Project Development-Delivery of Sprint 3

Date	5 November 2022
Team ID	PNT2022TMID30696
Project Name	Project -IOT Based Safety Gadget for Child
	Safety Monitoring and Notification

Sprint 3 is about **LOGIN and NOTIFIACATION** of the IoT device in Parent's Web Application for getting information about Child's Status.

LOGIN:-

This Coding is to built login page of parent's application to get information about child's condition.

Coding, Output, Screenshot

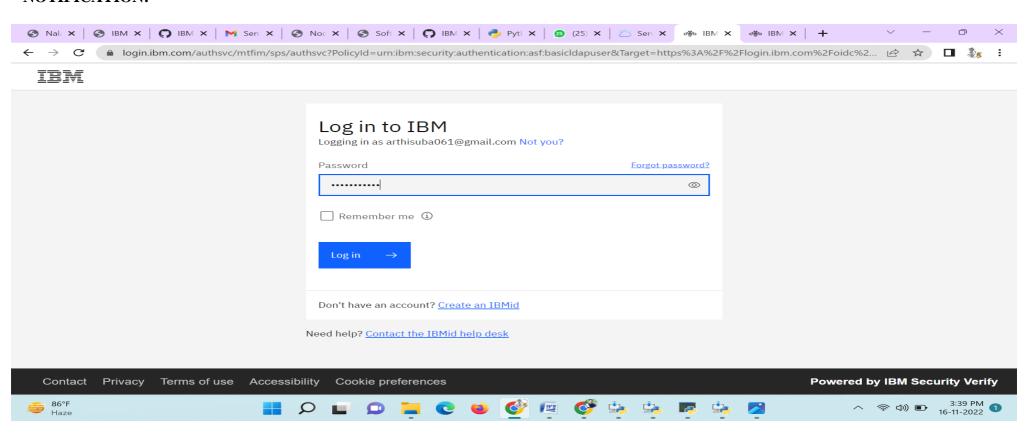
```
<!DOCTYPE html>
<html> <head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<title> Login Page </title>
<style> Body { font-family: Calibri,
Helvetica, sans-serif; background-color:
#9FE2BF;
}
button { background-color:
#9FE2BF; width: 100%;
color: black; padding: 15px;
```

```
margin: 10px 0px;
                         border:
           cursor: pointer;
none;
     } form {
                    border:
3px solid #f1f1f1;
input[type=text], input[type=password]
       width: 100%;
                         margin: 8px
0;
       padding: 12px 20px;
                         border: 2px
display: inline-block;
           box-sizing: border-box;
white;
button:hover {
opacity: 0.7;
 .cancelbtn {
    width: auto;
padding: 10px 18px;
margin: 10px 5px;
```

```
.container {
                padding: 25px;
background-color: #CCCCFF;
</style></head>
<body>
  <center> <h1> Login Form </h1> </center>
  <form>
    <div class="container">
    <label>Device ID/Number: </label>
      <input type="password" placeholder="Enter Password" name="password" required>
      <label>E-Mail: </label>
      <input type="text" placeholder="Enter Username" name="username" required>
      <label>Password : </label>
      <input type="password" placeholder="Enter Password" name="password" required>
      <button type="submit">Login</button>
      <button class="loginBtn loginBtn--facebook">Login with Facebook.
      <button class="loginBtn loginBtn--google">Login with Google./button>
      <input type="checkbox" checked="checked"> Remember me
      <button type="button" class="cancelbtn"> Cancel/button>
      Forgot <a href="#"> password? </a>
```

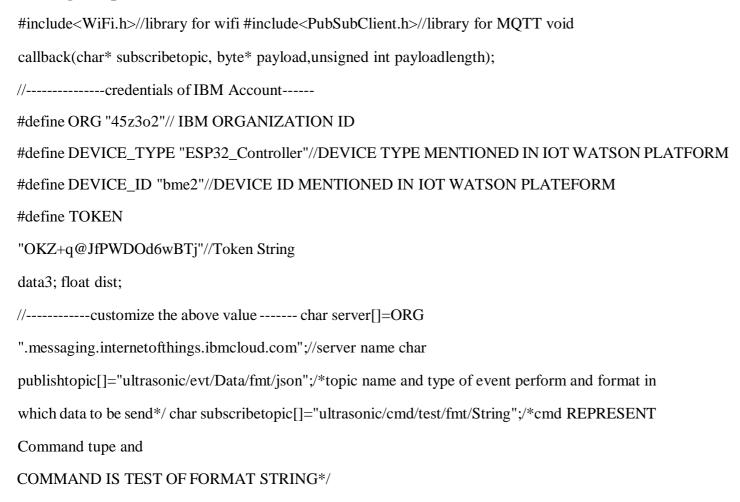
OUTPUT:

NOTIFICATION:-



This coding will make connection between IoT Device & Parent's application. When the child cross across the geofence message will be notifed on parent's application.

Coding, Output-Screenshot



```
char authMethod[]="use-token-auth"://authentication method char
token[]=TOKEN; char clientid[]="d:" ORG ":" DEVICE_TYPE":"
DEVICE_ID;//CLIENT ID
//_____
WiFiClient wifiClient;// creating an instance for wificlient
PubSubClient client(server, 1883, callback, wifiClient);/*calling the predefined client id by passing
parameter like server id, portand wificredential*/ int LED =4; int trig =5; int echo=18; void setup(){
Serial.begin(115200); pinMode(trig,OUTPUT); pinMode(echo,INPUT); pinMode(LED,OUTPUT);
delay(10); Serial.println(); wificonnect(); mqttconnect();
void loop() {
digitalWrite(trig,LOW);
digitalWrite(trig,HIGH);
delayMicroseconds(10);
digitalWrite(trig,LOW); float
dur=pulseIn(echo,HIGH); float
dist=(dur * 0.0343)/2;
Serial.print("distance in cm");
```

```
Serial.println(dist);
PublishData(dist);
delay(1000); if
(!client.loop()){
mqttconnect();
/*.....*/ void PublishData(float dist){ mqttconnect();//function
call for connecting to ibm
/*creating the string in form of JSON to update the data to ibm cloud*/
String object;
if(dist<100)
 digitalWrite(LED,HIGH);
Serial.println("no
                   object
                                   near");
                             is
object="Near";
                             else
digitalWrite(LED,LOW);
                         Serial.println("no
object found"); object="No";
```

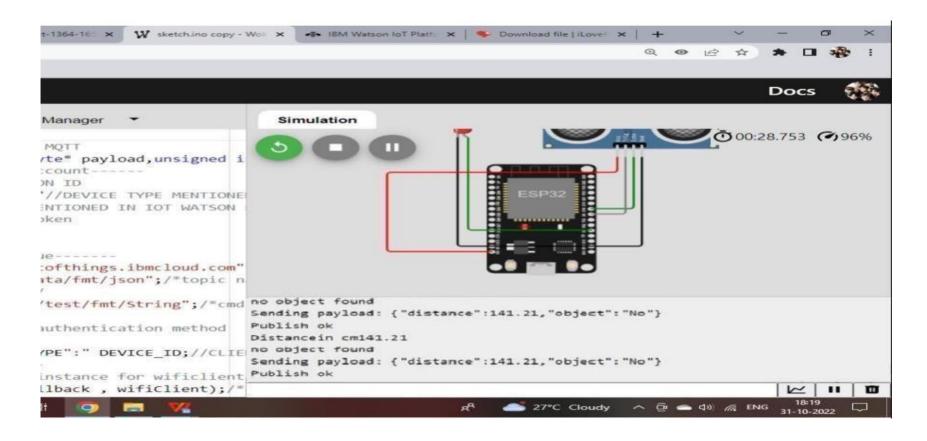
```
String payload="{\"distance\":";
payload +=dist; payload +=","
"\"object\":\""; payload += object;
payload += "\"}";
Serial.print("Sending payload: ");
Serial.println(payload); if(client.publish(publishtopic, (char*) payload.c_str())){
 Serial.println("Publish ok");/* if its successfully upload data on the cloud then it will print
                                                                                               publish ok in serial monitor or
else it will print publish failed*/
 } else{
  Serial.println("Publish failed");
 } } void mqttconnect(){
if(!client.connected()){
  Serial.print("Reconnecting client to "); Serial.println(server);
while(!!!client.connect(clientid,authMethod, token)){
Serial.print(".");
                     delay(500);
      initManagedDevice();
  Serial.println();
```

```
} } void wificonnect()//function defenition for wificonnect {
Serial.println();
Serial.print("Connecting to ");
 WiFi.begin("vivo 1816", "taetae95",6);//PASSING THE WIFI CREDIDENTIALS TO ESTABLISH
CONNECTION while (WiFi.status() !=WL_CONNECTED){
                                                               delay(500);
  Serial.print(".");
 Serial.println("");
 Serial.println("WiFi connected");
 Serial.println("IP address");
 Serial.println(WiFi.localIP());
} void initManagedDevice(){
if(client.subscribe(subscribetopic)){
Serial.println((subscribetopic));
  Serial.println("subscribe to cmd OK");
 }else{
  Serial.println("subscribe to cmd failed");
} void callback(char* subscribetopic,byte*payload,unsigned int payloadLength)
```

```
Serial.print("callback invoked for topic: ");
Serial.println(subscribetopic); for(int i=0; i<
payloadLength; i++){ //Serial.print((char)payload[i]);
data3 +=(char)payload[i];
 //Serial.println("dta: "+ data3);
 //if(data3=="Near")
 //{
 //Serial.println(data3);
 //digitalWrite(LED,HIGH);
 //}
 //else //{
 //Serial.println(data3);
//digitalWrite(LED,LOW);//} data3="";
```

OUTPUT:

When child is not detected within the safe zone with the help of IT device



Childs status are notified to parents device using cloud service

