

Project 0: Forgot Your Password?

This project is an introduction to writing simple scripts for computer security tasks.

Overview

TODO: Write a script to generate passwords using a given wordlist and constraints.

You're stuck in quarantine but you've forgotten your Netflix password! How will you survive without binging The Office for the 5th time?! You have a good idea of what the password might be (since you use a similar password for everything, contrary to good computer security practices), but none of the common variations seem to be working. You could just reset your password, but you're a programmer and you have a better idea: what if you write a script to generate possible passwords based on words that you usually use?

Constraints

1. You have a short list of words that might compose the password (given here):
 - a. michigan, hacker, security, password
2. You always include a 4-digit number in your passwords.
3. The last character of the password has to be a special character.
4. The password is case-insensitive (so stick to lowercase letters).
5. The script must generate a text file (.txt) of potential passwords separated by newlines.
6. The text file must contain a maximum of 10,000 passwords.
7. You're free to use any language, but Python, C++, and Java work best.
8. Submit your generated text file to the [Security Team GitHub repository](#) in the **Project 0** directory on the **dev** branch. Title your file **firstname_lastname_pass.txt**. Make sure not to submit your script!
9. Message **@Justin Hutchins** on Slack that you've submitted and find out if you generated the correct password!

Help

1. Examples of correctly generated passwords:
 - a. michiganhackers2020!
 - b. 2020password\$
 - c. security2021#
2. There is some luck to generating the correct password, so even a great script might fail in certain cases. However, thinking creatively and making educated guesses about additional constraints increases your chances.

3. Hint: Generalize your script as much as possible. Being able to change parameters easily will help to generate better passwords in less time.
4. You might want an [ASCII table](#) for reference.
5. Steps for adding your text file to the [Security Team GitHub repository](#):
 - a. Make sure you've downloaded [git](#).
 - b. `git clone https://github.com/michiganhackers/security_2021.git`
 - c. `git checkout dev`
 - d. Write your script and text file in the Project 0 directory.
 - e. `git add firstname_lastname_pass.txt`
 - f. `git commit -m "Adding generated password file"`
 - g. `git push`
 - h. Make sure you don't add the script file!
6. This file and all other Security Team files exist in the GitHub repo on the **master** branch.
7. If you have any other questions, message **@Justin Hutchins** on Slack!