

Project Planning Phase

Delivery Sprint 2

Date	10 November 2022
Team ID	PNT2022TMID108476
Project Name	Project - IoT Based Safety Gadget for Child Safety Monitoring and notification

LOGINandNOTIFIACATIONofthelotdeviceinParent'sWebApplicationforgettinginformationaboutChild'sStatus.

LOGIN:-

Coding,Output,Screenshot

```
<!DOCTYPEhtml>
<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><inputtype="password"placeholder="EnterPassword"name="password"required>
<buttontype="submit">Login</button>
<buttonclass="loginBtnloginBtn--facebook">LoginwithFacebook.</button>
<buttonclass="loginBtnloginBtn--google">LoginwithGoogle.</button>
<inputtype="checkbox"checked="checked">Rememberme
<buttontype="button"class="cancelbtn">Cancel</butt
on>Forgot<a href="#">password?</a></div>
</form>
</body>

```

</html>

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"//Tok
enStringdata3;floatdist;
//-----customizetheabovevalue
charserver[]=ORG
".messaging.internetofthings.ibmcloud.com";//servernamecharpublishtopic[]="ultrasonic/e
vt/Data/fmt/json";//*topicnameandtypeofeventperformandformatinwhichdatatobesend*/charsubscribetopic[]="ultrasonic/cmd/test/f
mt/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("noobj
ectfound");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("Rec
onnectingclientto");
Serial.println(server);while(!client.connect(clientid,authMet
hod,token)){Serial.print(".");
delay(500);
} initManagedDevice();

```

```

Serial.println();}}voidwificonnect();//functiondefenitionforwificonnect{ Serial.pri
ntln();
Serial.print("Connectingto");
WiFi.begin("vivo1816","taetae95",6);//PASSINGTHEWIFICREDIDENTIALSTOESTABLISHCONNECTIONwhile(WiFi.status()!=WL_CONNECTE
D){
delay(500);
Serial.print(".");
}
Serial.println("");Serial.println("
WiFiconnected");Serial.println( "I
P
address");Serial.println(WiFi.lo
calIP());
}void
initManagedDevice(){if(client.subsc
ribe(subscribetopic)){Serial.println( (su
bscribetopic));
Serial.println("subscribetocmdOK");
}else{
Serial.println("subscribetocmdfailed");
}
}voidcallback(char*subscribetopic,byte*payload,unsignedintpayloadLength){ Se
rial.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

