

## Project Planning Phase

### Delivery Sprint 2

Date	06 November 2022
Team ID	PNT2022TMID12772
Project Name	Project - IoT Based Safety Gadget for Child Safety Monitoring and notification
Maximum Marks	8 Marks

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

**LOGIN:-**

**Coding, Output, Screenshot**

```
<!DOCTYPE html>
<html> <head>
<metaname="viewport" content="width=device-width,initial-scale=1">
<title>LoginPage</title>
<style>Body{font-
family:Calibri,Helvetica,
sans-
serif;background-color:#9FE2BF;
}
button{
background-
```

```
color:#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;background-
color:#CCCCFF;
}
</style></head>
<body>
<center><h1>LoginForm</h1></center>
<form>
<divclass="container">
<label>DeviceID/Number:</label>
<inputtype="password"placeholder="EnterPassword"name="password"required>
<label>E-Mail:</label>
<inputtype="text"placeholder="EnterUsername"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>
on>Forgot<a href="#">password?</a></div>
</form>
</body>
</html>

```

### Coding, Output-Screenshot

```

#include <WiFi.h> // library for wifi
#include <PubSubClient.h> // library for MQTT
void callback(char* topic, byte* payload, unsigned int payloadLength);
//-----credentials of IBM Account-----
#define ORG "45z3o2" // IBM ORGANIZATION ID
#define DEVICE_TYPE "ESP32_Controller" // DEVICE TYPE MENTIONED IN IOT WATSON PLATFORM
#define DEVICE_ID "bme2" // DEVICE ID MENTIONED IN IOT WATSON PLATFORM
#define
TOKEN "OKZ+q@JfPWDOd6wBTj" // Token
String data3; float dist;
//-----customize the above value
char server[] = ORG
".messaging.internetofthings.ibmcloud.com"; // server name
char publishTopic[] = "ultrasonic/event/Data/fmt/json"; // topic name and type of event
perform and format in which data to be

```

```

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
PubSubClientclient(server,1883,callback,wifiClient);/*callingthepredefinedclientidby
passingparameterlikeserverid,portandwificredential*/intLED=4;inttrig=5;intecho=18;void
setup(){Serial.begin(115200);pinMode(trig,OUTPUT);pinMode(echo,INPUT);pinMode(LED,OUTPUT);
delay(10);Serial.println();wificonnect();mqttconnect();
}
voidloop()
{digitalWrite(trig,LOW);digital
Write(trig,HIGH);delayMicrose
conds(10);digitalWrite(trig,LO
W);floatdur=pulseIn(echo,HIG
H);floatdist=(dur*
0.0343)/2;Serial.print("distanc
eincm");Serial.println(dist);Publis
hData(dist);delay(1000);if
(!client.loop()){mqttconne
ct();
}
}
/*.....retrivingtocloud.....*/voidPublishData(floatdist){mqttconnect();//functi
oncallforconnectingtoibm
String
object;if(dis
t<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(){i
f(!client.connected()){
Serial.print("Reconnectingclientto");
Serial.println(server);while(!!!client.connect(clientid,authMethod,token)){Serial.print(".");
delay(500);
} initManagedDevice();
Serial.println();}}voidwificonnect();//functiondefinitionforwificonnect{
Serial.println();
Serial.print("Connectingto");
WiFi.begin("vivo1816","taetae95",6);//PASSINGTHEWIFICREDENTIALSTOESTABLISH

```

```

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)paylo
ad[i];
//Serial.println(data3);
//digitalWrite(LED,LOW);//}data3="";
}

```

### OUTPUT:

WhenchildisnotdetectedwithinthesafezonewiththehelpofIoTdevice

