

Assignment -4

Assignment Date	03 NOVEMBER 2022
Student Name	R.Yogapriya
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);

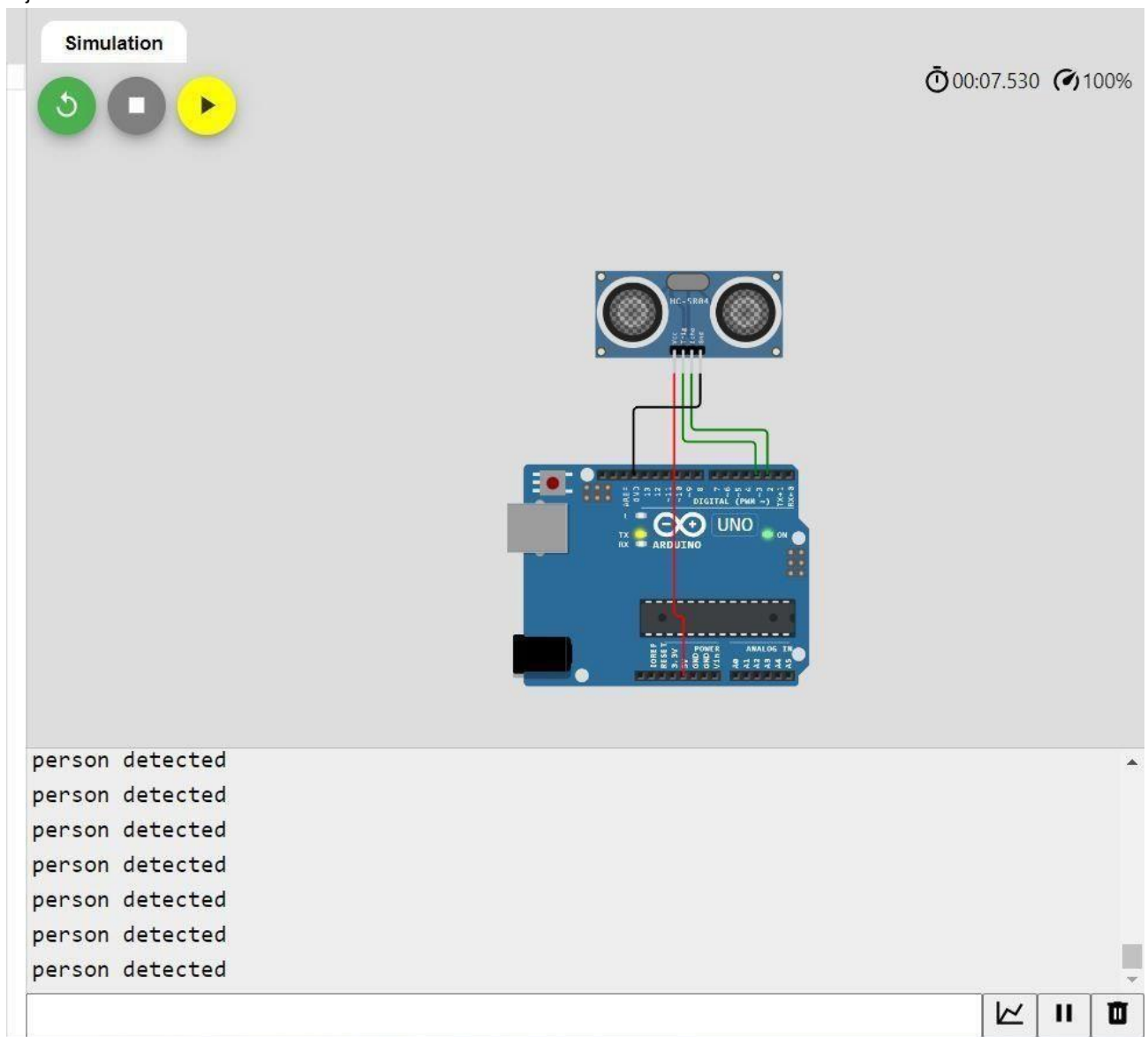
return duration * 0.034 / 2;

}
```

```

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

```



IBM Cloud

Device Recent Events

ID: memblbic

Browse Action Device Types Interfaces Add Device +

Ultrasonic_1 Connected Ultrasonic Device Oct 25, 2022 4:28 PM → ...

Identity Device Information Recent Events State Logs X

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
event_1	{"Persondetected": }	json	a few seconds ago
event_1	{"Persondetected": }	json	a few seconds ago
event_1	{"Persondetected": }	json	a few seconds ago
event_1	{"Persondetected": }	json	a few seconds ago
event_1	{"Persondetected": }	json	a few seconds ago

> pga460_sensor Disconnected Ultrasonic Device Oct 25, 2022 1:19 PM

Items per page: 50 | 1-3 of 3 items

1 Simulation running