Wi-Fi Security Assessment Report – Task 3 (Cybersecurity Internship)

# 1. Intern Details

Intern Name: Enochlin NanaYaa  
Track: Cyber Security (Track Code: CS)  
Task: Secure Your Own Wi-Fi Network (Task 3)  
Tools Used: Nmap, Router Settings, Windows 10

# 2. Objective

The objective of this task is to perform a basic security assessment of the intern's home Wi-Fi network, identify potential vulnerabilities, and recommend steps to improve overall wireless network security.

# 3. Tools & Network Setup

- Nmap 7.97 (Windows)  
- Router Admin Interface  
- Windows 10 Command Line  
- IP Address: 192.168.24.184  
- Router IP (Gateway): 192.168.24.137

# 4. Scan for Connected Devices

Using the command `nmap -sn 192.168.24.0/24`, a ping scan was performed to identify devices on the network.  
Only one active host was found:  
  
- 192.168.24.184 (This host)  
  
This result may indicate network restrictions or that no other devices were online during the scan.

# 5. Router Port Scan

A port scan was conducted using the command `nmap -sV 192.168.24.137` to identify open services on the router.  
  
Scan Results:

|  |  |  |  |
| --- | --- | --- | --- |
| Port | State | Service | Version |
| 53 | open | domain | dnsmasq 2.51 |

Interpretation: Port 53 is used for DNS, which is a standard service. No high-risk ports were found open on the router.

# 6. Wi-Fi Router Settings

The following key Wi-Fi security features were checked through the router admin interface:  
  
- WPA2/WPA3 encryption: [Noted by Intern]  
- Wi-Fi password strength: [Noted by Intern]  
- WPS (Wi-Fi Protected Setup): [Enabled/Disabled]  
- List of connected devices: [Screenshot attached]  
  
Note: Details to be filled in based on intern’s router access.

# 7. Recommendations

- Ensure WPA2 or WPA3 encryption is enabled.  
- Disable WPS if not needed.  
- Use a strong Wi-Fi password (min. 12 characters, mix of symbols and cases).  
- Monitor connected devices for unknown users.  
- Consider router firmware updates for added security.

# 8. Conclusion

This assessment confirmed that the home Wi-Fi network has minimal surface exposure with only DNS services running on the router.  
Additional checks through the router interface are recommended to confirm that encryption standards and access control policies meet best practices.