

Internship Project Report

Project Title: Password Strength Checker

Abstract:

This project demonstrates a simple and efficient way to evaluate the strength of passwords using Python. It analyzes the given password for essential security features such as length, presence of uppercase and lowercase characters, numbers, and special symbols. The program helps users understand how secure their passwords are and promotes cybersecurity awareness among users.

Introduction:

In today's digital era, passwords are the first line of defense against unauthorized access. Many users still create weak passwords, making their accounts vulnerable to attacks. This project, "Password Strength Checker," is designed to assist users in testing the strength of their passwords and guide them toward better security practices. The project is implemented using simple Python code that runs efficiently even on low-end systems.

Tools Used:

1. Programming Language: Python
2. Text Editor: Notepad or Visual Studio Code
3. Operating System: Windows
4. Command Line Tool: Command Prompt
5. Libraries Used: re (Regular Expression module)

Steps Involved in Building the Project:

1. Open Notepad and write the Python program to check password strength using regex patterns.
2. Save the file as **password_strength_checker.py** on the Desktop.
3. Open Command Prompt and navigate to the Desktop using `cd Desktop`.
4. Run the program using `python password_strength_checker.py`.
5. Enter a password and observe the output, which classifies it as Weak, Medium, or Strong.
6. Example Output:
Enter your password: MyP@ssword123
Password Strength: ■ Very Strong
7. The project successfully demonstrates basic cybersecurity concepts.

Conclusion:

The Password Strength Checker project provides an easy and effective method to test the security level of passwords. By evaluating factors like length, case variation, digits, and symbols, it educates users on the importance of strong password creation. This project can be extended to include advanced checks such as dictionary attacks or common password detection. It serves as a simple yet valuable cybersecurity awareness tool.

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