Assignment - 4

Team ID	**PNT2022TMID38861**
Project Name	**loT Based Safety Gadget For Child Safety Monitoring & Notification**
Maximum Marks	**4 Marks**

Program code:

```
/*
 HC-SR04 Ultrasonic Sensor Example.

 Turn the LED on when an object is within 100cm range.

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*/

#define ECHO_PIN 2

#define TRIG_PIN 3

#define organization ="ig6yme"

#define device type ="Child1"

#define deviceId="75"

#define authmethod="token"
```
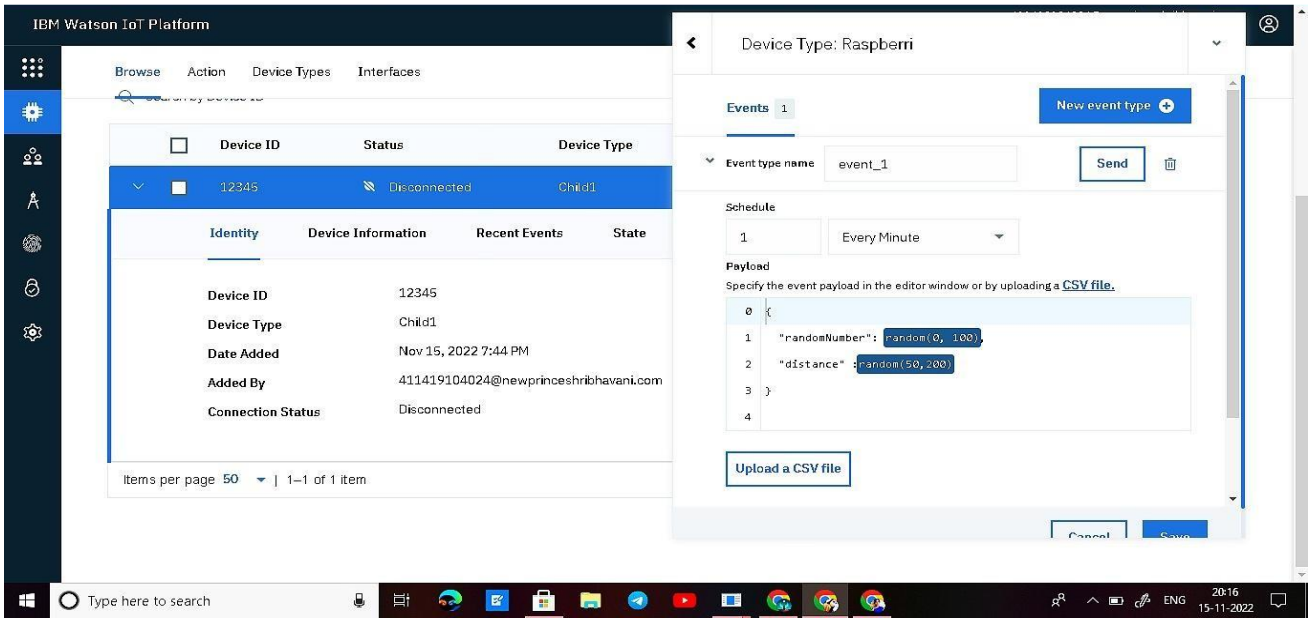
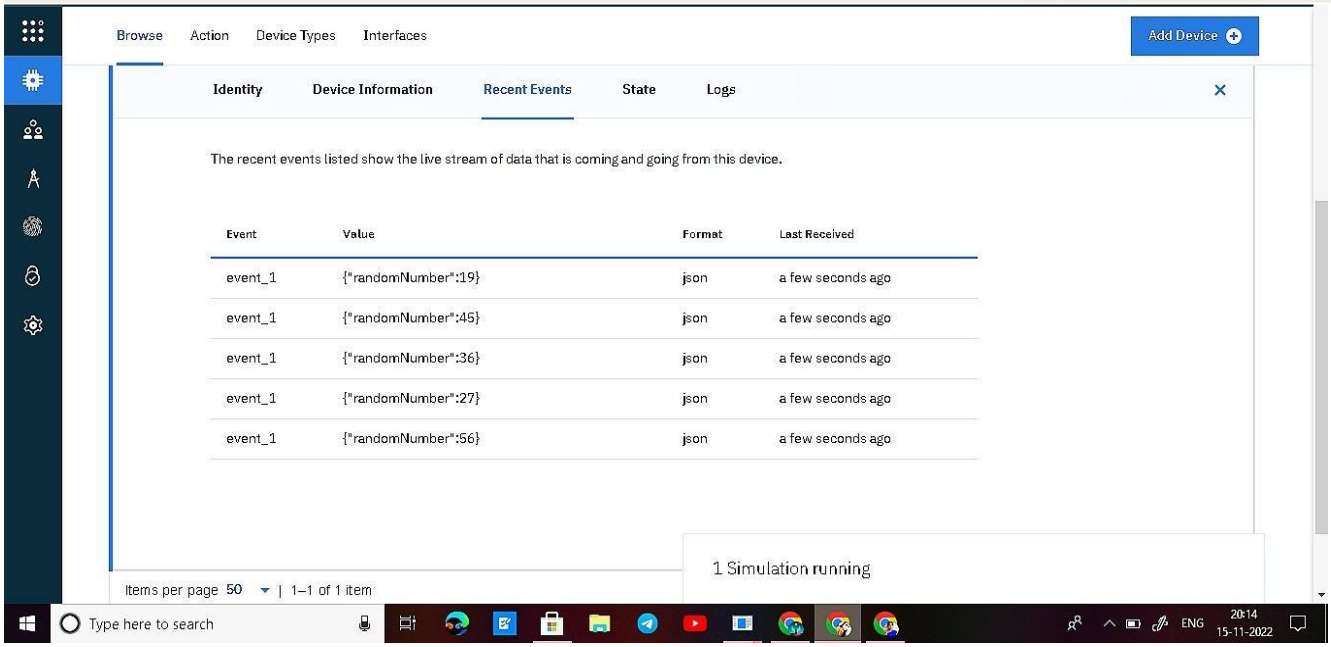
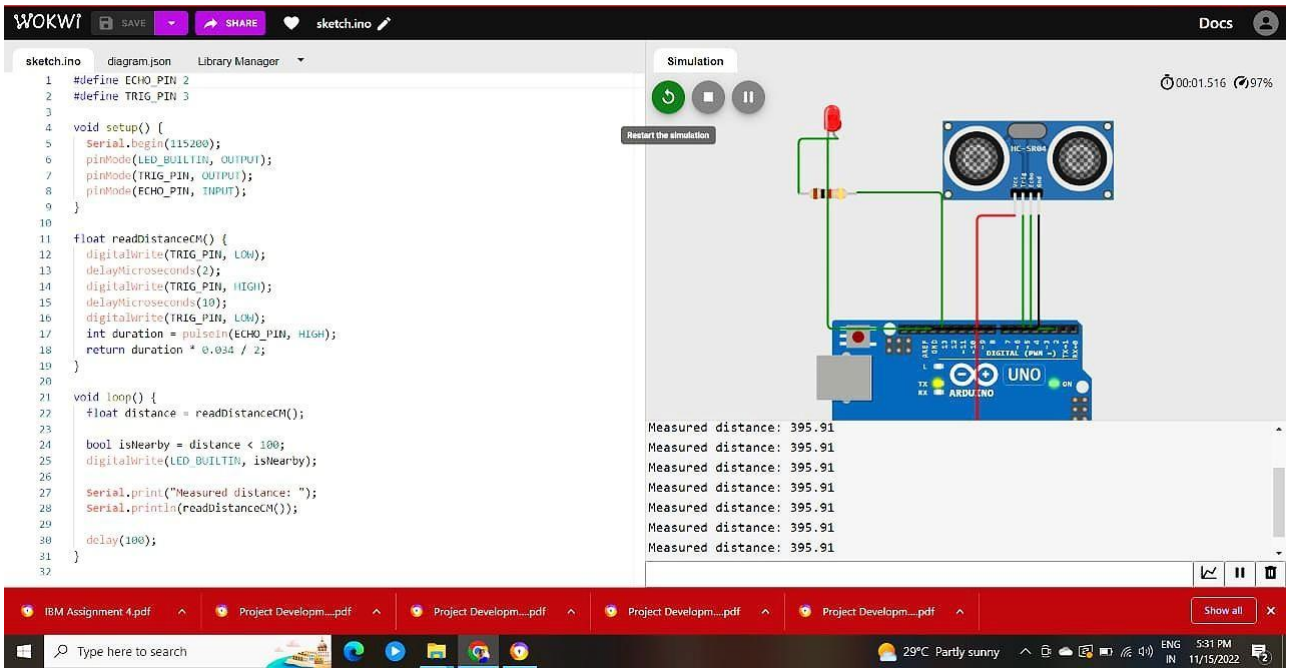

```
#define authToken="12345678"

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

IBM CLOUD :


IBM Watson IoT Platform
Browse
Action
Device Types
Interfaces
Device ID
Status
Device Type
12345
Disconnected
Child1
Identity
Device Information
Recent Events
State
Device ID
12345
Device Type
Child1
Date Added
Nov 15, 2022 7:44 PM
Added By
411419104024@newprinceshribhavani.com
Connection Status
Disconnected
Items per page 50
1–1 of 1 item
Device Type: Raspberri
Events 1
New event type
Event type name
event_1
Send
Schedule
1
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
{
"randomNumber": random(0, 100),
"distance" :random(50,200)
}
Upload a CSV file
Cancel
Save
Type here to search
ENG
20:16
15-11-2022


Browse
Action
Device Types
Interfaces
Add Device
Identity
Device Information
Recent Events
State
Logs
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
{"randomNumber":19}
json
a few seconds ago
event_1
{"randomNumber":45}
json
a few seconds ago
event_1
{"randomNumber":36}
json
a few seconds ago
event_1
{"randomNumber":27}
json
a few seconds ago
event_1
{"randomNumber":56}
json
a few seconds ago
1 Simulation running
Items per page 50
1–1 of 1 item
Type here to search
ENG
20:14
15-11-2022


WOKWI
SAVE
SHARE
sketch.ino
Docs
sketch.ino
diagram.json
Library Manager
#define ECHO_PIN 2
#define TRIG_PIN 3
void setup() {
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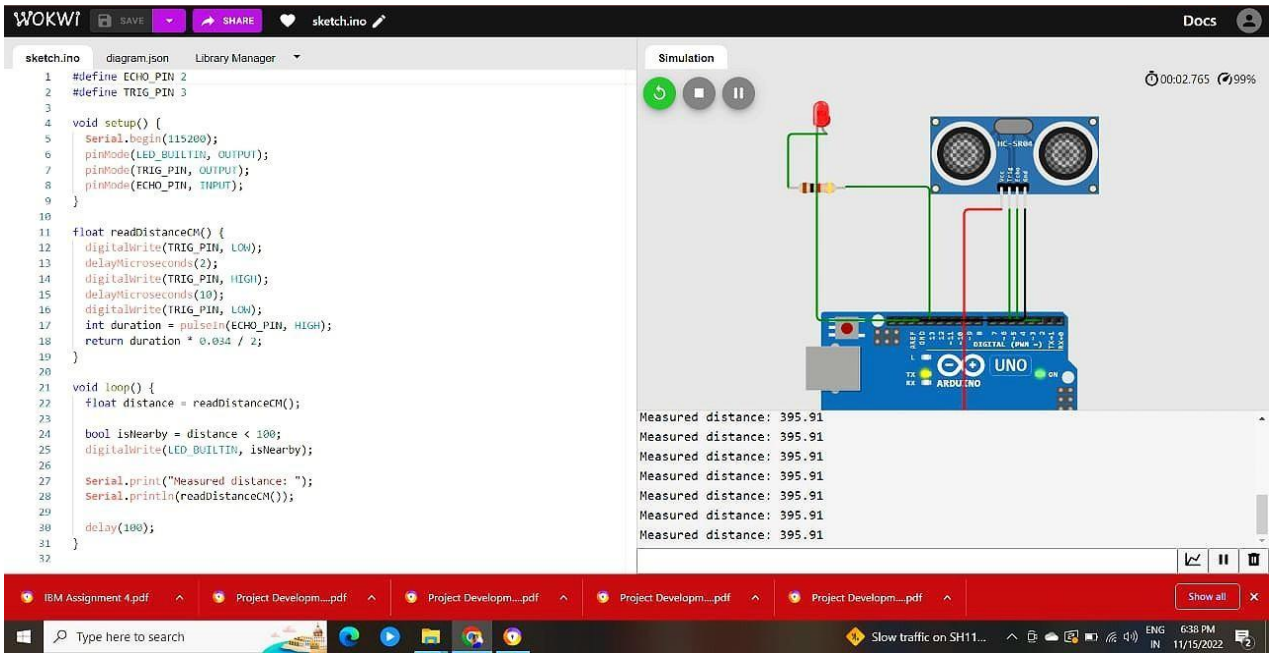
pinMode(ECHO_PIN, INPUT);
}
float readDistanceCM() {
digitalWrite(TRIG_PIN, LOW);
delayMicroseconds(2);
digitalWrite(TRIG_PIN, HIGH);
delayMicroseconds(10);
digitalWrite(TRIG_PIN, LOW);
int duration = pulseIn(ECHO_PIN, HIGH);
return duration * 0.034 / 2;
}
void loop() {
float distance = readDistanceCM();
bool isNearby = distance < 100;
digitalWrite(LED_BUILTIN, isNearby);
Serial.print("Measured distance: ");
Serial.println(readDistanceCM());
delay(100);
}
Simulation
00:01.516
97%
Restart the simulation
HC-SR04
UNO
ARDUINO
Measured distance: 395.91
Measured distance: 395.91
Measured distance: 395.91
Measured distance: 395.91
Measured distance: 395.91
Measured distance: 395.91
Measured distance: 395.91
IBM Assignment 4.pdf
Project Developm....pdf
Project Developm....pdf
Project Developm....pdf
Project Developm....pdf
Show all
Type here to search
29°C Partly sunny
ENG
IN
5:31 PM
11/15/2022


WOKWI
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sketch.ino
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diagram.json
Library Manager
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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
00:02.765
99%
HC-SR04
UNO
ARDUINO
Measured distance: 395.91
Measured distance: 395.91
Measured distance: 395.91
Measured distance: 395.91
Measured distance: 395.91
Measured distance: 395.91
Measured distance: 395.91
IBM Assignment 4.pdf
Project Developm....pdf
Project Developm....pdf
Project Developm....pdf
Project Developm....pdf
Show all
Type here to search
Slow traffic on SH11...
ENG
IN
6:38 PM
11/15/2022

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