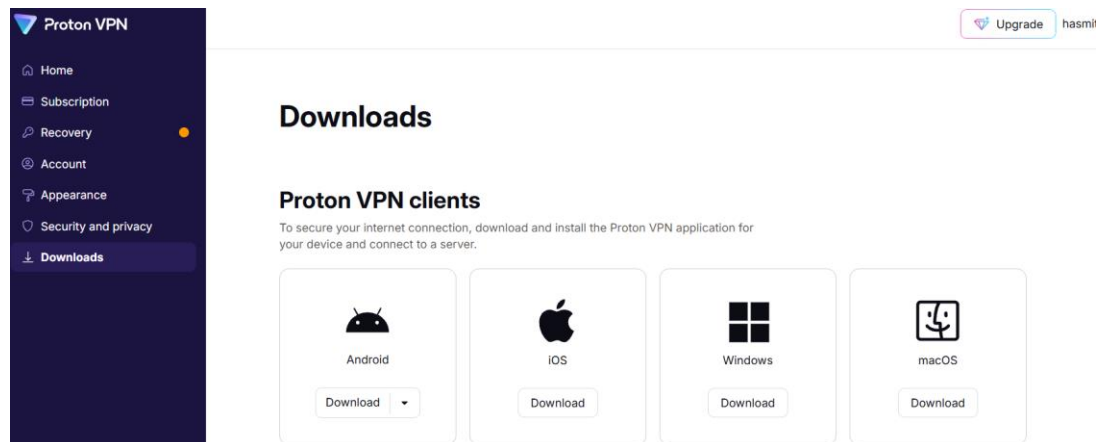# *Task 8: Identify and Remove Suspicious Browser Extensions*

1. **What is a VPN?**
   A VPN (Virtual Private Network) is a service that creates a secure and encrypted connection between a user's device and a remote server. It hides the user's real IP address and encrypts internet traffic. This enhances privacy and protects sensitive data, especially when using public Wi-Fi networks.

2. **How does a VPN protect privacy?**
   A VPN encrypts internet traffic and routes it through a secure server. This prevents hackers, ISPs, or third parties from viewing browsing activity. It also hides the user's real IP address, making online tracking more difficult.

3. **Difference between VPN and Proxy?**
   A proxy only hides your IP address for specific applications (like a browser) but does not encrypt traffic. A VPN encrypts all internet traffic on the device and provides stronger security and privacy protection.

4. **What is encryption in VPN?**
   Encryption converts readable data into unreadable coded data. VPNs use strong encryption standards like AES-256 to protect user data. Even if intercepted, encrypted data cannot be easily decoded without the encryption key.

5. **Can VPN guarantee complete anonymity?**

No. A VPN improves privacy but does not guarantee complete anonymity. Websites can still track users via cookies, accounts, or browser fingerprinting. VPN providers may also log some activity depending on their privacy policy.

6. **What protocols do VPNs use?**

Common VPN protocols include:
OpenVPN
WireGuard
IKEv2/IPSec
L2TP/IPSec
These protocols determine how data is encrypted and transmitted securely.

7. **What are some VPN limitations?**

May reduce internet speed
Free versions have limited servers
Some websites block VPN IP addresses
Does not protect against phishing or malware

8. **How does a VPN affect network speed?**

A VPN may slightly reduce speed due to encryption and routing traffic through a remote server. The farther the server location, the higher the latency. However, premium VPNs minimize speed loss using optimized servers.