

**Title:** Task 1 – Random Password Generator

## **Personal Details:**

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## **Objective:**

To develop a Python program that generates a random and secure password based on user input length.

## **Tools Used:**

- Python 3.x
- IDLE (Python Editor)

## **Description:**

This project uses Python's built-in libraries – random and string – to create a random password containing letters, numbers, and special symbols. It ensures secure password generation with user-defined length.

## Source Code:

```
import random
import string

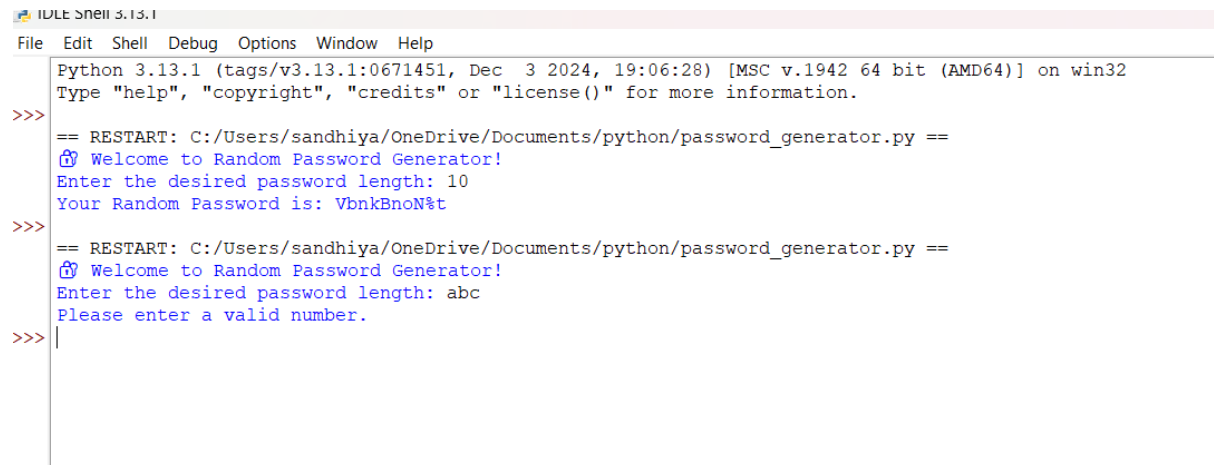
def generate_password(length):
    if length < 4:
        return "Password too short!"

    characters = string.ascii_letters + string.digits +
string.punctuation
    password = ''.join(random.choice(characters) for _ in
range(length))
    return password

print("    Welcome to Random Password Generator!")
try:
    length = int(input("Enter the desired password length: "))
    result = generate_password(length)
    print("Your Random Password is:", result)
except ValueError:
    print("Please enter a valid number.")
```

## Screenshot:

Both valid and invalid input results.



```
IDLE Shell 3.13.1
File Edit Shell Debug Options Window Help
Python 3.13.1 (tags/v3.13.1:0671451, Dec 3 2024, 19:06:28) [MSC v.1942 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:/Users/sandhiya/OneDrive/Documents/python/password_generator.py ==
🔒 Welcome to Random Password Generator!
Enter the desired password length: 10
Your Random Password is: VbnkBnoN%t
>>>
== RESTART: C:/Users/sandhiya/OneDrive/Documents/python/password_generator.py ==
🔒 Welcome to Random Password Generator!
Enter the desired password length: abc
Please enter a valid number.
>>> |
```

## Conclusion:

This task helped me understand random data generation and how to handle user input in Python. I improved my knowledge of functions and string operations.