Task 3: Secure File Sharing System

Objective

Build a file upload/download portal that incorporates AES encryption to ensure data security both at rest and in transit.

Project Specifications

🛠️Task Description

Develop a secure file-sharing web application with the following features: - AES-based encryption for uploaded/downloaded files. - Security in both storage and data transmission. - A user-friendly interface to upload and download files securely.

🕐Skills Gained

- Web application development
- Encryption implementation (AES)
- Secure file handling
- Key management and encryption best practices

🧰Tools & Technologies

- **Backend Frameworks**: Python Flask or Node.js (Express)
- **Encryption Libraries**: PyCryptodome (Python) or Node.js Crypto module
- **Version Control**: Git & GitHub
- **Testing Tools**: Postman or `curl`

📦Deliverables

- A complete GitHub repository with source code
- A walkthrough video explaining the system
- A **security overview document** covering:
- Encryption approach
- Key handling
- Threat model and mitigations