TECHPLEMENT

Week 1:

Python Developer Task

→ **Task:** Random Password Generator.
→ **Description:**
  ◆ Develop a command-line tool for generating random passwords with customizable length and complexity.
  ◆ Allow users to specify password requirements such as including uppercase letters, lowercase letters, digits, and special characters.
  ◆ The application ensures that the generated passwords are secure and random, making them resistant to brute-force attacks and guessing.
  ◆ Create a proper documentation of commands to use.

→ Create a github repo with the name "Techplement", inside that repo create a folder week1-tasks where you have to upload your files.

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

• Installation:

1. Download the script file `random_password_generator.py`.

2. Ensure you have Python installed on your system.

• Usage:

Run the script from the command line using Python:

 python random_password_generator.py --length LENGTH(in digits) [--uppercase] [--lowercase] [--digits] [--special]

- **Options and Parameters:**

--length: (Required) Specify the length of the password.

--uppercase: (Optional) Include uppercase letters in the password.

--lowercase: (Optional) Include lowercase letters in the password.

--digits: (Optional) Include digits in the password.

--special: (Optional) Include special characters in the password.

- **Example cases:**

1.Generate a password of length 12 with all character types:

python random_password_generator.py --length 12 --uppercase --lowercase – digits --special

Output: Generated Password: E)7EVoB2a.MO

2. Generate a password of length 15 with only uppercase and special types:

python random_password_generator.py --length 15 --uppercase --special

Output: XJ)!,&}PFA.;+DF

- **Error handling:**

If the password length is less than 1, an error is raised: "Password length must be at least 1".

If no character set is selected, an error is raised: "At least one character set must be selected".

If argument parsing fails, an error message is displayed: "Argument parsing failed".

By,

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