Password Strength Checker

Internship Project Report submitted to
INLIGHN TECH

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Overview

The Password Strength Checker project is a simple yet effective cybersecurity tool designed to help users evaluate the strength of their passwords. It classifies passwords into categories such as Weak, Medium, or Strong based on various security factors including length, inclusion of uppercase and lowercase letters, numbers, and special characters.

Objective

The objective of this project is to design and develop a Python program that analyzes a password and provides feedback on its strength, promoting better password security awareness among users.

Tools Used

- Python 3
- re (Regular Expressions) Module
- VS Code / Any Text Editor
- GitHub for Project Hosting

Methodology

1. A Python script was created to analyze passwords.

2. Regular expressions were used to detect patterns such as letters, digits, and symbols.

3. Passwords were categorized based on strength metrics.

4. Feedback was provided to guide users toward stronger passwords.

5. The project was documented and uploaded to GitHub for presentation.

Output Example

An example output of the program demonstrates how it classifies a password entered by the user and provides corresponding remarks on its strength.

```
PS C:\Users\Sabnam\OneDrive\Desktop\Password-Strength-Checker> python password_checker.py
Enter Password: hello
Password Strength: Weak
Remarks: Password too short. Minimum 6 characters required.
PS C:\Users\Sabnam\OneDrive\Desktop\Password-Strength-Checker> python password_checker.py
Enter Password: Travet476
Password Strength: Medium
Remarks: Your password is okay, but could be stronger.
PS C:\Users\Sabnam\OneDrive\Desktop\Password-Strength-Checker> python password_checker.py
Enter Password: MaqRaRtt@7691
Password Strength: Strong
Remarks: Your password is strong.
PS C:\Users\Sabnam\OneDrive\Desktop\Password-Strength-Checker>
```

Learning Outcomes

- Learned to use Regular Expressions for pattern matching in Python.
- Understood password strength metrics and security policies.
- Gained experience in documenting and publishing a project on GitHub.
- Developed better awareness about password security and ethical coding practices.

Future Improvements

- Add a graphical user interface (GUI) using Tkinter.
- Implement password suggestions for weak passwords.
- Build a web version using Flask for online use.

Conclusion

This project successfully demonstrates a practical approach to evaluating password security. By providing real-time feedback, it encourages users to create stronger and safer passwords, which is a fundamental practice in cybersecurity. This experience helped enhance my technical, analytical, and documentation skills.

Acknowledgment