

UTS SISTEM INTERNET OF THINGS

“ESP-32 sebagai WifiMode dan APMoD”

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1. Kodingan :

```
#include <WiFi.h>

#include <WebServer.h>

const char* ssid = "anes";
const char* password = "12345678";

// AP untuk node
const char* ap_ssid = "ESP32-GATEWAY";
const char* ap_password = "12345678";

WebServer server(80);

// status node
String statusESP8266 = "";
String statusESP32_3 = "";

void handleESP8266() {
    statusESP8266 = server.arg("value");

    Serial.println("\n===== DATA MASUK =====");
    Serial.println("[NODE ESP8266]");
    Serial.println("STATUS: " + statusESP8266);
    Serial.println("=====");

    server.send(200, "text/plain", "OK ESP8266");
```

```

}

void handleESP32_3() {
    statusESP32_3 = server.arg("value");

    Serial.println("\n===== DATA MASUK =====");
    Serial.println("[NODE ESP32 #3]");
    Serial.println("STATUS: " + statusESP32_3);
    Serial.println("=====");

    server.send(200, "text/plain", "OK ESP32_3");
}

void setup() {
    Serial.begin(115200);

    WiFi.mode(WIFI_AP_STA);

    // ===== AP MODE =====
    WiFi.softAP(ap_ssid, ap_password);

    Serial.println("\n===== ACCESS POINT =====");
    Serial.print("SSID: ");
    Serial.println(ap_ssid);
    Serial.print("AP IP (PAKAI NODE): ");
    Serial.println(WiFi.softAPIP());

    // ===== STA MODE =====
    WiFi.begin(ssid, password);

    Serial.print("\nConnecting WiFi");
    while (WiFi.status() != WL_CONNECTED) {
        delay(500);
    }
}

```

```

        Serial.print(".");
    }

    Serial.println("\n\n==== WIFI CONNECTED =====");
    Serial.print("STA IP (INTERNET): ");
    Serial.println(WiFi.localIP());
    Serial.println("=====");

    // ===== SERVER =====

    server.on("/esp8266", handleESP8266);
    server.on("/esp32_3", handleESP32_3);

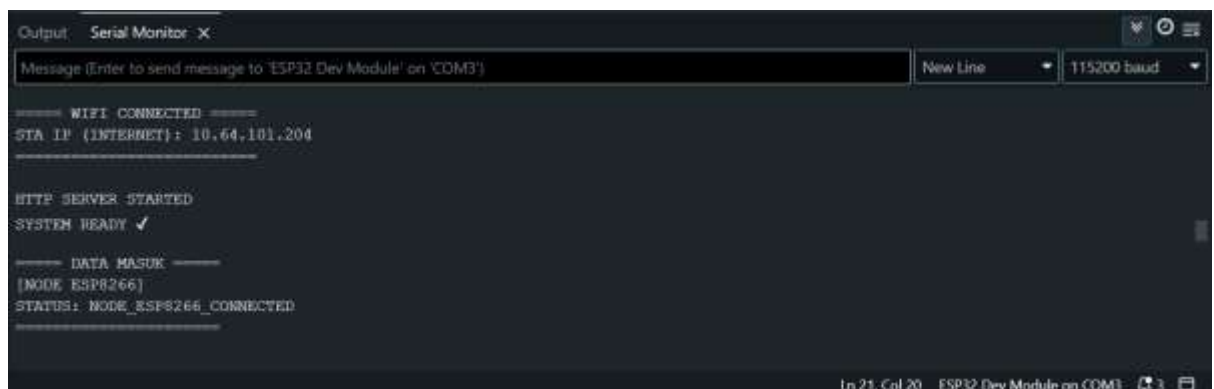
    server.begin();

    Serial.println("\nHTTP SERVER STARTED");
    Serial.println("SYSTEM READY ✓");
}

void loop() {
    server.handleClient();
}

```

2. Hasil di Serial Monitor



3. Tess ping dengan client 1

```
C:\Users\ASUS>ping 192.168.4.2

Pinging 192.168.4.2 with 32 bytes of data:
Reply from 192.168.4.2: bytes=32 time=99ms TTL=64
Reply from 192.168.4.2: bytes=32 time=113ms TTL=64
Reply from 192.168.4.2: bytes=32 time=313ms TTL=64
Reply from 192.168.4.2: bytes=32 time=30ms TTL=64

Ping statistics for 192.168.4.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 30ms, Maximum = 313ms, Average = 138ms

C:\Users\ASUS>
```