

RANDOM PASSWORD GENERATE

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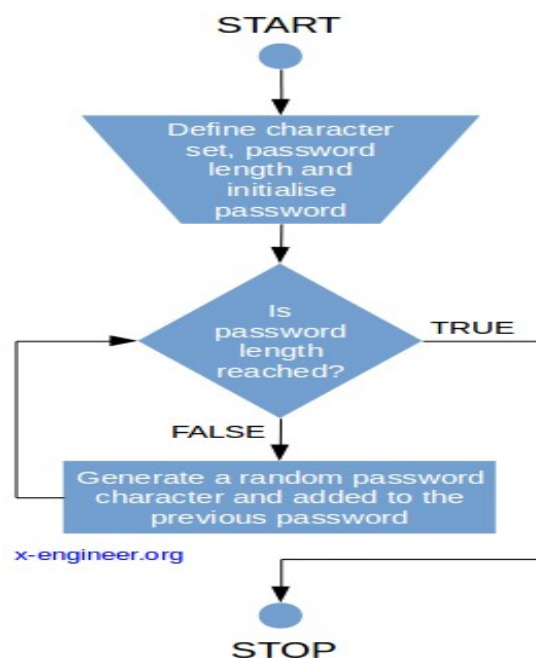
ABSTRACT :

Some password generators are simply random password generators. These programs produce complex/strong passwords with combinations of numbers, uppercase and lowercase letters, and special characters such as braces, asterisks, slashes, etc.

Other types of password generators are made to generate more recognizable passwords rather than a completely random set of characters. There are tools for generating pronounceable passwords, as well as custom tools that allow users to set detailed criteria. For instance, a user could set a request for a certain number of characters, a certain mix of letters and numbers, a certain number of special characters, or any other criteria for generating a new password.

Password generators help those who have to constantly come up with new passwords to ensure authorized access for programs and to manage a large number of passwords for identity and access management. Other kinds of tools include a password vault, where users manage large numbers of passwords in a secure location.

Architecture :



How to Code a Password Generator in Python :

- Step 1: Import necessary modules. As a first step, let's import the secrets module. .
- Step 2: Define the alphabet. The next step is to define the alphabet. ...
- Step 3: Fix the length of the password; Generate a password. ...
- Step 4: Customize Your Passwords Based on Constraints.

IMPLEMENTATION :

```
import random
```

```
import array
```

```
MAX_LEN = 12
```

```
DIGITS = ['0', '1', '2', '3', '4', '5', '6', '7', '8', '9']
```

```
LOCASE_CHARACTERS = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'm', 'n', 'o',  
'p', 'q', 'r', 's', 't', 'u', 'v', 'w', 'x', 'y', 'z']
```

```
UPCASE_CHARACTERS = ['A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'M', 'N',  
'O', 'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z']
```

```
SYMBOLS = ['@', '#', '$', '%', '=', ':', '?', '.', '/', '|', '~', '!', '>', '*', '(', ')', '<']
```

```
COMBINED_LIST = DIGITS + UPCASE_CHARACTERS +  
LOCASE_CHARACTERS + SYMBOLS
```

```
rand_digit = random.choice(DIGITS)
```

```
rand_upper = random.choice(UPCASE_CHARACTERS)
```

```
rand_lower = random.choice(LOCASE_CHARACTERS)
```

```
rand_symbol = random.choice(SYMBOLS)
```

```
temp_pass = rand_digit + rand_upper + rand_lower + rand_symbol
```

```
for x in range(MAX_LEN - 4):
```

```

temp_pass = temp_pass + random.choice(COMBINED_LIST)

temp_pass_list = array.array('u', temp_pass)

random.shuffle(temp_pass_list)

password = ""

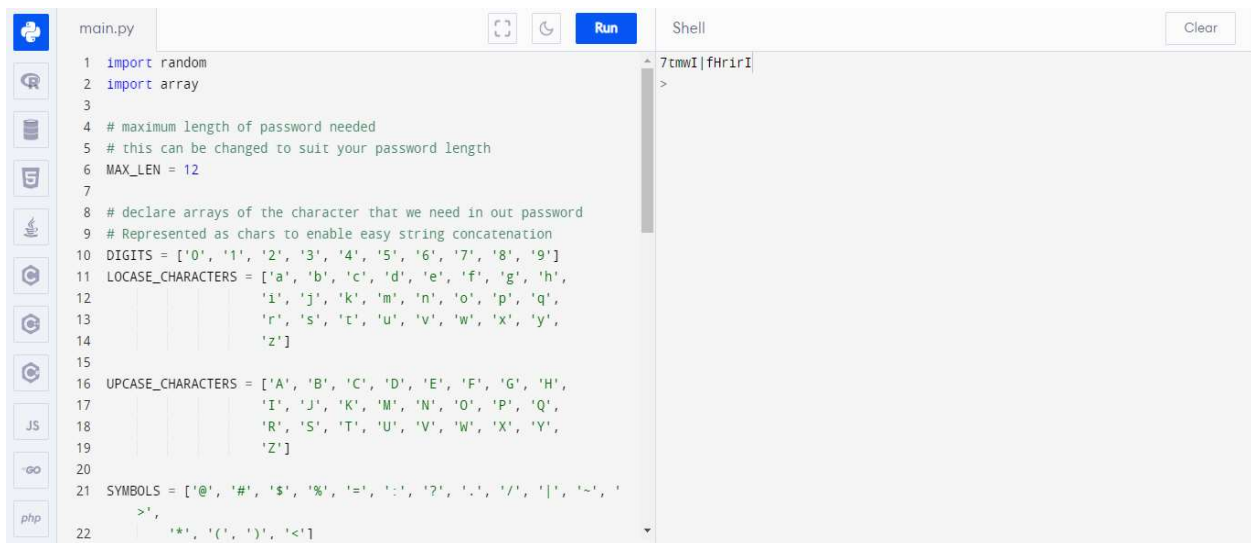
for x in temp_pass_list:

password = password + x

print(password)

```

OUTPUT :



The screenshot shows a Python IDE with a file named 'main.py'. The code in the file is a password generator script. It imports 'random' and 'array', sets a maximum length of 12, and defines lists of digits, lowercase and uppercase characters, and symbols. It then generates a password by randomly selecting characters from these lists and concatenating them. The output of the script is displayed in the 'Shell' window on the right, showing the generated password: '7tmwI|fHrIrI'.

```

main.py
1 import random
2 import array
3
4 # maximum length of password needed
5 # this can be changed to suit your password length
6 MAX_LEN = 12
7
8 # declare arrays of the character that we need in our password
9 # Represented as chars to enable easy string concatenation
10 DIGITS = ['0', '1', '2', '3', '4', '5', '6', '7', '8', '9']
11 LOCALE_CHARACTERS = ['a', 'b', 'c', 'd', 'e', 'f', 'g', 'h',
12                      'i', 'j', 'k', 'l', 'm', 'n', 'o', 'p', 'q',
13                      'r', 's', 't', 'u', 'v', 'w', 'x', 'y',
14                      'z']
15
16 UPPERCASE_CHARACTERS = ['A', 'B', 'C', 'D', 'E', 'F', 'G', 'H',
17                        'I', 'J', 'K', 'L', 'M', 'N', 'O', 'P', 'Q',
18                        'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y',
19                        'Z']
20
21 SYMBOLS = ['@', '#', '$', '%', '=', ':', '?', '.', '/', '|', '~', '!',
22            '>',
23            '*', '(', ')', '<']

```

Shell

```

7tmwI|fHrIrI
>

```

CONCLUSION :

The random password generator in Python is a program that will generate strong random passwords of the specified length using alphabets, numbers, and symbols. We first create a string or list consisting of all the alphabets, numbers, and symbols.

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