**Assignment Submission**

**Approach:**

* **Understanding and Breaking Down the Problem:** The problem involved uncovering plaintext usernames and passwords within a Cisco router's configuration. The key elements were identifying the encryption methods used and finding a way to decrypt the passwords.
* **Approach Selection:** After analyzing the problem, I recognized that the passwords were encrypted using the Cisco Type 7 encryption algorithm. To decrypt the passwords, I chose to utilize a tool capable of decrypting Cisco Type 7 passwords.
* **Methods and Preprocessing Techniques:** I executed the "show running-config" command on the Cisco router to retrieve the configuration file, which contained the encrypted passwords. Since the passwords were encrypted using the Cisco Type 7 algorithm, I employed a decryption tool to reveal the plaintext passwords.
* **Addressing Challenges and Seeking Help:** One challenge encountered was the encryption of passwords using the "service password-encryption" command, which obscured the passwords in the configuration. To overcome this, I researched and identified a tool capable of decrypting Cisco Type 7 passwords. Additionally, I sought assistance from online forums and documentation to ensure I executed the commands correctly and utilized the decryption tool effectively.

**Solution:**

* show running-config
* enable
* config t
* service password-encryption
* exit
* show running-config