Assignment -4

Question-1: Write code and connections in wokwi for ultrasonic sensor. Whenever distance is less than 100 cms send “alert” to IBM cloud and display in device recent events.

Solution:

```
#define ECHO_PIN 2
#define TRIG_PIN 3
#define organization =”46x7xk”
#define deviceType=” arduino”
#define deviceId =”0504”
#define authMethod ="use-token-auth"
#define authToken =”dv*uK8y__X4O5m!V(K”

void setup() {
  // put your setup code here, to run once:
  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);
```

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```
int duration = pulseIn(ECHO_PIN, HIGH);
return duration * 0.034 / 2;



}

void loop() {
 // put your main code here, to run repeatedly:
 float distance = readDistanceCM();
 if(distance <= 100)
 {
  Serial.println("person detected ");
 }
 else{
  Serial.print("Measured distance: ");
  Serial.println(readDistanceCM());
 }
 delay(1000);




}
```

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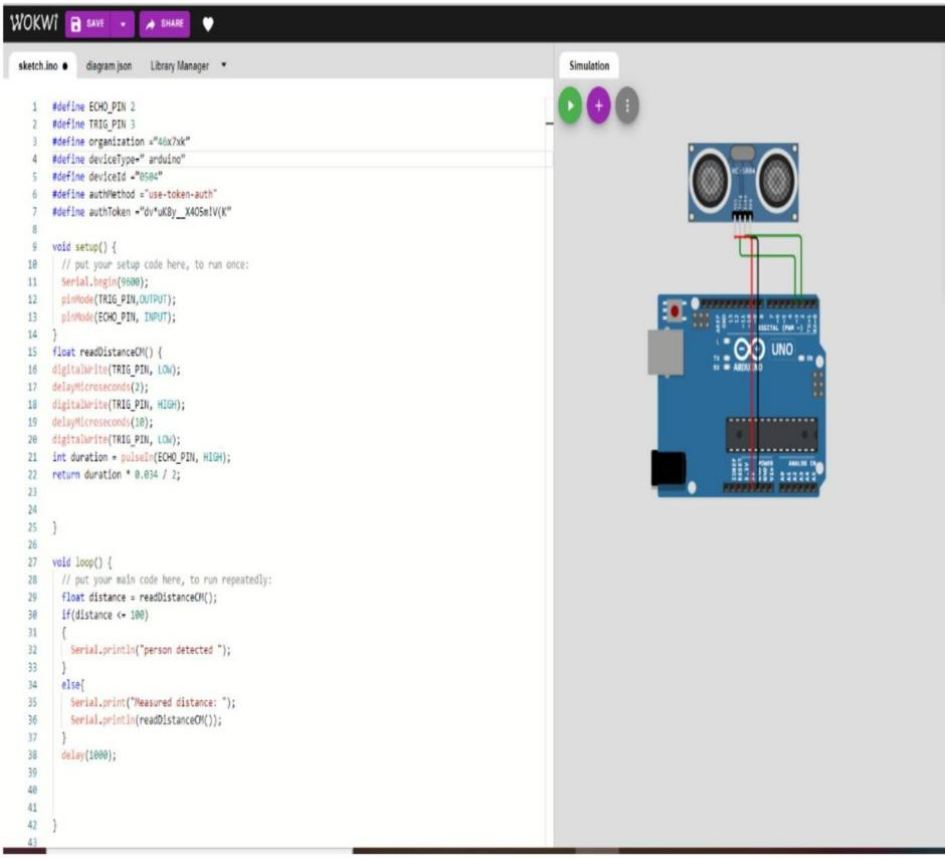
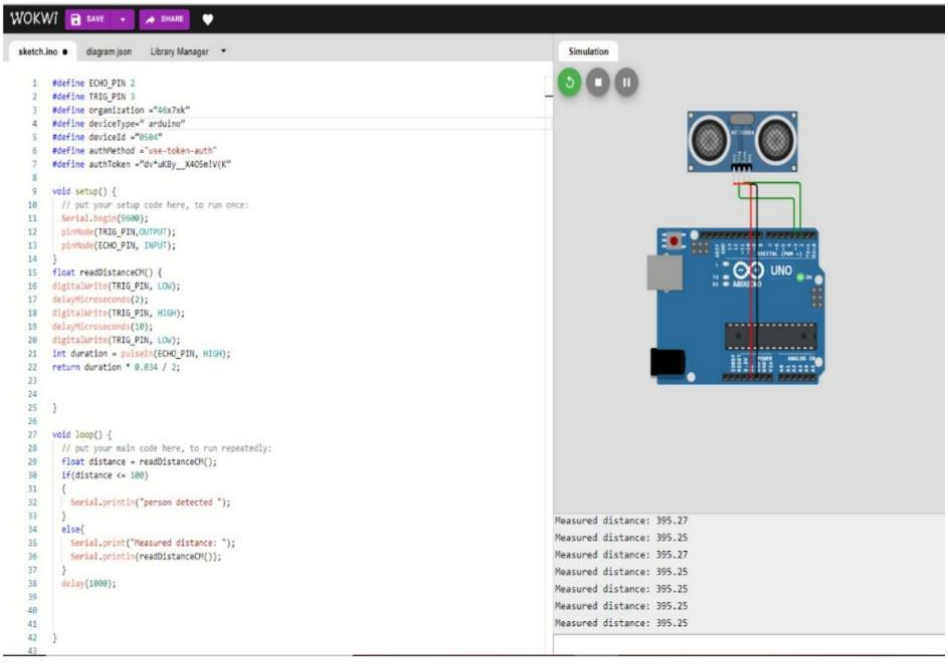


Output:



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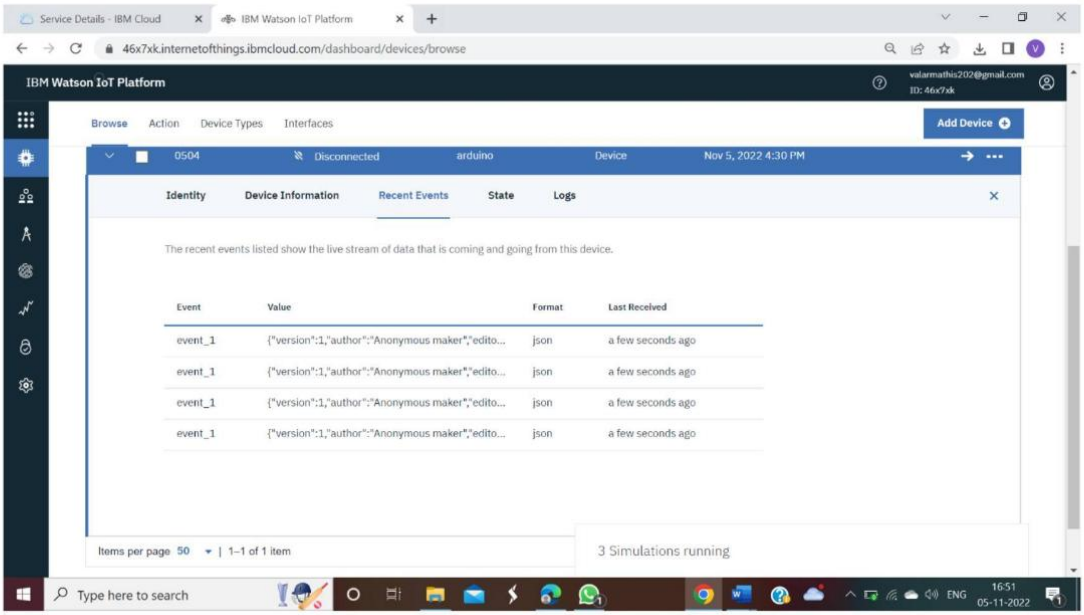
Wokwi Link: https://wokwi.com/projects/347484942224065107

IBM CLOUD

Device Recent Events



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