# Python pwned Password Cracker Tutorial

## Contents



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.

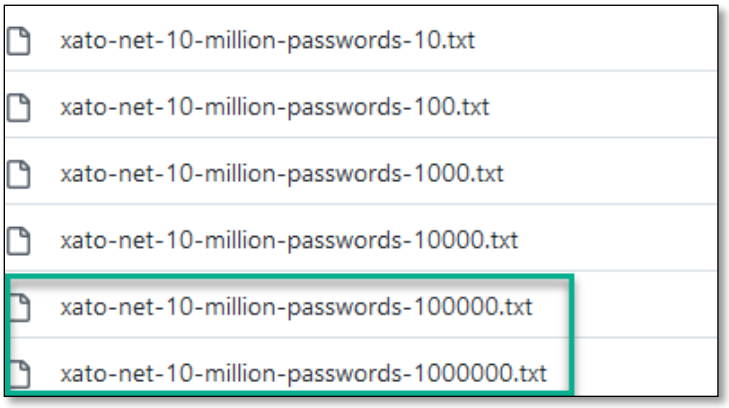
**WARNING**: Some of the passwords might be offensive. Remember, these are real passwords that people have and do use.

- 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.
7. 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.

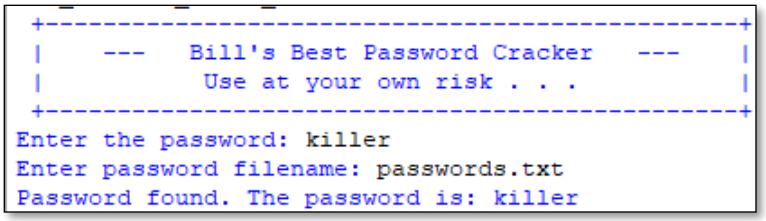
## Tutorial 2 - Python pwned Password Cracker

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.

```python
"""
    Name: password_cracker_plain_text.py
    Author:
    Created:
    Crack a password using a plain text password list
    https://github.com/danielmiessler/SecLists/tree/master/Passwords
"""

print(" +-------------------------------------------------+")
print(" |    ---   Bill's Best Password Cracker   ---     |")
print(" |         . . . Use at your own risk . . .        |")
print(" +-------------------------------------------------+")

# Boolean variable to track whether the password has been found
password_found = False

# Get password to get tested from user
input_password = input("Enter the password: ")

# Enter the password list filename
password_list_file = input("Enter password filename: ")

try:
    # Try to open the password file using the with context handler
    # with automatically closes the file when you exit the block
    with open(password_list_file, "r") as file:
        # Read file --> splitlines() removes \n newline
        # Read each line into a list item
        password_list = file.read().splitlines()
    # The file is automatically closed

except Exception as e:
    # If there is an error reading the file, we handle it here
    print(f"Error: {e}")
    print(f"{password_list_file} is not found.")
    quit()


# Loop through each password in the password list one at a time
for password in password_list:
    # Compare the input_password with current password in the password_list
    if input_password == password:
        print(f"Password found. The password is: {password}")
        password_found = True
        break

# If the password is not found
if password_found == False:
    print(f"Password not found in {password_list_file} file")
    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.