ProjectDevelopment-Deliveryof
Sprint2

Date	5November2022
TeamID	PNT2022TMID30639
ProjectName	Project-IoTBasedSafetyGadgetfor ChildSafetyMonitoringand notification

LOGINandNOTIFIACATIONoftheIoTdeviceinParent'sWebApplicationforgettinginformationaboutChild'sStatus.

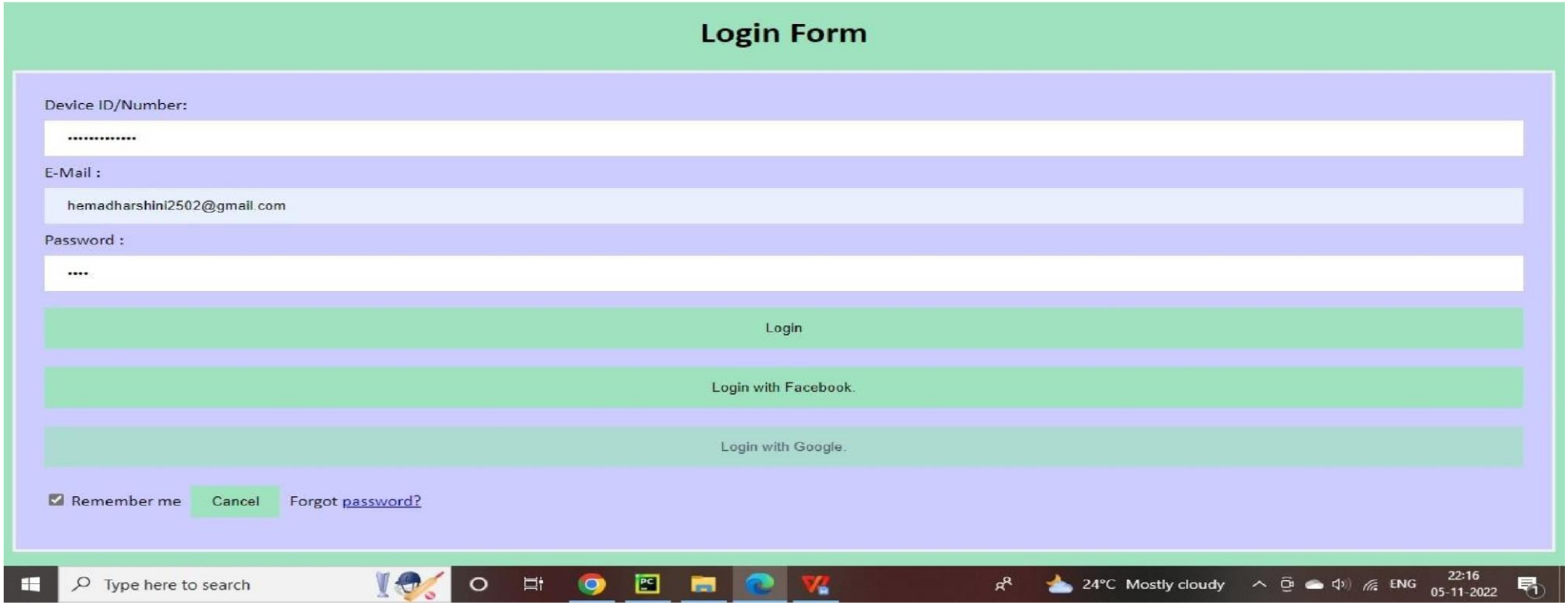
LOGIN:-

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>
            <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<ahref="#">password?</a>
        </div>
    </form>
</body>
</html> OUTPUT:
```



NOTIFICATION:Coding,Output-Screenshot

#include<WiFi.h>//libraryforwifi#include<PubSubClient.h>//libraryforMQTTvoidcallback(ch

ar*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";/*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
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
```

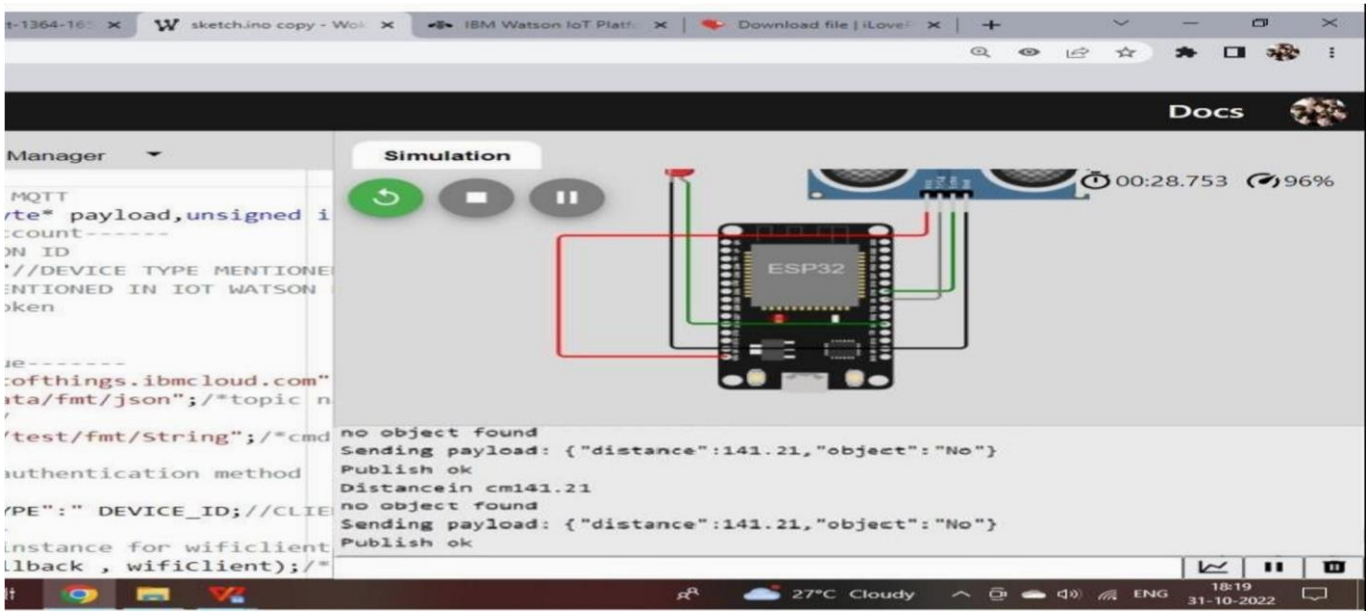
```
eincm");
  Serial.println(dist);Publis

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="Nea

r";       }          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("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(
```

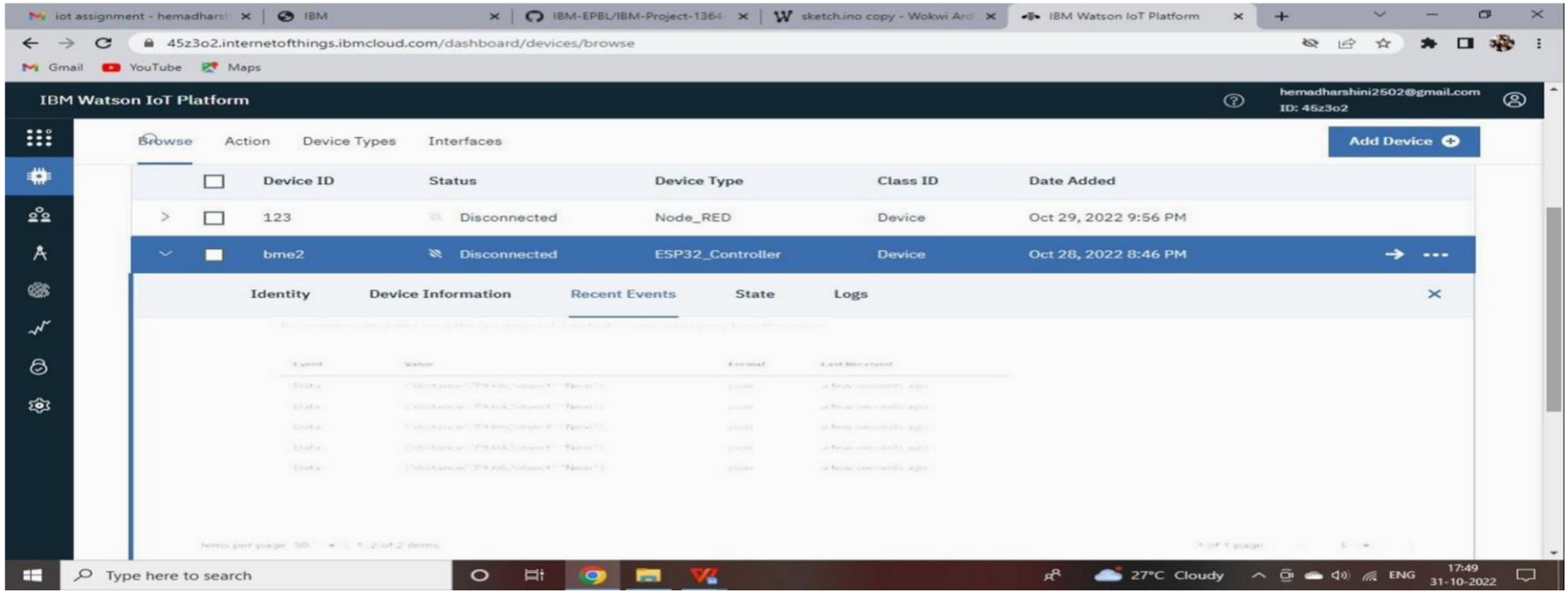
```
  "IP
  address");Serial.println(WiFi.lo
callIP()); }void
initManagedDevice(){if(client.subsc ribe(subscribetopic)){Serial.println(
(subscribetopic));
    Serial.println("subscribetocmdOK");
  }else{
    Serial.println("subscribetocmdfailed");
  }
}voidcallback(char*subscribetopic,byte*payload,unsignedintpayloadLength)
{
  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



Childsstatusarenotifiedtoparentsdeviceusingcloudservice


IBM Watson IoT Platform
45z3o2.internetofthings.ibmcloud.com/dashboard/devices/browse
hemadharshini2502@gmail.com
ID: 45z3o2
Browse
Action
Device Types
Interfaces
Add Device
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
Type here to search
27°C Cloudy
ENG
17:49
31-10-2022