

User Requirements Specifications

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Functional Requirements

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Web (User):

FR-1, FR-2, FR-3, FR-4, FR-5, FR-6, FR-7, FR-9, FR-11, FR-14

Desktop (Admin):

FR-6, FR-7, FR-8, FR-9, FR-10, FR-11, FR-12, FR-13

Web and desktop:

FR-6, FR-7, FR-9, FR-11, FR- 14

MoSCoW for Functional Requirements

Must have:

- FR-1
- FR-5
- FR-7
- FR-10
- FR-14

Should have:

- FR-2
- FR-3
- FR-6
- FR-9
- FR-11
- FR-14

Could have:

- FR-4
- FR-8
- FR-12

Will not have:

- FR-15

Non-functional requirements

NFR-01: Response Time: The web application should load Razor Pages and respond to user interactions within a maximum of 2 seconds.

NFR-02: Database Query Speed: Database queries should execute within 500 milliseconds on average.

NFR-03: Resource Utilization: The system should use no more than 70% of available server CPU and memory resources under peak load.

NFR-04: Code Documentation: All code, including Razor Pages and WinForms components, should be well-documented to facilitate future maintenance and enhancements.

NFR-05: Modularity: The codebase should follow a modular structure to ease future updates and extensions.

NFR-06: Version Control: Utilize a version control system (e.g., Git) for source code management, with clear commit messages and branching strategies.

NFR-07: Code Review: Implement a code review process to ensure code quality and adherence to coding standards.

NFR-08: Authentication: Implement secure user authentication and authorization for both the web and WinForms applications.

NFR-09: Data Encryption: Sensitive data should be encrypted both in transit (using HTTPS) and at rest (in the database).

NFR-10: Input Validation: Implement input validation and sanitation to prevent SQL injection, cross-site scripting (XSS), and other common web vulnerabilities.

NFR-11: Session Management: Ensure secure session management practices to protect user sessions from hijacking or unauthorized access.

NFR-12: Load Balancing: Design the web application to be load-balanced to distribute traffic evenly across multiple servers.

NFR-13: Database Scalability: Ensure the database can scale horizontally or vertically to accommodate increasing data volumes and user loads.

NFR-14: Caching: Implement caching mechanisms for frequently accessed data to reduce the load on the server and improve response times.

NFR-15: Elasticity: Set up auto-scaling for cloud-based infrastructure to handle sudden spikes in traffic without manual intervention.

Use Cases

UC-01: Post a review

Covers: FR-01

Actor: User

Pre-condition: Actor is logged in Main

Success Scenario:

1. Actor goes to the Main Page
2. System returns Main Page
3. Actor goes to read/write movie reviews Page
4. System returns Read/Write movie reviews Page
5. Actor types a review
6. Actor posts
7. System confirms and posts the review

Extensions:

5a. Actor cancels the action.

1. System returns to the Main Page
2. End of use case

UC-02: Create Movie

Covers: FR-10

Actor: Admin

Pre-condition: logged in

Main Success Scenario

1. Actor goes to the movie section

2. System displays the Add New Movie Form
3. Actor fills in the required information
4. Actor confirms
5. System confirms and saves the information

Extensions:

4a. Actor clicks on the cancel button

1. System returns to the Main Form
2. End of use case

5a. Not all required information is filled in

1. System shows a message that there is missing information
2. Return to MSS step 2

UC-03: Edit a Movie

Covers: FR-13

Actor: Admin

Pre-condition: logged in

Main Success Scenario

1. Actor goes to the movie section
2. System displays all available movie
3. Actor selects a movie
4. Actor wants to edit a movie
5. System displays the Edit Form
6. Actor fills in the required information
7. Actor confirms
8. System confirms and saves the information

Extensions:

6a. Actor clicks on the cancel button

1. End of Scenario

8a. Not all required information is filled in

1. System shows a message that there is missing information
2. Return to MSS 2

UC-04: Delete a Movie

Covers: FR-12

Actor: Admin

Pre-condition: logged in

Main Success Scenario

1. Actor goes to the Movie section
2. System displays all available movies
3. Actor selects a movie
4. Actor wants to delete a movie
5. System displays a message that it was successfully deleted and displays the new list of movies in the list box

Extensions:

3a. Actor does not select a movie

1. System displays a message that no movie was selected
2. Return to MSS 2

UC-05: Login

Covers: FR-05

Actor: Admin/User

Pre-condition: Actor already has an account

Main Success Scenario

1. Actor goes to the login page

2. System opens login page and asks for email and password
3. Actor inputs the required information and clicks the login button
4. System checks and logs the actor in
5. Actor is logged in

Extensions:

4a. Actor inputs wrong credentials

1. System shows a message that there is no account with these credentials 2.
Return to MSS 2

UC-06: Create Account

Covers: FR-09

Actor: User/Admin

Main Success Scenario

1. Actor goes to the Create Account section
2. System opens Create Account section
3. Actor fills in the required information
4. System checks if the credentials meet the criteria
5. System creates an account
6. Actor has an account

Extensions:

3a. Actor cancels process

1. System returns to the Login section
2. End of use case

4a. Not all the credentials meet the criteria

1. System shows a message that says there is missing or has wrong credentials
2. Return to MSS 2

UC-07: Read Review/s

Covers: FR-02

Actor: Client

Main Success Scenario

1. Actor goes to the View Reviews section
2. System opens View Reviews section and returns a list of reviews
3. Actor reads the reviews

Extensions:

- 2a. System does not find any reviews
 1. System displays that there are no reviews
 2. End of use case

UC-08: Client Creates Account

Covers: FR-07

Actor: Client

Main Success Scenario

1. Actor goes to the Create Account section
2. System opens Create Account section
3. Actor fills in the required information and submits
4. System confirms and account is created

Extensions:

- 4a. System finds invalid credentials
 1. System marks the given invalid credentials
 2. Return to MSS 3

UC-09: Client Logs out

Covers: FR-14

Actor: Client

Pre-condition: Client is logged in

Main Success Scenario

1. Actor goes to the Log out section
2. System opens Log out section
3. Actor logs out
4. System logs out the actor

Extensions:

- 2a. System crashes
 1. System opens the error Section
 2. End of use case

UC-10: Client Edits a Review

Covers: FR-03

Actor: Client

Main Success Scenario

1. Actor goes to the View Reviews section
2. System opens View Reviews section and returns a list of reviews
3. Actor reads the reviews
4. Actor selects a review
5. System opens the Edit Review section
6. Actor changes the review description and submits
7. System confirms and changes review

Extensions:

2a. System does not find any reviews

1. System displays that there are no reviews
2. End of use case

6a. Actor does not place any review description

1. System returns invalid description
2. Return to MSS 6