CHAPTER 4

CODE

```
#include <ESP8266WiFi.h>


const char* ssid = "DESKTOP"; // SSID i.e. Service Set Identifier is the name of your WIFI

const char* password = "asdfghjkl"; // Your Wifi password, in case you have open network comment the whole statement.

int R1=D0; // GPIO13 or for NodeMCU you can directly write D7

int R2=D1;

int R3=D2;

int R4=D3;

WiFiServer server(80); // Creates a server that listens for incoming connections on the specified port, here in this case port is 80.

void setup() {

 Serial.begin(115200);

 delay(10);

pinMode(R1, OUTPUT);

 pinMode(R2, OUTPUT);

 pinMode(R3, OUTPUT);

 pinMode(R4, OUTPUT);

 digitalWrite(R1,HIGH);

 digitalWrite(R2,HIGH);
```

```
 digitalWrite(R3,HIGH);
 digitalWrite(R4,HIGH);
 // Connect to WiFi network
 Serial.println();
 Serial.println();
 Serial.print("Connecting to ");
 Serial.println(ssid);
 WiFi.begin(ssid, password);
 while (WiFi.status() != WL_CONNECTED) {
  delay(500);
  Serial.print(".");
 }
 Serial.println("");
 Serial.println("WiFi connected");
 // Start the server
 server.begin();
 Serial.println("Server started");
 // Print the IP address
 Serial.print("Use this URL to connect: ");
 Serial.print("http://");
 Serial.print(WiFi.localIP()); //Gets the WiFi shield's IP address and Print the IP address of serial monitor
 Serial.println("/");
```

```
}
void loop() {
 // Check if a client has connected
 WiFiClient client = server.available();
 if (!client) {
  return;
 }
 // Wait until the client sends some data
 Serial.println("new client");
 while(!client.available()){
  delay(1);
 }
 // Read the first line of the request
 String request = client.readStringUntil('\r');
 Serial.println(request);
 client.flush();
 // Match the request
 if (request.indexOf("/OFF1") != -1) {
  digitalWrite(R1,LOW);
   client.println("HTTP/1.1 200 OK");
   client.println("Content-Type: text/html");
   client.println("");
   client.println("<!DOCTYPE HTML>");
```

```
  client.println("<html>");
  client.println("Relay 1 is ON");
  client.println("</html>");
  client.stop();
  delay(1);
}
if (request.indexOf("/ON1") != -1) {
 digitalWrite(R1, HIGH);
  client.println("HTTP/1.1 200 OK");
  client.println("Content-Type: text/html");
  client.println("");
  client.println("<!DOCTYPE HTML>");
  client.println("<html>");
  client.println("Relay 1 is OFF");
  client.println("</html>");
  client.stop();
  delay(1);
}
if (request.indexOf("/OFF2") != -1) {
 digitalWrite(R2,LOW);
  client.println("HTTP/1.1 200 OK");
  client.println("Content-Type: text/html");
  client.println("");
```

```
  client.println("<!DOCTYPE HTML>");
  client.println("<html>");
  client.println("Relay 2 is ON");
  client.println("</html>");
  client.stop();
  delay(1);
}
if (request.indexOf("/ON2") != -1) {
 digitalWrite(R2, HIGH);
  client.println("HTTP/1.1 200 OK");
  client.println("Content-Type: text/html");
  client.println("");
  client.println("<!DOCTYPE HTML>");
  client.println("<html>");
  client.println("Relay 2 is OFF");
  client.println("</html>");
  client.stop();
  delay(1);
}
if (request.indexOf("/OFF3") != -1) {
 digitalWrite(R3,LOW);
  client.println("HTTP/1.1 200 OK");
  client.println("Content-Type: text/html");
```

```
  client.println("");
  client.println("<!DOCTYPE HTML>");
  client.println("<html>");
  client.println("Relay 3 is ON");
  client.println("</html>");
  client.stop();
  delay(1);
}
if (request.indexOf("/ON3") != -1) {
 digitalWrite(R3, HIGH);
  client.println("HTTP/1.1 200 OK");
  client.println("Content-Type: text/html");
  client.println("");
  client.println("<!DOCTYPE HTML>");
  client.println("<html>");
  client.println("Relay 3 is OFF");
  client.println("</html>");
  client.stop();
  delay(1);
}
if (request.indexOf("/OFF4") != -1) {
 digitalWrite(R4,LOW);
  client.println("HTTP/1.1 200 OK");
```

```
  client.println("Content-Type: text/html");
  client.println("");
  client.println("<!DOCTYPE HTML>");
  client.println("<html>");
  client.println("Relay 4 is ON");
  client.println("</html>");
  client.stop();
  delay(1);
 }
if (request.indexOf("/ON4") != -1) {
 digitalWrite(R4, HIGH);
  client.println("HTTP/1.1 200 OK");
  client.println("Content-Type: text/html");
  client.println("");
  client.println("<!DOCTYPE HTML>");
  client.println("<html>");
  client.println("Relay 4 is OFF");
  client.println("</html>");
  client.stop();
  delay(1);
 }
}
```