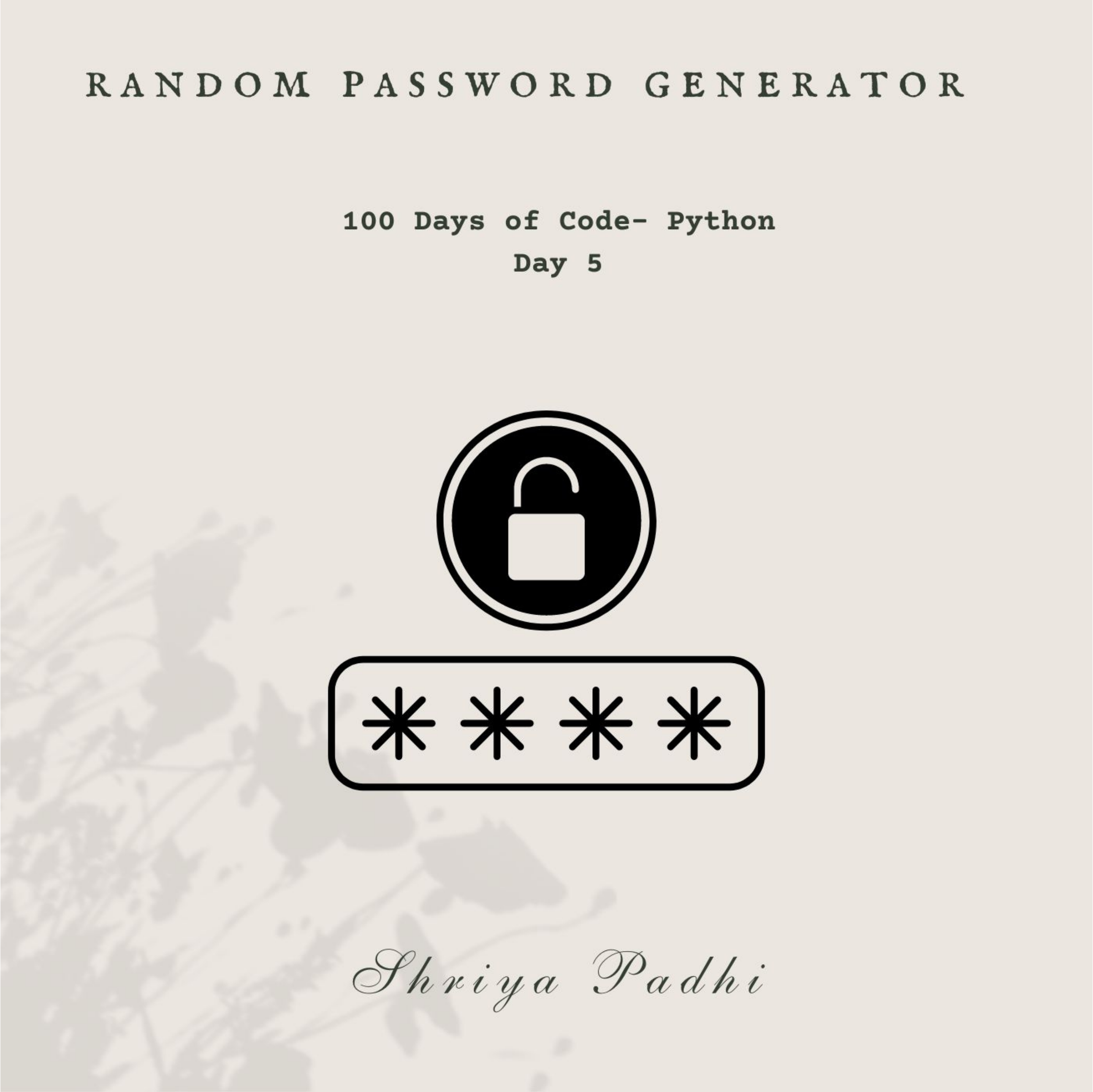
Random Password Generator

The program asks you to enter an input of number of letters, symbols and numbers you want in your password. Based on user input, random letters, symbols and numbers are generated and shuffled to generate a custom password which is displayed to the user. Python concepts such as for loops, range function and random module are used in this project.



Project Details

Variables

1. Input 1-Number of letters you need in your password.
2. Input 2-Number of symbols you need in your password.
3. Input 3-Number of numbers you need in your password.
4. Output- Generated password string

Logic Development

We input number of letters, symbols and numbers from the user. Using range function we define a range for each category between 1 and user input value. For each category we generated random outputs using random.choice(). We merge all three categories into a single string and shuffle it to generate the password which is presented as an output

Python Concept Used

1. **Random module:** Python has a built-in module that you can use to make random numbers. The random module has a set of methods: randint(a,b) Returns a random integer between the given range a and b (includes a and b); random() Returns a random float between 0 and 1; includes 0 but not 1.
2. **For loop:** With the for loop we can execute a set of statements, once for each item in a list, tuple, set etc.
3. **Range function:** The range() function returns a sequence of numbers, starting from 0 by default, and increments by 1 (by default), and stops before a specified number.

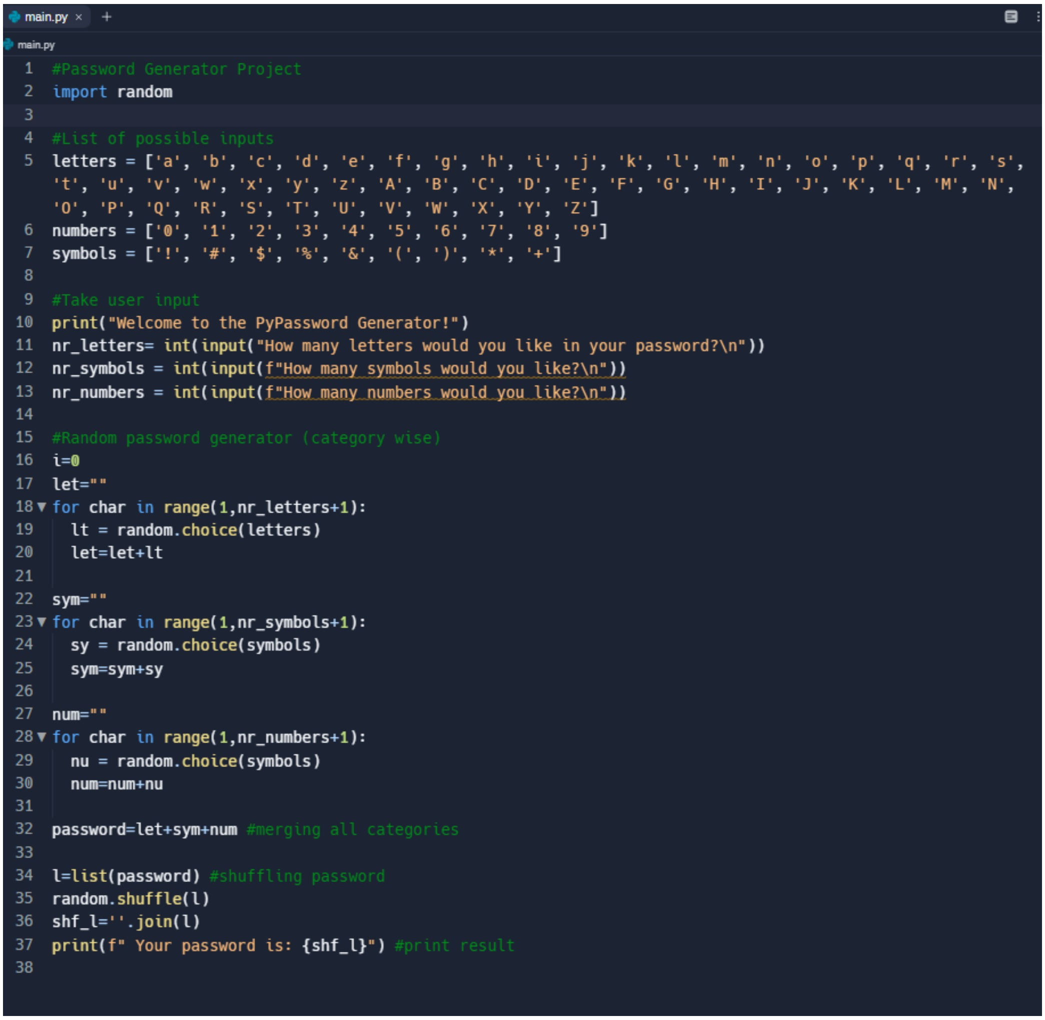
https://www.w3schools.com/python/

Why Random Password Generator

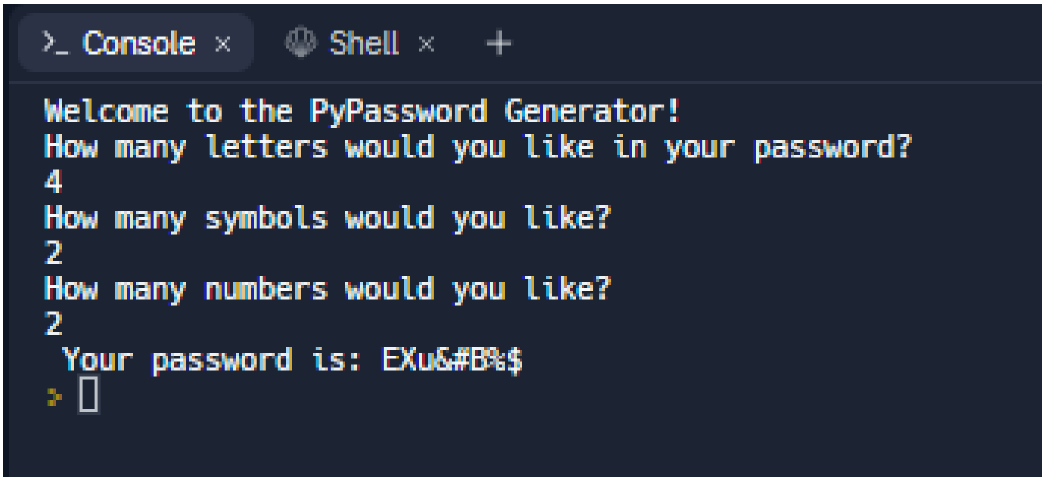
A password generator software offers a good display of all your credentials. As such, it saves you from memorizing hundreds of passwords except the generator's login details. The primary objective of using a generator is creation of strong and unpredictable passwords for all of your accounts.

https://teampassword.com/blog/why-should-i-use-a-password-generator

My Code



```python
#Password Generator Project
import random

#List of possible inputs
letters = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l', 'm', 'n', 'o', 'p', 'q', 'r', 's',
't', 'u', 'v', 'w', 'x', 'y', 'z', 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L', 'M', 'N',
'O', 'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z']
numbers = ['0', '1', '2', '3', '4', '5', '6', '7', '8', '9']
symbols = ['!', '#', '$', '%', '&', '(', ')', '*', '+']

#Take user input
print("Welcome to the PyPassword Generator!")
nr_letters= int(input("How many letters would you like in your password?\n"))
nr_symbols = int(input(f"How many symbols would you like?\n"))
nr_numbers = int(input(f"How many numbers would you like?\n"))

#Random password generator (category wise)
i=0
let=""
for char in range(1,nr_letters+1):
  lt = random.choice(letters)
  let=let+lt

sym=""
for char in range(1,nr_symbols+1):
  sy = random.choice(symbols)
  sym=sym+sy

num=""
for char in range(1,nr_numbers+1):
  nu = random.choice(symbols)
  num=num+nu

password=let+sym+num #merging all categories

l=list(password) #shuffling password
random.shuffle(l)
shf_l=''.join(l)
print(f" Your password is: {shf_l}") #print result

```



```
Welcome to the PyPassword Generator!
How many letters would you like in your password?
4
How many symbols would you like?
2
How many numbers would you like?
2
 Your password is: EXu&#B%$
>
```

https://replit.com/@ShriyaPadhi/password-generator-start#main.py