

Weekly Progress Report

Name: Panchal Parth

Domain: Python

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I. Overview:

This week, the primary focus was on developing a secure password manager in Python. Efforts were concentrated on implementing encryption for password storage, designing the user interface, and developing functions for password generation and retrieval.

II. Achievements:

1. Encryption Implementation:

- Researched and selected suitable encryption algorithms for securing password storage.
- Successfully integrated AES encryption to ensure passwords are securely stored.

2. User Interface Design:

Password Manager :-

- Designed and developed a user-friendly interface for inputting and retrieving passwords.
- Implemented functionality for users to securely access and manage their stored passwords.

3. Password Generation and Management:

- Developed a function to generate strong, random passwords.
- Created a database schema to store and retrieve encrypted passwords efficiently.
- Implemented CRUD (Create, Read, Update, Delete) operations for managing passwords in the database.

III. Challenges:

1. Encryption Algorithm Complexity:

- Encountered challenges in understanding and implementing the AES encryption algorithm.
- Ongoing efforts to ensure encryption and decryption processes are both secure and efficient.

2. User Interface Integration:

- Faced difficulties in integrating the user interface with backend functionalities.
- Seeking solutions to enhance the seamless interaction between the UI and the database.

IV. Learning Resources:

1. Encryption and Security:

- **Utilized online resources such as cryptography tutorials and documentation.**
- Attended webinars on best practices for encryption and secure password management.

2. Python Development:

- Engaged with Python development courses on platforms like Coursera and Udemy.
- Participated in coding forums and challenges to apply Python skills in real-world scenarios.

V. Next Week's Goals:

1. Enhance Encryption Security:

- Continue refining the encryption process to ensure maximum security.
- Implement additional security measures such as two-factor authentication.

2. User Interface Improvements:

- Enhance the user interface for better user experience.
- Integrate feedback from initial testing to refine UI functionality.

VI. Additional Comments:

“Collaborative efforts and continuous learning were crucial this week. Progress made in encryption and UI design sets a strong foundation for future development.”