PRESENTATION
0N
PASSWORD GENERATOR

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About the Program

Creating a password generator in Python is a useful project to enhance your programming skills and improve your understanding of random number generation and string manipulation. A password generator is a tool that generates secure and random passwords, which are crucial for maintaining the security of various online accounts and systems

Forms of Protection

Passwords

Two-factor Authentication

- i.e. a password and image

Biometrics

- Fingerprints, eye scans, etc.

Tokens

- A piece of technology that only you can use to login somewhere.

Why Passwords

Passwords are here to stay

Why!?

- Passwords are easy to remember.
- Are used for almost everything.
- Are still wonderful if created and protected well.

Good Password Tips

You should never:

- Reuse a password for multiple logins.
- Make a password using your personal information like your name, birthday, pets name, etc.
- Make a password that is commonly used such as, abc123! Or P@55w0rd, etc.

- If allowed, passwords should:
  - Be 10-14 characters long
  - Have lower and upper case letters, numbers and symbols.
  - Be something unique to you that you will remember.

Hacking Passwords

- Password protection is very important.
- Hackers have tools now to find a password almost immediately.
  - Tools today can figure out simple passwords in under 0.23 milliseconds!
- Tool:

Programming with Python

- Random
  - This library allows us to generate a random set of characters.
  - **Example Code:** import random

- print
  - This function lets us print out what our program created.
  - **Example Code:** print p
- Step One:
  - Open the following link:
    - https://repl.it/languages/python3
- Step Two:
  - Let's make sure we include our library.
  - In order to use the random library, let's type the following in our compiler:

```
import random
```

Python Password Generator Code

```
'''
Password Generator
-----------------------------------------------------------
'''


import secrets
import string


def create_pw(pw_length=12):
  letters = string.ascii_letters
  digits = string.digits
  special_chars = string.punctuation

  alphabet = letters + digits + special_chars
  pwd = ''
  pw_strong = False
```

```
while not pw_strong:
        pwd = ''
        for i in range(pw_length):
            pwd += ''.join(secrets.choice(alphabet))

        if (any(char in special_chars for char in pwd) and
                sum(char in digits for char in pwd) >= 2):
            pw_strong = True

    return pwd


if __name__ == '__main__':
    print(create_pw())
```

OutPut

```
if __name__ == '__main__':
    print(create_pw())
```

```
1M9wI;`k!pn@
```

```
In [ ]:
```


THANK
YOU