

Having a weak password is not good for a system that demands high confidentiality and security of user credentials. It turns out that people find it difficult to make up a strong password that is strong enough to prevent unauthorized users from memorizing it.

This article uses a mixture of numbers, alphabets, and other punctuation found on the computer

Keyboard to from user enter password length which is unpredictable and cannot easily be memorized.

- The components of the password are represented in the form of arrays.
- Arrays is create list from
- Use the random method to select at least one character from each array of character.
- Since the user the enter password is required, so fill the rest of the length of the password left with randomly selected characters from an array formed from the combination of all the characters needed in the final password. Anytime the password is generated, shuffle the password using random.shuffle() to ensure that the final password does not follow a particular pattern.
- Print out password

```
import random
import array
# User the Enter maximum length
length = int(input("Enter password length :"))
print("Password maximum length :",length)

# declare arrays of the character that we need in out password
digits = ['0', '1', '2', '3', '4', '5', '6', '7', '8', '9']
lower_characters = ['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']

upper_characters = ['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']

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

# list
List = digits+lower_characters+upper_characters+PUNCTUATION
# random function use the choice
rand_digits = random.choice(digits)
rand_Lower = random.choice(lower_characters)
rand_upper = random.choice(upper_characters)
rand_punctuation = random.choice(PUNCTUATION)
# combine the character random
temp = rand_digits+rand_Lower+rand_upper+rand_punctuation
# loop
for x in range(length - 4):
    temp = temp + random.choice(List)
    temp_pass_list = array.array('u', temp)
    random.shuffle(temp_pass_list)
password = ""
for x in temp_pass_list:
    password = password + x
```

```
# print out password  
print(password)
```

Output:-

```
Enter password length : 12  
12  
oi%TY3$mg1pZ
```