Post-Lab 4: WiFi

## What to submit?

Please use this document as a template, add your responses directly, and export it as a PDF to Gradescope. Each group should submit one post-lab.

**Group name:**

**Team member names: Rajan Verma**

**Link to GitHub repository:**

## 5. Scan for WiFi networks

**TASK: Demonstrate ability to scan networks**

1. **Show me the terminal output from a scan**
2. **Commit your wifi-scanner code to your shared repo**

**A screenshot of a computer program

AI-generated content may be incorrect.**

## 6. Connect to the Internet

**TASK: Demonstrate ability to get time through the Internet**

1. **Show me the terminal output printing the current date AND time**
2. **Commit your wifi-client code to your shared repo**
3. A screen shot of a black screen

   AI-generated content may be incorrect.

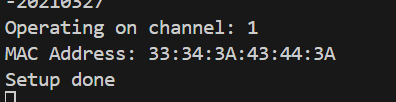
## 7. Scan Promiscuously

**TASK: Demonstrate ability to capture packets from your other device**

1. **Show me the terminal output printing some packet metadata**
2. **Commit your wifi-promiscuous code to your shared repo**

A black screen with white text

AI-generated content may be incorrect.



A computer screen shot of a black screen

AI-generated content may be incorrect.

**TASK: Determine some information about how the ESP32 client is connected**

1. **Which WiFi PHY protocol is it using to connect to the WiFi network? (e.g., 802.11b, 802.11g, 802.11n, etc.)**

**Wifi Phy p[rotocl is : non HT (11bg)**

1. **Which channel is it connected on? Channel 5**
2. **How much bandwidth is it using on that channel, 20 MHz or 40 MHz? 20Mhz**

## 8. Host a WiFi network and connect to it

**TASK: Demonstrate creation of an Access Point**

1. **Show me the terminal output printing data about a connected client**
2. **Commit your wifi-access-point code to your shared repo**

## 9. Use MQTT across multiple devices

**CHECKOFF: Demonstrate the full working MQTT app across three devices**

1. **Show us your MQTT application working.**
2. **Write a couple of sentences on what you did and how it worked and show relevant terminal output from devices.**
3. **Commit code for all three applications to your shared repo**