

Project Development
Delivery of Sprint2

Date	5 November2022
Team ID	PNT2022TMID25072
Project Name	Project- IoT Based Safety Gadget for Child Safety Monitoring and notification

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

LOGIN:-

Coding, Output, Screenshot

```
<!DOCTYPEhtml>
```

```
<html><head>
```

```
<metaname="viewport"content="width=device-width,initial-scale=1">
```

```
<title>LoginPage</title>
```

```
<style>Body{fontfamily:Calibri,Helvetica,  
    sansserif;background-color:#9FE2BF;  
}
```

```
button{ backgroundcolor:#9FE2BF;  
width:100%;    color:black;  
padding:15px;  margin:10px0px;  
border:none; cursor:pointer;  
    }form{ border:  
3pxsolid#f1f1f1;
```

```
    }
    input[type=text],input[type=password]
    { width:100%; margin:
    8px0;padding:12px20px; display:inline-block;
    border: 2pxwhite;box-sizing:border-box;
    }
    button:hover
    {opacity:0.7;
    }
    .cancelbtn{ width:
    auto;padding:10px
    18px;margin:10px
    5px;
    }
    .container{ padding:
    25px;backgroundcolor:#CCCCFF;
    }
</style></head>
<body>
    <center><h1>LoginForm</h1></center>
    <form>
        <divclass="container">
```

<label>DeviceID/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>

<button class="loginBtn loginBtn--google">Login with Google.</button>

<input type="checkbox" checked="checked">Remember me

<button type="button" class="cancelBtn">Cancel</button> Forgot password?

</div>

</form>

</body>

</html> OUTPUT:

Login Form

Device ID/Number:

E-Mail :

hemadharshini2502@gmail.com

Password :

Login

Login with Facebook.

Login with Google.

☒ Remember me

Cancel

Forgot [password?](#)



Type here to search



24°C Mostly cloudy



ENG

22:16
05-11-2022



NOTIFICATION: Coding, Output-Screenshot

```
#include<WiFi.h>//libraryforwifi#include<PubSubClient.h>//libraryforMQTTvoidcallback(char*subscribetopic,byte*payload,unsignedintpayloadlength);
//-----credentialsofIBMAccount-----
#defineORG"45z3o2"//IBMORGANIZATIONID
#defineDEVICE_TYPE"ESP32_Controller"//DEVICETYPEMENTIONEDINIOTWATSON
PLATFORM#defineDEVICE_ID"bme2"//DEVICEIDMENTIONEDINIOTWATSONPLATEFORM
#define
TOKEN"OKZ+q@JfPWDOd6wBTj"//TokenStringdata3;floatdist;
//-----customizeabovevalue charserver[]=ORG
".messaging.internetofthings.ibmcloud.com";//servernamecharpublishtopic[]="ultrasonic/event/Data/fmt/json";//*topicnameandtypeofeventperformandformatinwhichdatatobe
send*/charsubscribetopic[]="ultrasonic/cmd/test/fmt/String";//*cmd REPRESENTCommandtupeand
COMMANDISTESTOFFORMATSTRING*/ charauthMethod[]="use-token-auth";//authentication methodchartoken[]=TOKEN;char
clientid[]="d:"ORG":"DEVICE_TYPE":"DEVICE_ID";//CLIENTID
//
WiFiClientwifiClient;//creatinganinstanceforwificlient
```

```

PubSubClient client(server,1883,callback,wifiClient);/*calling the predefined client id by
passing parameter like server id,port and wifi credential*/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();}
}
/*.....retrieving to cloud.....*/void PublishData(float dist){mqttConnect();//function call for connecting to IBM

String object;if(dist<100)

```

```

{
    digitalWrite(LED,HIGH);
    Serial.println("noobjectisnear");object="Near";
} else
{digitalWrite(LED,LOW);Serial.println("noobjectfound");object="No";
}
String payload="{\"distance\":";payload
+=dist;payload
+=",\"\"object\":\";payload+=object; payload+=\"\"}";

Serial.print("Sendingpayload:"); Serial.println(payload);
if(client.publish(publishtopic,(char*)payload.c_str())){
    Serial.println("Publishok");

}else{

    Serial.println("Publishfailed");
}
}voidmqttconnect(){if(!client.connected()){
    Serial.print("Reconnectingclientto");
    Serial.println(server);while(!client.connect(clientid,authMethod,token)){Serial.print(".");
        delay(500);
    } initManagedDevice();
}

```

```

Serial.println(); }}voidwificonnect();//functiondefenitionforwificonnect{

Serial.println();
Serial.print("Connectingto");

WiFi.begin("vivo1816","taetae95",6);//PASSINGTHEWIFICREDIDENTIALSTOESTABLISH
CONNECTIONwhile(WiFi.status() !=WL_CONNECTED){ delay(500);

Serial.print(".");
}

Serial.println("");Serial.println("
WiFiconnected");Serial.println(
"IP
address");Serial.println(WiFi.lo
calIP()); }void
initManagedDevice(){if(client.subsc ribe(subscribetopic)){Serial.println(
(subscribetopic));

Serial.println("subscribetocmdOK");
}else{

Serial.println("subscribetocmdfailed");
}
}voidcallback(char*subscribetopic,byte*payload,unsignedintpayloadLength)
{

```



```

Serial.print("callbackinvokedfortopic:");

Serial.println(subscribetopic);for(inti=0; i<payloadLength;i++){

//Serial.print((char)payload[i]);data3+=(char)payload[i];

//Serial.println(data3);

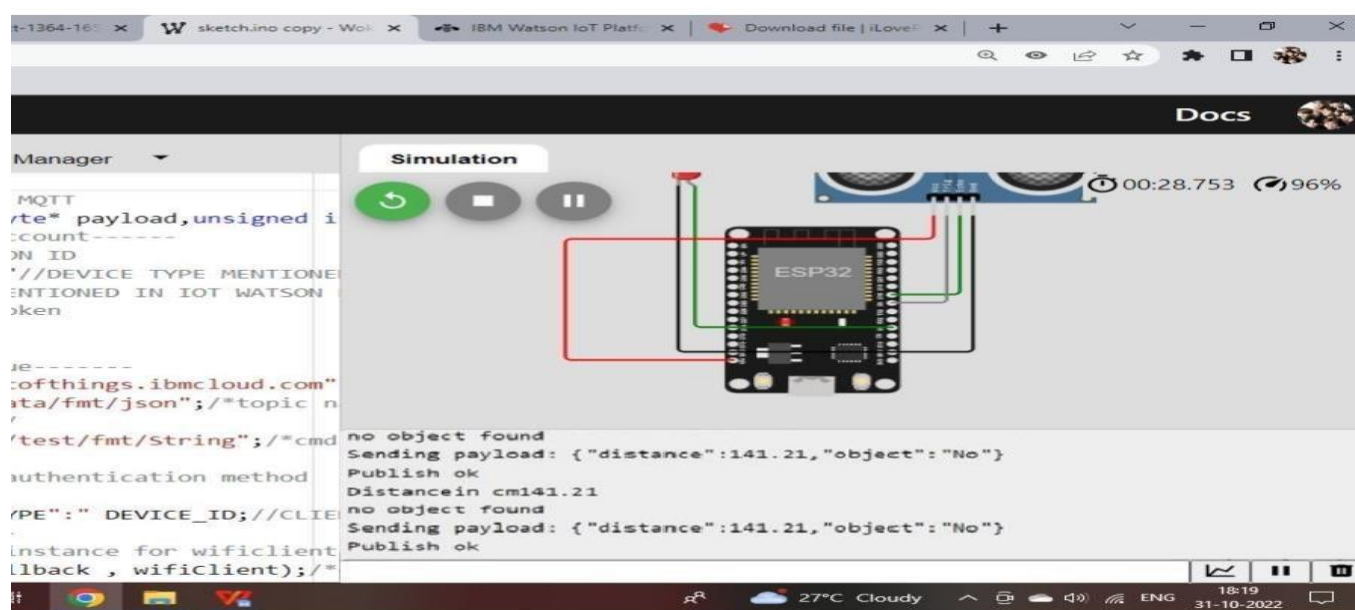
//digitalWrite(LED,LOW);//}data3="";

}

```

OUTPUT:

WhenchildisnotdetectedwithinthesafezonewiththehelpofIoTdevice



Childs status are notified to parents device using cloud service:

The screenshot displays the IBM Watson IoT Platform dashboard. The top navigation bar includes the IBM logo and the user's email address, hemadharshini2502@gmail.com, with the ID 45z3o2. The main content area is divided into two sections. The top section is a table listing devices, with columns for Device ID, Status, Device Type, Class ID, and Date Added. The bottom section is a detailed view of a device named 'bme2', showing its Identity, Device Information, Recent Events, State, and Logs. The 'Recent Events' table lists several events with columns for Event, Value, Format, and Last Occurred.

Device ID	Status	Device Type	Class ID	Date Added
123	Disconnected	Node_RED	Device	Oct 29, 2022 9:56 PM
bme2	Disconnected	ESP32_Controller	Device	Oct 28, 2022 8:46 PM

Identity	Device Information	Recent Events	State	Logs
Event	Value	Format	Last Occurred	
[Data]	[Object]{"PM_AirQuality":1}	json	at 10:00:00 AM	at 10:00:00 AM
[Data]	[Object]{"PM_AirQuality":2}	json	at 10:00:00 AM	at 10:00:00 AM
[Data]	[Object]{"PM_AirQuality":3}	json	at 10:00:00 AM	at 10:00:00 AM
[Data]	[Object]{"PM_AirQuality":4}	json	at 10:00:00 AM	at 10:00:00 AM
[Data]	[Object]{"PM_AirQuality":5}	json	at 10:00:00 AM	at 10:00:00 AM

