Dhirubhai Ambani Institute of Information and Communication Technology

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IT-314: Software Engineering

Group-10

Functional & Non-Functional Requirements

eBook Library System

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Functional requirements

1. User Management

FR 1.1: Users should be able to create accounts by providing essential details like name, email, and password.
FR 1.2: Registered users should be able to log in securely using their credentials.
FR 1.3: Registered users should be able to maintain a wishlist of eBooks for later reference.

2. Role Selection

FR 2.1: Users should be able to select their roles such as ‘reader’ or ‘author’.

3. eBook Management

FR 3.1: Users should be able to browse a collection of eBooks categorized by genres, authors, and other filters.
FR 3.2: Users should be able to read eBooks directly through the platform.

4. eBook Transactions

FR 4.1: Users should be able to rent or purchase chargeable eBooks through the platform.
FR 4.2: Users should receive payment receipts and email notifications for completed transactions.

5. Author Management

FR 5.1: Authors should be able to upload and manage their eBooks, including updating content and metadata.
FR 5.2: Authors should be able to view feedback and ratings on their uploaded eBooks.

6. Feedback and Ratings

FR 6.1: Users should be able to share their thoughts on eBooks by submitting ratings and reviews.

7. Administrator Features

FR 7.1: Administrators should be able to verify user accounts to ensure authenticity.
FR 7.2: Administrators should be able to add or remove eBooks from the platform.
FR 7.3: Administrators should be able to view reports on user activities and eBook access to make informed decisions on system improvements.
FR 7.4: Administrators should be able to manage an online payment system with various payment methods to facilitate book purchases.

Non-functional requirements

1. Compatibility and Data Conversion

The system should support seamless data migration from lightweight sources and ensure **compatibility across common web browsers** considering resource limitations.

2. Robustness

The system should effectively handle exceptions and recover gracefully from errors without affecting active users or processes, within the constraints of the limited backend capacity

3. Load Handling:

The system should maintain stability and responsiveness under increased loads, including:

- Supporting at least 1000 simultaneous users.
- Handling 100,000 transactions per day without performance degradation.

4. Performance

The platform should deliver response times within 3 seconds for key operations, efficiently manage datasets of up to 500,000 records, and handle light concurrent traffic without degradation.

5. Usability

The system should provide an intuitive interface optimized for smaller-scale use, enabling users to navigate seamlessly and perform tasks efficiently within resource limitations.

6. Privacy

The system shall ensure basic security measures are in place, such as hashed passwords and secure communication (e.g., HTTPS), to protect user credentials and sensitive data, even in a limited resource environment.