PROGRAM - 4

Q4 Write a Python program that reads a file containing a list of usernames and passwords, one pair per line (separated by a comma). It checks each password to see if it has been leaked in a data breach. You can use the "Have I Been Pwned" API (https://haveibeenpwned.com/API/v3) to check if a password has been leaked.

Source Code -

```
import requests
import hashlib

with open('passwords.txt', 'r') as f:
    for line in f:
            username, password = line.strip().split(',')

        password_hash = hashlib.sha1(password.encode('utf-
        8')).hexdigest().upper()
        prefix, suffix = password_hash[:5], password_hash[5:]

        response =
        requests.get(f"https://api.pwnedpasswords.com/range/{prefix}")

        if response.status_code == 200:
                leaked_hashes = (line.split(':') for line in response.text.splitlines())
            if any(suffix == h for h, _ in leaked_hashes):
                print(f"Password for user {username} has been leaked.")
        else:
            print(f"Could not check password for user {username}.")
```

Text File - Passwords.txt

user1,Pas1$Ku1
user2,password
user3,password123
user4,password123$
user5,Password6#(%
user6,Germany#12

OUTPUT -

```
======================== RESTART: C:/python 37/dse2.py ========================
Password for user user2 has been leaked.
Password for user user3 has been leaked.
Password for user user4 has been leaked.
Password for user user6 has been leaked.
>>>
```
