

Project Development- Delivery of Sprint2

Date	5 November2022
Team ID	PNT2022TMID47921
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{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:12px 20px;
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>

OUTPUT:

The screenshot displays a web browser window with a 'Login Form' centered on the page. The form is contained within a light blue rectangular box. At the top of the form, the title 'Login Form' is displayed in bold black text. Below the title, there are three input fields: 'Device ID/Number:' with a white input box containing a series of dots, 'E-Mail :' with a light blue input box containing the email address 'hemadharshini2502@gmail.com', and 'Password :' with a white input box containing four dots. Below these fields are three buttons: a green 'Login' button, a green 'Login with Facebook.' button, and a light blue 'Login with Google.' button. At the bottom of the form, there is a checkbox labeled 'Remember me' which is checked, followed by a green 'Cancel' button and a link 'Forgot password?'. The browser's taskbar is visible at the bottom, showing the Windows logo, a search bar, and various application icons. The system tray on the right shows the date and time as '05-11-2022 22:16' and the weather as '24°C Mostly cloudy'.

NOTIFICATION:-

Coding,Output-Screenshot

```
#include<WiFi.h>//libraryforwifi#include<PubSubClient.h>//libraryforMQTTvoidcallback(char*subscribetopic,byte* payload,unsignedintpayloadlength);
//-----credentialsofIBMAccount-----
#defineORG"45z3o2"//IBMORGANIZATION ID
#define DEVICE_TYPE "ESP32_Controller"//DEVICE TYPE MENTIONED IN IOT WATSON
PLATFORM#defineDEVICE_ID "bme2"//DEVICEID MENTIONED INIOTWATSONPLATEFORM
#define
TOKEN"OKZ+q@JfPWOd6wBTj"//Tok
enStringdata3;floatdist;
//-----customizetheabovevalue-----charserver[]=ORG
".messaging.internetofthings.ibmcloud.com";//servernamecharpublishtopic[]="ultrasonic/e
vt/Data/fmt/json";//*topic nameandtypeofeventperformandformatinwhich data to be
send*/ char subscribetopic[]="ultrasonic/cmd/test/fmt/String";//*cmd
REPRESENTCommandtupeand
COMMANDISTESTOFFORMATSTRING*/
```

```

char authMethod[]="use-token-auth";//authentication
method chartoken[]=TOKEN;char
clientid[]="d:"ORG":"DEVICE_TYPE":"DEVICE_ID";//CLIENTID
// .....
WiFiClient wifiClient;//creating an instance for wifi client
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);digital
Write(trig,HIGH);delayMicrose
conds(10);digitalWrite(trig,LO
W);float dur=pulseIn(echo,HIG
H);float dist=(dur *
0.0343)/2;Serial.print("distanc
e in cm");

```

```

    Serial.println(dist);PublishData(dist);delay(1000);if
(!client.loop()){mqttconnect();
}
}
/*.....retrivingtocloud.....*/voidPublishData(floatdist){mqttconnect();//functionforconnecting toIBMCloud}

```

```

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(){i  
f(!client.connected()){  
    Serial.print("Reconnectingclientto");  
Serial.println(server);while(!client.connect(clientid,authMet  
hod,token)){Serial.print(".");        delay(500);  
    }    initManagedDevice();  
    Serial.println();
```



```

}}voidwificonnect();//functiondefenitionforwificonnect{

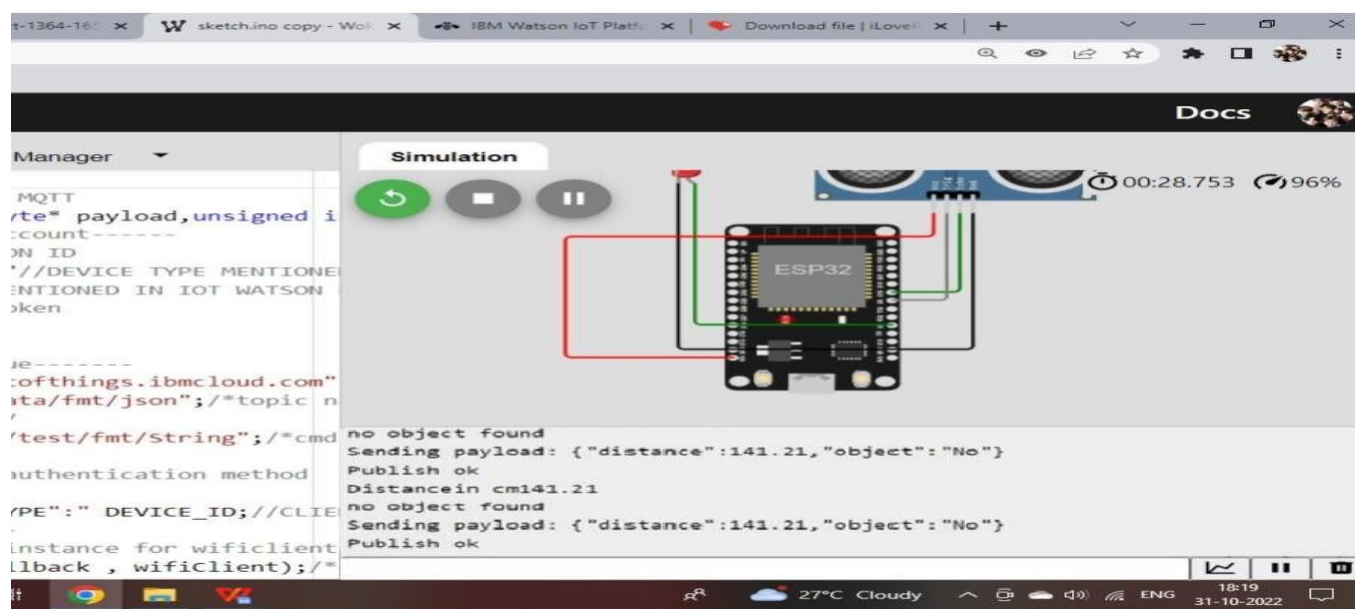
Serial.println();
Serial.print("Connectingto");
WiFi.begin("vivo1816","taetae95",6);//PASSINGTHEWIFICREDIDENTIALSTOESTABLISH
CONNECTIONwhile(WiFi.status()!=WL_CONNECTED){      delay(500);
    Serial.print(".");
}
Serial.println("");Serial.println("
Wificonnected");Serial.println(
"IP
address");Serial.println(WiFi.lo
callP());
} void
initManagedDevice(){if(client.subsc
ribe(subscribetopic)){Serial.println(
(subscribetopic));
    Serial.println("subscribetocmdOK");
}else{
    Serial.println("subscribetocmdfailed");
}
}voidcallback(char*subscribetopic,byte*payload,unsigned int payload Length)

```

```
{  
  Serial.print("callbackinvokedfortopic:");  
  Serial.println(subscribetopic);for(int i=0;  
  i<payloadLength;i++){  
    //Serial.print((char)payload[i]);data3+=(char)paylo  
    ad[i];  
  
    //Serial.println(data3);  
    //digitalWrite(LED,LOW);//}data3="";  
}
```

OUTPUT:

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



Childs status are notified to parents device using cloud service

