Week 4

Password generator

This code defines two functions: **generate\_password** and **generate\_passwords**. The **generate\_password** function takes in a length parameter and generates a random password of that length with a mix of uppercase and lowercase letters, numbers, and special characters. The **generate\_passwords** function takes in the number of passwords to generate and the length of each password, and generates that many passwords of the specified length.

The script then prompts the user to input the number of passwords to generate and the length of each password, and generates and prints out the specified number of passwords.

1. **generate\_password(length)**: This function generates a random password of the specified length by using **string.ascii\_letters** (concatenation of all ASCII lowercase and uppercase letters), **string.digits** (all digits), and **string.punctuation** (all ASCII punctuation characters). It then uses **random.choice** to pick characters randomly and concatenates them to form the password.
2. **generate\_passwords(num\_passwords, length)**: This function generates a list of random passwords by calling **generate\_password** for the specified number of passwords (**num\_passwords**) and length (**length**). It iterates through a loop, generating a password in each iteration and appending it to the **passwords** list.
3. In the **\_\_main\_\_** block:
   * The user is prompted to enter the number of passwords to generate (**num\_passwords**) and the length of each password (**password\_length**).
   * The **generate\_passwords** function is then called with the provided input values, and the resulting passwords are stored in the **passwords** list.
   * Finally, the code prints each generated password.