**PROJECT DEVELOPMENT PHASE**

**DELIVERY OF SPRINT-4**

|  |  |
| --- | --- |
| Date | 7 November 2022 |
| Team ID | PNT2022TMID8144 |
| Project Name | Industry Specific Intelligence Fire Management System |

#include <WiFi.h>

#include <Wire.h>

#include <SPI.h>

#include "ThingSpeak.h" #include

<WiFiClient.h>

unsigned long myChannelNumber = 2; const char \* myWriteAPIKey

= "25V40ZAPI6KIZFGY";

int LED\_PIN = 32; // the current reading from the input pin

int BUZZER\_PIN= 12; const int mq2 = 4; int

value = 0;

//Flame int flame\_sensor\_pin = 10 ;// initializing pin 10 as the sensor digital output pin int flame\_pin = HIGH ; // current state of sensor

char ssid[] = "a"; char pass[] = "n"; WiFiClient client;

#define PIN\_LM35 39

#define ADC\_VREF\_mV 3300.0

#define ADC\_RESOLUTION 4096.0

#define RELAY\_PIN 17

#define RELAY\_PIN1 27

void setup()

{

Serial.begin(115200);

pinMode(RELAY\_PIN, OUTPUT); pinMode(RELAY\_PIN1, OUTPUT);

Serial.print("Connecting to ");

Serial.println(ssid);

WiFi.begin(ssid, pass); int wifi\_ctr

= 0;

while (WiFi.status() != WL\_CONNECTED)

{

delay(1000);

Serial.print(".");

}

Serial.println("WiFi connected");

ThingSpeak.begin(client); pinMode(LED\_PIN, OUTPUT); pinMode(mq2, INPUT); pinMode ( flame\_sensor\_pin , INPUT ); // declaring sensor pin as input pin for Arduino pinMode(BUZZER\_PIN, OUTPUT);

}

void temperature()

{

int adcVal = analogRead(PIN\_LM35); float milliVolt = adcVal \*

(ADC\_VREF\_mV / ADC\_RESOLUTION); float tempC = milliVolt /

10; Serial.print("Temperature: ");

Serial.print(tempC);

Serial.print("°C"); if(tempC

> 60)

{

Serial.println("Alert");

digitalWrite(BUZZER\_PIN, HIGH); // turn on

} else

{

digitalWrite(BUZZER\_PIN, LOW); // turn on

}

int x = ThingSpeak.writeField(myChannelNumber,1, tempC, myWriteAPIKey); }

void GasSensors()

{

//mq2

int gassensorAnalogmq2 = analogRead(mq2);

Serial.print("mq2 Gas Sensor: ");

Serial.print(gassensorAnalogmq2);

Serial.print("\t");

Serial.print("\t");

Serial.print("\t");

if (gassensorAnalogmq2 > 1500)

{

Serial.println("mq2Gas"); Serial.println("Alert"); digitalWrite(RELAY\_PIN1, HIGH); // turn on fan 10 seconds delay(100);

} else

{

Serial.println("No mq2Gas"); digitalWrite(RELAY\_PIN1,

LOW); // turn off fan 10 seconds delay(100);

}

int a = ThingSpeak.writeField(myChannelNumber,4, gassensorAnalogmq2, myWriteAPIKey);

}

void flamesensor()

{ flame\_pin = digitalRead ( flame\_sensor\_pin ) ; // reading from the sensor if (flame\_pin == LOW ) // applying condition

{

Serial.println ( " ALERT: FLAME IS DETECTED" ) ; digitalWrite (BUZZER\_PIN, HIGH ) ;// if state is high, then turn high the BUZZER } else

{

Serial.println ( " NO FLAME DETECTED " ) ;

digitalWrite (BUZZER\_PIN , LOW ) ; // otherwise turn it low

} int value = digitalRead(flame\_sensor\_pin); // read the analog value from sensor

if (value ==LOW) { Serial.print("FLAME");

digitalWrite(RELAY\_PIN, HIGH);

} else {

Serial.print("NO FLAME"); digitalWrite(RELAY\_PIN, LOW);

}

} void loop() {

temperature(); GasSensors(); flamesensor();

}

**LOGIN CODE**

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">

<head>

<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />

<title>Welcome To Login Form</title>

<!-- Complete css for whole page. -->

<style type="text/css">

/\* body css for whole page \*/

body

{

margin:0px;

background-image: url("https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.projects.ed.ac.uk%2Fproject%2Fcsg013&psig=AOvVaw2ZIud0tkiB8qE7PAATcOUg&ust=1668527229576000&source=images&cd=vfe&ved=0CBAQjRxqFwoTCPDglLmCrvsCFQAAAAAdAAAAABAE");

background-size: cover;

color:#f9fcf5;

font-family:Arial, Helvetica, sans-serif;

}

#main{width:600px; height:260px; margin-left:auto; margin-right:auto; border-radius:5px; padding-left:10px; margin-top:100px;

border-top:3px double #f1f1f1; border-bottom:3px double #f1f1f1;border-right:3px double #f1f1f1;border-left:3px double #f1f1f1; padding-top:20px;

background: #fff;

}

#main table{font-family:"Comic Sans MS", cursive;}

/\* css code for textbox \*/

#main .tb{

height: 28px;

width: 230px;

border: 1px solid #262b28;

color: #27a465;

font-weight: bold;

opacity: 0.9;

padding: 0 10px;

}

#main .tb:focus{height:28px; border:1px solid #27a465; outline:none; border-left:5px solid #f7f7f7;}

/\* css code for button\*/

#main .btn{width:60%; height:32px; outline:none; font-weight:bold; border:0px solid #27a465; text-shadow: 0px 0.5px 0.5px #fff;

border-radius: 2px; font-weight: 600; color: white; letter-spacing: 1px; font-size:14px;

background-color:black; -webkit-transition: 1s; -moz-transition: 1s; transition: 1s;}

#main .btn:hover{background-color:white; outline:none; border-radius: 2px; color:#f1f1f1; border:1px solid #f1f1f1;-webkit-transition: 1s; -moz-transition: 1s; transition: 1s; }

</style>

<!-- Css ending here. -->

<!-- Complete javascript for login. -->

<!-- Add url of javascript -->

<script type="text/javascript" src="http://code.jquery.com/jquery-1.6.min.js"></script>

<!-- Java Script -->

<script>

function login()

{

var uname = document.getElementById("email").value;

var pwd = document.getElementById("pwd1").value;

var filter = /^([a-zA-Z0-9\_\.\-])+\@(([a-zA-Z0-9\-])+\.)+([a-zA-Z0-9]{2,4})+$/;

if(uname =='')

{

alert("please enter user name.");

}

else if(pwd=='')

{

alert("enter the password");

}

else if(pwd=="Athulya" && uname=="Athulya" )

{

alert('Login Success...Redirecting to Dashboard');

//Redirecting to other page or webste code or you can set your own html page.

window.location = "https://node-red-jleja-2022-11-04.eu-gb.mybluemix.net//ui/";

}

else

{

alert("Invalid Login Credentials");

}

}

function clearFunc()

{

document.getElementById("email").value="";

document.getElementById("pwd1").value="";

}

</script>

<!-- Javascript ending here.. -->

</head>

<body>

<!-- Main div code -->

<div id="main">

<div class="h-tag">

<h2><center style="color: black;">Login Form</center></h2>

</div>

<!-- Login box -->

<div class="login">

<table cellspacing="2" align="center" cellpadding="8" border="0">

<tr>

<td style="color: black;">User Name :</td>

<td><input type="text" placeholder="Enter User Name" id="email" class="tb" /></td>

</tr>

<tr>

<td style="color: black;">Password :</td>

<td><input type="password" placeholder="Enter Password" id="pwd1" class="tb" /></td>

</tr>

<tr>

<td></td>

<td>

<input type="submit" value="Login" class="btn" onClick="login()" /></td>

</tr>

</table>

</div>

<!-- login box div ending here.. -->

</div>

<!-- Main div ending here... -->

<script>

(function(i,s,o,g,r,a,m){i['GoogleAnalyticsObject']=r;i[r]=i[r]||function(){

(i[r].q=i[r].q||[]).push(arguments)},i[r].l=1\*new Date();a=s.createElement(o),

m=s.getElementsByTagName(o)[0];a.async=1;a.src=g;m.parentNode.insertBefore(a,m)

})(window,document,'script','https://www.google-analytics.com/analytics.js','ga');

ga('create', 'UA-88667581-1', 'auto');

ga('send', 'pageview');

</script>

</body>

</html>

**DIAGRAM.JSON**

{

  "version": 1,

  "author": "พิทักษ์ สถิตวรรธนะ",

  "editor": "wokwi",

  "parts": [

    { "type": "wokwi-esp32-devkit-v1", "id": "esp", "top": -96.39, "left": -7.47, "attrs": {} },

    {

      "type": "wokwi-ntc-temperature-sensor",

      "id": "ntc1",

      "top": -105.69,

      "left": 146.71,

      "rotate": 90,

      "attrs": {}

    },

    {

      "type": "wokwi-led",

      "id": "led1",

      "top": -30.93,

      "left": -84.06,

      "attrs": { "color": "red" }

    },

    {

      "type": "wokwi-resistor",

      "id": "r1",

      "top": 101.21,

      "left": -121.88,

      "attrs": { "value": "5600" }

    }

  ],

  "connections": [

    [ "esp:TX0", "$serialMonitor:RX", "", [] ],

    [ "esp:RX0", "$serialMonitor:TX", "", [] ],

    [ "r1:1", "led1:C", "green", [ "h-7.64", "v2.81" ] ],

    [ "led1:A", "esp:D14", "green", [ "v0" ] ],

    [ "r1:2", "esp:GND.2", "green", [ "h0" ] ],

    [ "ntc1:GND", "esp:GND.2", "black", [ "v0" ] ],

    [ "ntc1:VCC", "esp:VIN", "red", [ "v0" ] ],

    [ "esp:D32", "ntc1:OUT", "green", [ "h-33.04", "v-80.52", "h165.33", "v101.33" ] ]

  ]

}