

TRUSTLOCKER FS – SECURE FILE SYSTEM SOFTWARE

⚠ Note: This mini software is currently in its initial stages and is not yet fully completed. The current version is for **demo purposes only**.

USERNAME & PASSWORDS FOR DEMO ACCESS:

- **Admin:** admin / admin123
 - **User:** user / user123
 - **Guest:** guest / guest123
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OVERVIEW

TrustLocker FS is a lightweight, secure file system application designed to protect your sensitive files while providing an intuitive user interface. It incorporates the **CIA Triad principles**:

- **Confidentiality:** All files are encrypted using XOR-based encryption.
 - **Integrity:** SHA-256 hash verification ensures files are not tampered with.
 - **Availability:** Role-based access ensures appropriate permissions for admin, user, and guest accounts.
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KEY FEATURES

1. **Role-Based Access Control**
 - **Admin:** Full access to create, read, edit, and delete files.
 - **User:** Can create and read files, with limited edit permissions.
 - **Guest:** Read-only access to selected files.
2. **Advanced File Security**
 - XOR encryption for file confidentiality.
 - Integrity checks using SHA-256 hash.
 - Files are protected from unauthorized external modifications.
3. **User-Friendly GUI**
 - Smooth navigation with forward/backward buttons.
 - In-app file viewing and editing.
 - Folder-like clickable interface for easy file management.
4. **Multi-File Support**
 - Create and save multiple `.txt` files with custom names.
 - Secure access to all files according to user role.

5. Lightweight & Fast

- Minimal system resources required.
- Quick encryption, decryption, and file access.

WHY USE TRUSTLOCKER FS?

- Protect sensitive data from unauthorized access.
- Maintain file integrity with automated hash verification.
- Convenient and centralized management of files within a secure GUI.
- Ideal for cybersecurity students, red teamers, or anyone needing a secure file storage solution.

GETTING STARTED

1. Launch the application.
2. Log in with the demo credentials above.
3. Navigate the interface using the ribbon and folder icons.
4. Start creating, editing, or viewing files according to your role.
5. **File Storage Details:**
 - All files you save in the software are stored in a folder named **saved_files**.
 - If you open these files outside the software, you will see **encrypted text**.
 - To access **decrypted files**, open them within TrustLocker FS.
 - If anyone alters files in the **saved_files** folder outside the software, TrustLocker FS will **warn you** that a specific file has been **altered by an intruder**.

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Feedback & Suggestions: Suggestions for improvements or bug reports are highly appreciated. Please ping me via **email:** rashidiqbal621493@gmail.com
