

```
// Complete Arduino Code:
```

```
#include <WiFi.h>
```

```
#include <WebServer.h>
```

```
// Wi-Fi Credentials
```

```
const char* ssid = "Redmi10T";
```

```
const char* password = "12345678";
```

```
int a = 0;
```

```
// LED pins
```

```
const int ledPins[4] = {3, 4, 8, 10}; // GPIOs for Red, Green, Blue, Pink OUTPUTS  
// 2, 3 Motor Logic Input to L298 to forward and reverse direction  
// 8 Bird Sound Output  
// 10 WLED Output
```

```
WebServer server(80);
```

```
// HTML Page with JavaScript and CSS
```

```
const char MAIN_page[] PROGMEM = R"rawliteral(  
// Open Bracket Below Close 114 line
```

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>ESP32 LED Control</title>
```

```
<style>
```

```
body { font-family: Arial; text-align: center; margin-top: 40px; background: #f0f0f0; }
```

```
h1 { color: #333; }
```

```
button  
{
```

```
font-size: 18px; padding: 10px 20px; margin: 10px;
```

```
border: none; border-radius: 8px;

cursor: pointer;

color: white;

}

.red { background-color: #e53935; }

.green { background-color: #43a047; }

.blue { background-color: #1e88e5; }

.pink { background-color: #d81b60; }

.off { background-color: #757575; }

</style>

</head>

<body>

<h1>ESP32 LED Controller</h1>

<div>

<button class="red" onclick="send('red/on')">FLY UP</button>

<button class="off" onclick="send('red/off')">FLY UP OFF</button><br>

<button class="green" onclick="send('green/on')">FLY DOWN</button>

<button class="off" onclick="send('green/off')">FLY DOWN OFF</button><br>

<button class="blue" onclick="send('blue/on')">FLYING</button>

<button class="off" onclick="send('blue/off')">FLYING OFF</button><br>

<button class="pink" onclick="send('pink/on')">LED OUT</button>

<button class="off" onclick="send('pink/off')">LED OFF</button>

</div>

<script>

function send(path)
{
```

```

    fetch('/') + path)

    .then(response => response.text())

    .then(data => console.log(data));

}

</script>

</body>

</html>

)rawliteral"; // Close Bracket Above open line 30

//////////////////////////////////// /////////////////////////////////////////////////// ///////////////////////////////////////////////////

void handleRoot()
{

    server.send_P(200, "text/html", MAIN_page);

}

void setupRoutes()
{

    server.on("/", handleRoot);

    server.on("/red/on", []()
    {

        digitalWrite(ledPins[0], HIGH); // FLYING UP ON

        Serial.println("FLY UP");

        server.send(200, "text/plain", "Red ON");

    });

    server.on("/red/off", []()
    {

```

```
digitalWrite(ledPins[0], LOW);      // FLYING UP OFF

Serial.println("FLY UP OFF");

server.send(200, "text/plain", "Red OFF");

});

server.on("/green/on", []()
{

digitalWrite(ledPins[1], HIGH);    // FLYING DOWN ON

Serial.println("FLY DOWN");

server.send(200, "text/plain", "Green ON");

});

server.on("/green/off", []()
{

digitalWrite(ledPins[1], LOW);     // FLYING DOWN OFF

Serial.println("FLY DOWN OFF");

server.send(200, "text/plain", "Green OFF");

});

server.on("/blue/on", []()
{

digitalWrite(ledPins[2], HIGH);    // FLYING CONTINUOS ON

Serial.println("FLYING");

server.send(200, "text/plain", "Blue ON");

a = 1;

});

server.on("/blue/off", []()
```

```

{

digitalWrite(ledPins[2], LOW);      // BIRD SOUND OFF

Serial.println("FLYING OFF");

server.send(200, "text/plain", "Blue OFF");

a = 0;

});

server.on("/pink/on", []()
{

digitalWrite(ledPins[3], HIGH);    // LED OUTPUT ON

Serial.println("LED OUT");

server.send(200, "text/plain", "Pink ON");

});

server.on("/pink/off", []()
{

digitalWrite(ledPins[3], LOW);     // LED OUTPUT OFF

Serial.println("LED OFF");

server.send(200, "text/plain", "Pink OFF");

});

}

void setup()                        // PINS ARE OUTPUT SETUP
{

Serial.begin(115200);

for (int i = 0; i < 4; i++)
{

pinMode(ledPins[i], OUTPUT);      // 3,4,8,10 PINS ARE OUTPUT

digitalWrite(ledPins[i], LOW);    // INITIAL PINS ARE OUTPUT 0 LOW

```

```

}

pinMode(5, INPUT); // D3 UP STOP Switch 1
pinMode(6, INPUT); // D4 DOWN STOP Switch 2

pinMode(9, INPUT); // D9 LDR Sensor Input

WiFi.begin(ssid, password); // WIFI CONNECTING PROCESS

Serial.print("Connecting to WiFi");

while (WiFi.status() != WL_CONNECTED)
{
    delay(500);

    Serial.print(".");
}

Serial.println("\nWiFi connected. IP address: "); // SHOW THE WIFI DEVICE IP ADDRESS

Serial.println(WiFi.localIP());

setupRoutes();

server.begin();
}

void loop()
{
    if (digitalRead(5)==LOW) //////////////////////////////////////
    {
        digitalWrite(ledPins[0], LOW); // FLYING UP OFF

        Serial.println("FLY UP OFF");

        server.send(200, "text/plain", "Red OFF");
    }

    if (digitalRead(6)==LOW) //////////////////////////////////////
    {
        digitalWrite(ledPins[1], LOW); // FLYING DOWN OFF
    }
}

```

```

Serial.println("FLY DOWN OFF");

server.send(200, "text/plain", "Green OFF");
}

////////////////////////////////////

if (digitalRead(9)==HIGH) //////////////////////////////////LDR INPUT LED OUTPUT ON
{
digitalWrite(10, HIGH);
}
else
{
digitalWrite(10, LOW);
}

if(a == 1)
{
if (digitalRead(5)==LOW) //////////////////////////////////
{
digitalWrite(ledPins[0], LOW);          // FLYING UP OFF
digitalWrite(ledPins[1], HIGH);        // FLYING DOWN ON

Serial.println("FLY UP OFF");
Serial.println("FLY DOWN");

server.send(200, "text/plain", "Red OFF");
server.send(200, "text/plain", "Green ON");
}

if (digitalRead(6)==LOW) //////////////////////////////////
{
digitalWrite(ledPins[1], LOW);          // FLYING DOWN OFF
digitalWrite(ledPins[0], HIGH);        // FLYING UP ON

Serial.println("FLY DOWN OFF");
Serial.println("FLY UP");

server.send(200, "text/plain", "Green OFF");
server.send(200, "text/plain", "Red ON");

}
}

server.handleClient();  //////////
}

```