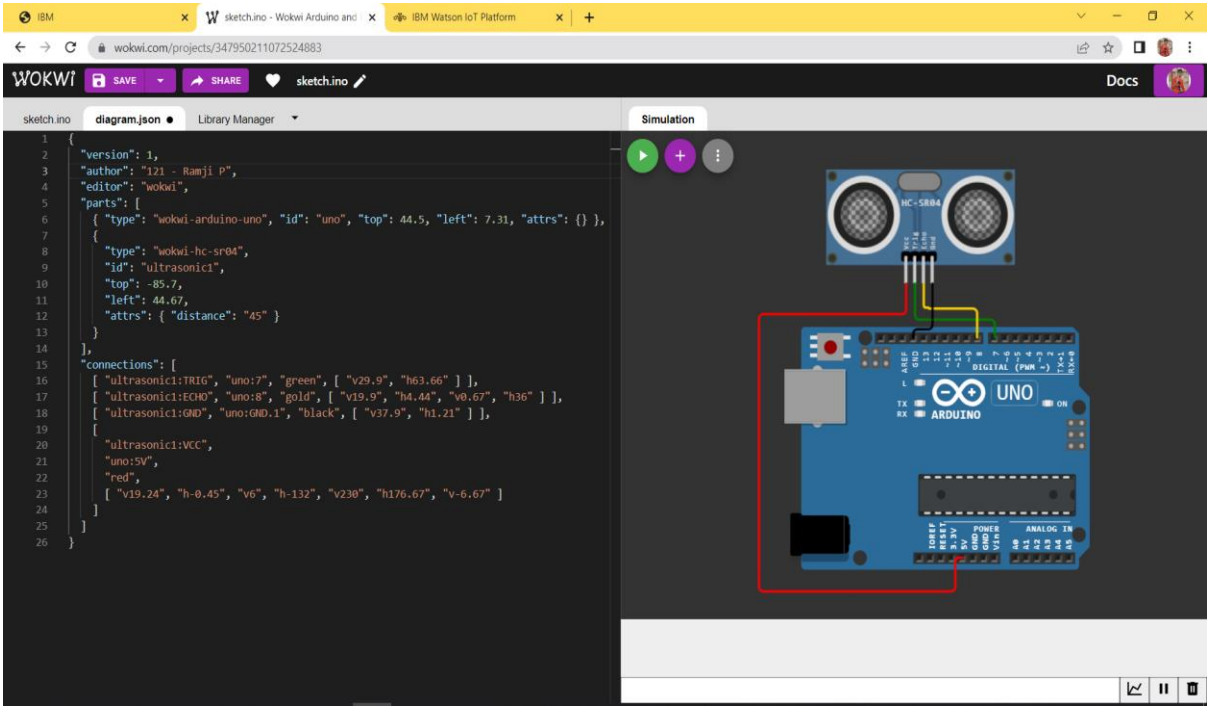
Assignment Date	10 Oct 2022
Student Name	Ramji P
Student Roll Number	732219EC077
Maximum Marks	2 marks

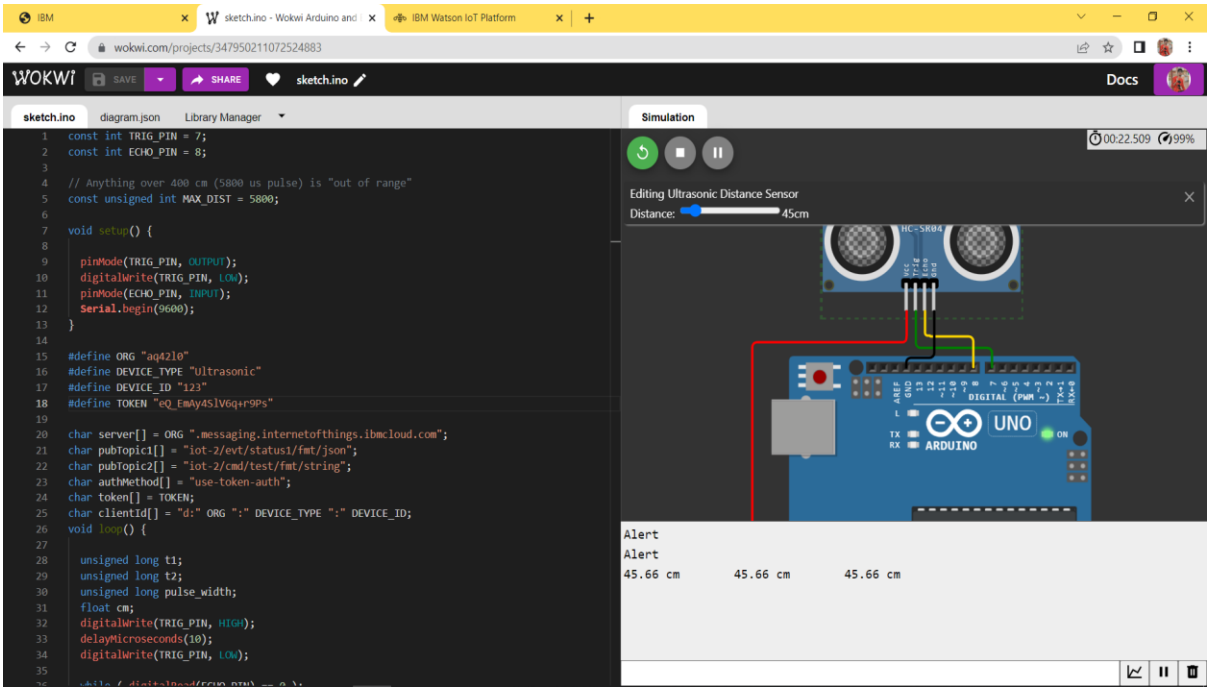
Question-1:

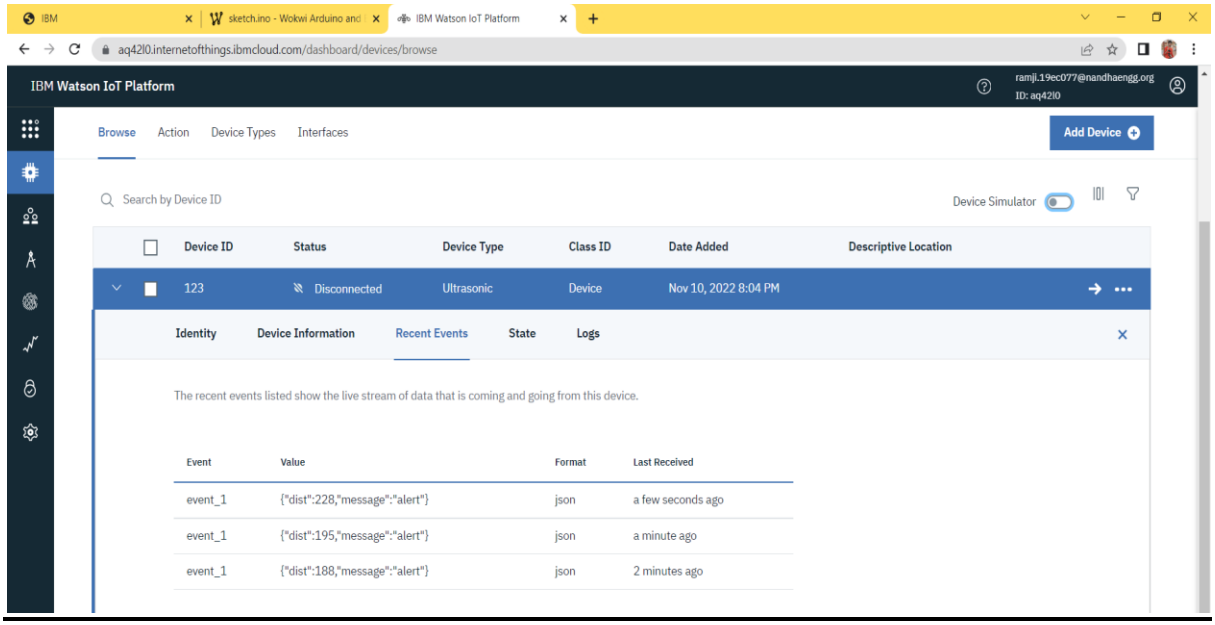
Write code and connections in wokwi for the ultrasonic sensor. Whenever the distance is less than 100 cms send an "alert" to the IBM cloud and display in the device recent events. Upload document with wokwi share link and images of IBM cloud.

WOKWI LINK:

https://wokwi.com/projects/347950211072524883






```ino
const int TRIG_PIN = 7;
const int ECHO_PIN = 8;

// Anything over 400 cm (5800 us pulse) is "out of range"
const unsigned int MAX_DIST = 5800;

void setup() {

  pinMode(TRIG_PIN, OUTPUT);
  digitalWrite(TRIG_PIN, LOW);
  pinMode(ECHO_PIN, INPUT);
  Serial.begin(9600);
}

#define ORG "aq42l0"
#define DEVICE_TYPE "ultrasonic"
#define DEVICE_ID "123"
#define TOKEN "eQ_EmAy4SlV6q+r9Ps"

char server[] = ORG ".messaging.internetofthings.ibmcloud.com";
char pubTopic1[] = "iot-2/evt/status1/fmt/json";
char pubTopic2[] = "iot-2/cmd/test/fmt/string";
char authMethod[] = "use-token-auth";
char token[] = TOKEN;
char clientId[] = "d:" ORG ":" DEVICE_TYPE ":" DEVICE_ID;
void loop() {

  unsigned long t1;
  unsigned long t2;
  unsigned long pulse_width;
  float cm;
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
```

IBM CLOUD: