**RandomPasswordGenerator**

**Overview:**

The Random Password Generator is a command-line tool designed to generate secure, random passwords based on user-specified requirements. Users can customize the length and complexity of the passwords by including uppercaseletters, lowercase letters, digits, and special characters.

**Features:**

* Customizable password length.
* Options to include/exclude uppercase letters, lowercase letters, digits, and special characters.
* Ensures that generated passwords are secure and random.
* Easy-to-use command-line interface.

**Requirements:**

**P**ython 3.X

**Code Explanation:**

import string  
import random

1. **Importing Libraries**:

* string: This module contains various string constants, including ascii\_lowercase, ascii\_uppercase, and digits.
* random: This module provides functions to generate random numbers and make random choices.  
    
  def Generator(len):  
   lower=string.ascii\_lowercase  
   upper=string.ascii\_uppercase  
   digits = string.digits  
   charters = "!~@#$%&\*(?<"

**2.Character Sets**:

* lower: Contains all lowercase letters (a-z).
* upper: Contains all uppercase letters (A-Z).
* digits: Contains all digit characters (0-9).
* charters: A string of special characters that we want to include in the password.

password=lower+upper+digits+charters

**3.Generating the Password**:

* Password: This line generates the password. It uses a list comprehension to create a list of random characters.
* random.choice(password): Selects a random character from the combined password string.
* for \_ in range(len): Repeats the selection process len times to generate a password of the specified length.
* ''.join(...): Joins the list of random characters into a single string.

Password = ''.join(random.choice(password) for \_ in range(len))  
 print("Random Generator Password is:")  
 return Password

**4.User Input and Function Call**:

* len = int(input("length of Password:")): Prompts the user to enter the desired length of the password. The input is converted to an integer and stored in the variable len.
* print(Generator(len)): Calls the Generator function with the user-specified length and prints the generated password.

len = int(input("length of Password:"))  
print(Generator(len))

**Complete Code:**

import string  
import random  
  
def Generator(len):  
 lower=string.ascii\_lowercase  
 upper=string.ascii\_uppercase  
 digits = string.digits  
 charters = "!~@#$%&\*(?<"  
 password=lower+upper+digits+charters  
 Password = ''.join(random.choice(password) for \_ in range(len))  
 print("Random Generator Password is:")  
 return Password  
len = int(input("length of Password:"))  
print(Generator(len))

**output:**

length of Password:16

Random Generator Password is:

lxkScIrGdBJhnPP9