

# **ANNEXURE-I**

*(Code UPLOADED IN ESP32 DEV MODULE)*

```
#include <WiFi.h>

WiFiClient client;

WiFiServer server(80);

const char* ssid = "realme 7 pro";
const char* password = "hubham123";

String command = ""; // Command received from Android device
```

## **// Set Relay Pins**

```
int relay1 = 4;
int relay2 = 2;
```

```
void setup() {
    Serial.begin(115200);
    pinMode(relay1, OUTPUT);
    pinMode(relay2, OUTPUT);
    digitalWrite(relay1, HIGH);
    digitalWrite(relay2, HIGH);
    connectWiFi();
    server.begin();
}
```

```
void loop() {
    client = server.available();
    if (!client) return;
    command = checkClient ();

    if (command == "r1on" || command == "turn on relay 1" || command ==
    "r1%20on" || command == "are%20one%20on")
```

```
{  
    digitalWrite(relay1, 0);  
    Serial.println("Relay1 ON");  
}  
else if (command == "r1off" || command == "turn off relay 1" || command ==  
"r1%20of" || command == "are%20one%20of")  
{  
    digitalWrite(relay1, 1);  
    Serial.println("Relay1 OFF");  
}  
else if (command == "r2on" || command == "turn on relay 2" || command ==  
"r2%20on" || command == "are%20to%20on" || command == "are%20tu%20on")  
{  
    digitalWrite(relay2, 0);  
    Serial.println("Relay2 ON");  
}  
else if (command == "r2off" || command == "turn off relay 2" || command ==  
"r2%20of" || command == "are%20to%20of" || command == "are%20tu%20of" ||  
command == "are%20to%20off" || command == "are%20tu%20off")  
{  
    digitalWrite(relay2, 1);  
    Serial.println("Relay2 OFF");  
}  
else if (command == "allon" || command == "Turn on all devices" || command ==  
"all%20on")  
{  
    digitalWrite(relay1, LOW);  
    digitalWrite(relay2, LOW);  
    Serial.println("All ON");  
}
```

```

else if (command == "alloff" || command == "Turn off all devices" || command ==
"all off" || command == "all%20of" || command == "all%20off")
{
    digitalWrite(relay1, HIGH);
    digitalWrite(relay2, HIGH);
    Serial.println("ALL OFF");
}

sendBackEcho(command); // send command echo back to android device

    command = "";
}

/* connecting WiFi */
void connectWiFi() {
    Serial.println("Connecting to WIFI");
    WiFi.begin(ssid, password);
    while ((!(WiFi.status() == WL_CONNECTED)))
    {
        delay (300);
        Serial.print("..");
    }
    Serial.println("");
    Serial.println("WiFi connected");
    Serial.println("ESP32 Local IP is: ");
    Serial.print((WiFi.localIP()));
}

/* check command received from Android Device */
String checkClient (void) {
    while (!client.available())
    {
        delay(1);
    }
}

```

```

    }
    Serial.print("Data---");
    Serial.println(client.available());
    String request = client.readStringUntil('\r');
    request.remove(0, 5);
    request.remove(request.length() - 9, 9);
    return request;
}

/* send command echo back to android device */
void sendBackEcho(String echo)
{
    client.println("HTTP/1.1 200 OK ");
    client.println("Content-Type: text/html");
    client.println("");
    client.println("<!DOCTYPE HTML>");
    client.println("<html>");
    client.println(echo);
    client.println("</html>");
    client.stop();
    delay(1);
} //END OF CODE

```

### **ANDROID APP LINK**

<http://ai2.appinventor.mit.edu/b/2688y>



OR