Assignment -4

Assignment Date	03 NOVEMBER 2022
Student Name	K.Sandhiya
Team ID	PNT2022TMID33019
Project Name	Project-Real time river water quality monitoring and control system
Maximum Marks	2 Marks

Question-1:

Write code and connections in wokwi for ultrasonic. 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 = "mmbh4c"

#define deviceType = "Ultrasonic"

#define deviceId = "pga460_sensor"

#define authMethod = "use-token-auth"

#define authToken = "123456789"

void setup() {

  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);

  int duration = pulseIn(ECHO_PIN, HIGH);

  return duration * 0.034 / 2;
```

```
}

void loop() {
 float distance = readDistanceCM();
 if(distance <= 100)
 {
   Serial.println("person detected ");
 }
 else{
 Serial.print("Measured distance: ");
  Serial.println(readDistanceCM());
 }
 delay(1000);
}
```

Simulation

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```
person detected
person detected
person detected
person detected
person detected
person detected
person detected
```

Wokwi Link: https://wokwi.com/projects/34666287045176594
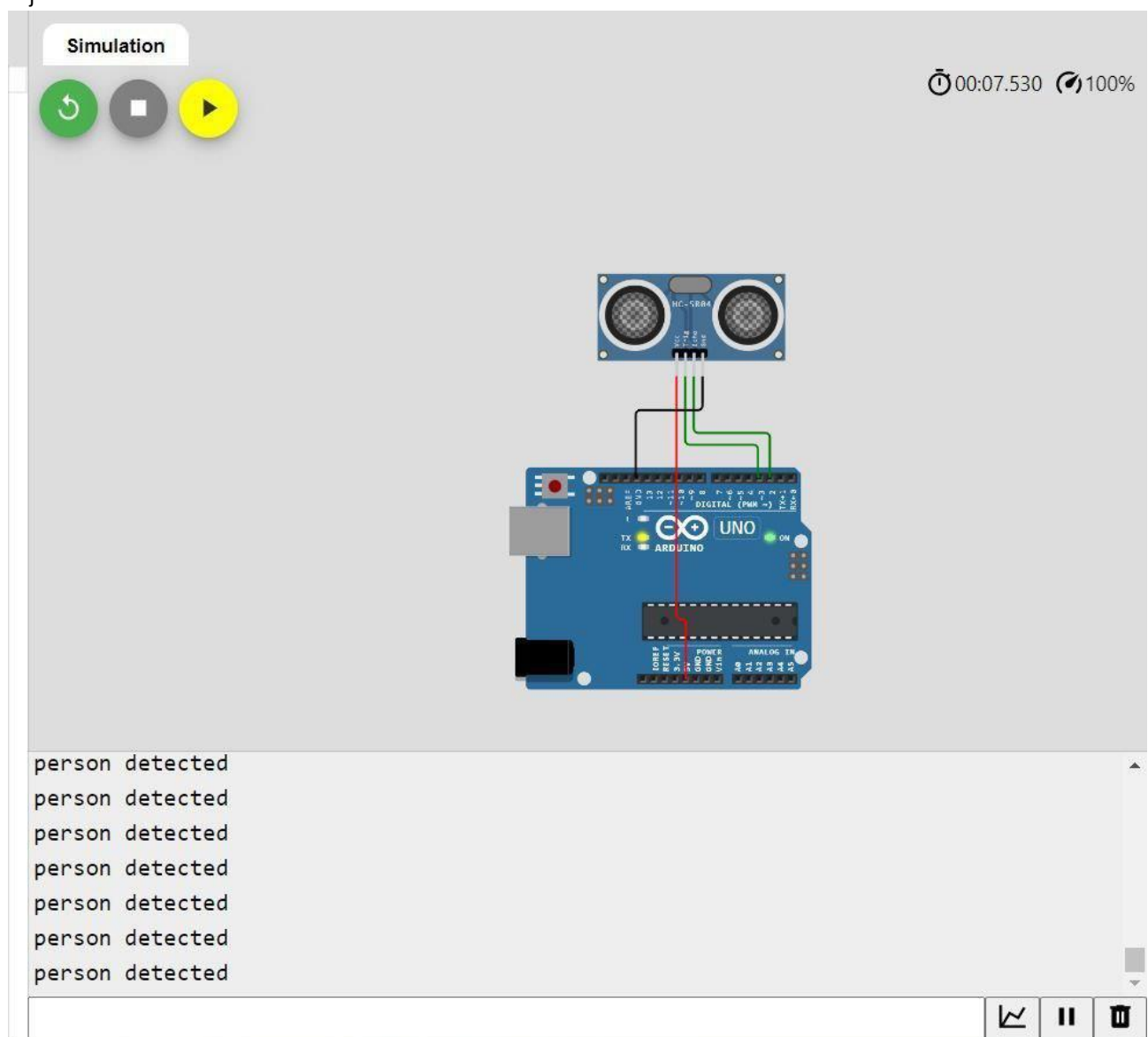
IBM Cloud

<u>Device Recent Events</u>