

Software Requirements and Design Document

For

Group 21

Version 3.0

Authors:

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1. Overview (5 points)

A web application that allows for real-time data and file sharing between devices. Users can easily drag and drop files, with options to encrypt and/or password-protect them. The application also provides the ability to send an invite via a link or email, allowing the recipient to securely access and retrieve the file.

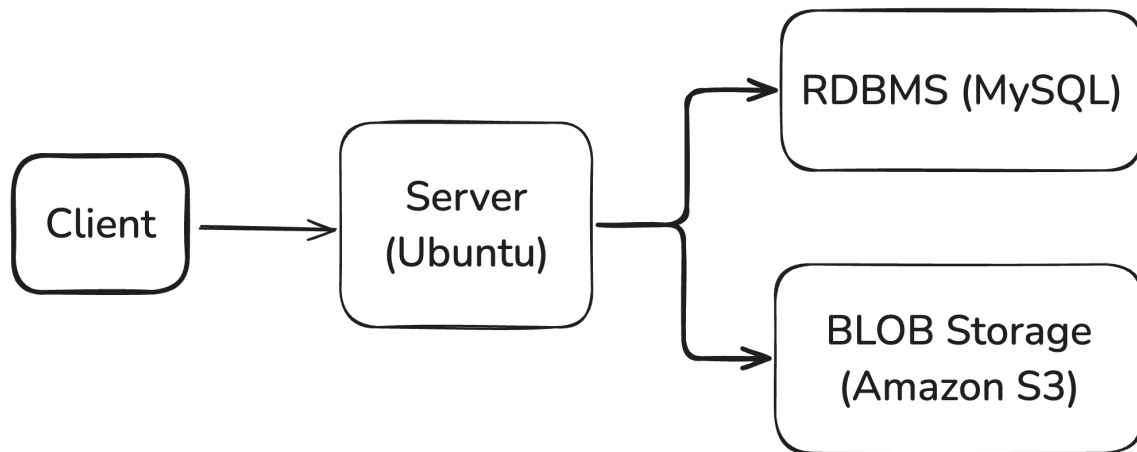
2. Functional Requirements (10 points)

The functional requirements for this app includes users being able to drag and drop files directly into the application for file sharing, file encryption, and password protection. It also enables users to send invitations via email allowing the recipient to retrieve the files safely.

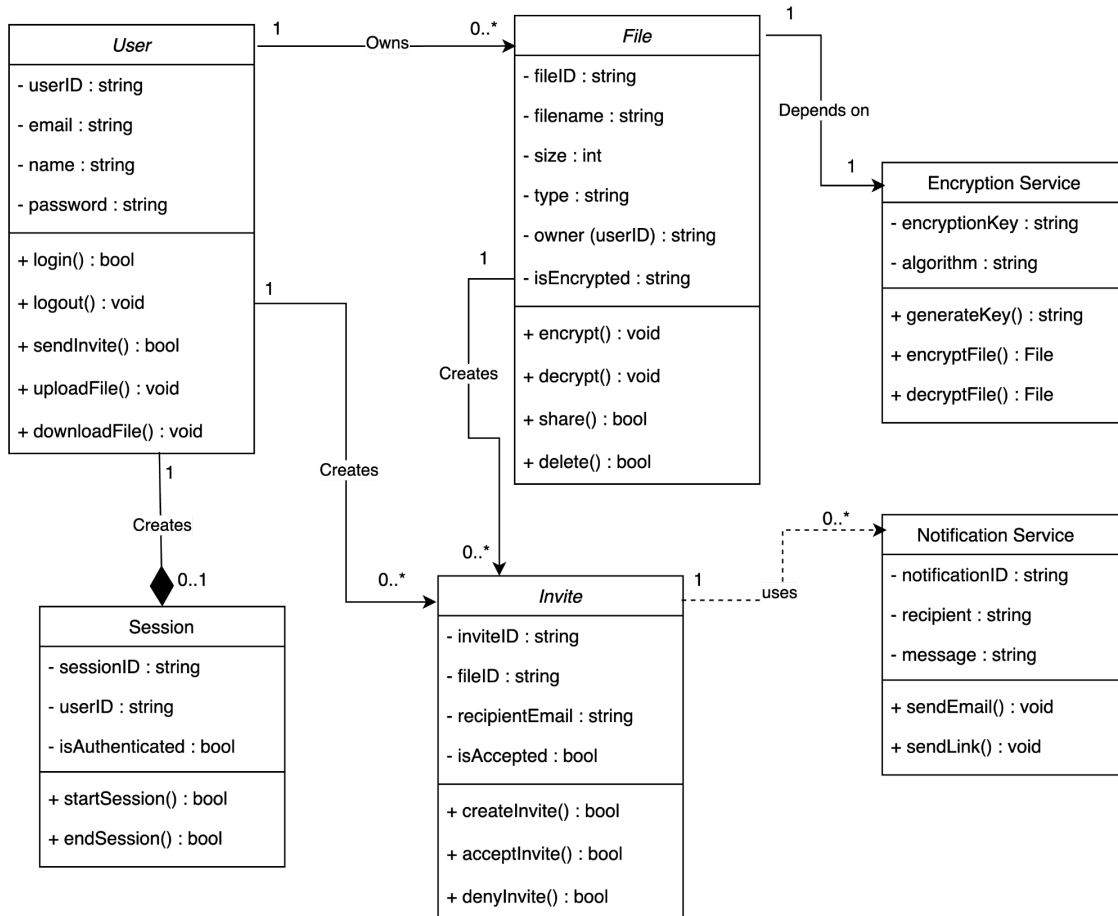
3. Non-functional Requirements (10 points)

Our system must support 100 concurrent users and a total of 10,000 users. It must also be able to retrieve any file in less than 5 seconds and work with 99% availability.

4. Use Case Diagram (10 points)



5. Class Diagram and/or Sequence Diagrams (15 points)



6. Operating Environment (5 points)

- **Hardware Compatibility**
 - Primarily designed for use on computers and mobile devices with internet access.
- **Operating Systems Compatibility**
 - For computers, the application is compatible with Windows (10 and above), macOS and Linux distributions.
 - For mobile, it supports iOS and Android.
- **Browser Compatibility**
 - Fully functional on modern web browsers like Google Chrome, Firefox, Safari, Opera and Edge.
 - Requires JavaScript to be enabled.
- **Server Hosting Environment**
 - The backend server is hosted on a DigitalOcean Droplet, running Ubuntu 24.10. This environment was chosen for its reliability and ease of scaling.

7. Assumptions and Dependencies (5 points)

- Assumptions
 - User has a reliable internet connection for file transfers.
 - User is using a modern web browser.
 - There will be reasonable limits on uploaded file size.
 - Users comply with laws and regulations regarding data sharing.
- Dependencies
 - Third-party services for sending emails and notifications (invites).
 - Cloud Storage
 - Encryption libraries
 - Web Hosting
 - Version Control tools (Git)
 - User Authentication Services