## **Python Plain Text Password Cracker Tutorial**

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Time required: 30 minutes

### What is pwned?

**pwned**, in a security context, means that your account has been the victim of a data breach.

The word itself takes its name from player-to-player messaging in online computer gaming. When one player is defeated, another might type out a message to say 'You've been owned'.

This was so frequently misspelt as 'pwned', the word itself took off.

#### Has Your Password been Pwned?

Check out your current email account or cell phone number. Has your information been compromised in a data breach? If you find your info in the list, change your passwords now.

https://haveibeenpwned.com/

#### **Password Lists**

Password lists are text files of common passwords used to crack password hashes. These are from data breaches and are REAL passwords that people use.

The following sites have password lists. We will use some in this lab.

**WARNING**: Some of the passwords might be offensive. Remember, these are real passwords that people have and do use.

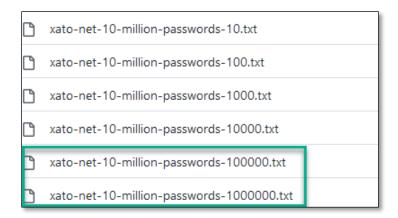
- https://github.com/danielmiessler/SecLists/tree/master/Passwords
- https://weakpass.com/

#### **Tutorial 1: Get a Password List**

We are going to use a password list that has popular passwords in it.

- 1. Go to https://github.com/danielmiessler/SecLists/tree/master/Passwords
- 2. I suggest using one of the two highlighted lists. I will be using the last one.

  10 has the 10 most popular passwords, 100 has the 100 most popular passwords,
  etc. The bigger the list, the better chance of finding a password.



- 3. Click the password file. Click View Raw.
- 4. This may take a bit to load the file.
- 5. Press **CTRL-A** to select all the passwords.
- 6. Press **CTRL-C** to copy all the passwords.
- In the same folder that you will save your password cracker program: Use Visual Studio Code to create a text file named passwords.txt
   NOTE: if you use Notepad, it may freeze up.
- 8. Press **CTRL-V** to paste the passwords into the text file.

We are now ready to create our password cracking tool in Python.

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# **Tutorial 2: Python pwned Password Cracker**

The following program uses a password list to find a password. We aren't really cracking a password . . . yet. We are going through the comparison process with a password list to get used to the idea.

- 1. Create a Python program named **password\_cracker.py**
- 2. Enter the following code, comments and all.

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```
Name: password cracker plain text.py
3
      Author:
4
      Created:
      Crack a password using a plain text password list
     https://github.com/danielmiessler/SecLists/tree/master/Passwords
6
7 | """
8
9 print(" +----+")
10 print(" | --- Bill's Best Password Cracker --- |")
ll print(" | . . . Use at your own risk . . .
12 print(" +----
13
14 # Boolean variable to track whether the password has been found
15 password found = False
16
17 # Get password to get tested from user
18 input password = input("Enter the password: ")
19
20 # Enter the password list filename
21 password list file = input("Enter password filename: ")
22
23 try:
24
      # Try to open the password file using the with context handler
25
      # with automatically closes the file when you exit the block
26
      with open(password list file, "r") as file:
27
         # Read file --> splitlines() removes \n newline
28
          # Read each line into a list item
29
          password list = file.read().splitlines()
      # The file is automatically closed
31
32 except Exception as e:
33
     # If there is an error reading the file, we handle it here
34
     print(f"Error: {e}")
35
     print(f"{password list file} is not found.")
36
      quit()
37
38
39 # Loop through each password in the password list one at a time
40 for password in password list:
41
     # Compare the input password with current password in the password list
42
     if input password == password:
43
         print(f"Password found. The password is: {password}")
44
         password found = True
45
          break
46
47 # If the password is not found
48 if password found == False:
49
     print(f"Password not found in {password list file} file")
50
      print('\n')
```

Example run:

## **Assignment Submission**

- 1. Attach all program files.
- 2. **NOTE:** Do not attach the password file, I will test your program with my own files.
- 3. Attach a screenshot of your functioning program.
- 4. Attach to the assignment in BlackBoard.