
Software Requirements Specification

for

OutfitSpotlight

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version
Khalid Nur	12/29/23	First Release	1.0.0

1. Introduction

This section gives a summary of the whole SRS document's contents as well as an explanation of its scope. Along with a list of definitions and phrases, this page also explains its goal.

1.1 Purpose

This Software Requirements Specification (SRS) document has been prepared to detail the requirements and specifications for the development of the OutfitSpotlight social network system. Its primary objective is to provide a comprehensive description of the functionalities, features, and constraints of the OutfitSpotlight system.

1.2 Product Scope

OutfitSpotlight is a unique social media platform specifically for the fashion and beauty industries. OutfitSpotlight stands out by offering every user the opportunity to evolve into an influencer and creator, thereby increasing the field of fashion and beauty content creation. OutfitSpotlight gives its users the ability to add their own ideas and styles in addition to interacting with the content. OutfitSpotlight is an exclusive community for fashion and beauty enthusiasts. Users can explore, discuss, and find the newest trends. OutfitSpotlight is a great place for people who are passionate about fashion and beauty to connect, get inspired, and be inspired by others to promote creativity and uniqueness.

2. Overall Description

2.1 Product Perspective

OutfitSpotlight is an online social media network designed specifically for the beauty and fashion industries. It serves a global audience with an easy-to-use interface that is compatible with a range of devices, including computers and smartphones. With features like content posting, profile customization, and interactive community aspects, the platform's functionality is centered around user engagement. OutfitSpotlight differentiates itself in the market by providing a specialized community platform that focuses exclusively on the latest fashion and beauty content.

2.2 Product Functions

2.2.1. Register

This feature enables new users to create an account. During the registration process, users are required to provide a profile name, a valid email address, and a secure password. The system then allows users to proceed to the application, ready to explore and interact.

2.3.2 Login

Users must enter their credentials to access their account. The system validates the username and password. If the credentials match, access is granted. Unsuccessful attempts may trigger additional security checks to prevent unauthorized access.

2.3.3 Logout

The logout feature allows users to end their current session usage and ensures that future access to their account requires re-authentication in order to maintain security.

2.3.4 Post Content

The Post Content feature serves as a creative space for users to express their fashion sense and beauty insights. Users can upload and showcase their style, share suggestions and tips, as well as link products for other users to view or buy.

2.3.5 View Profile

The view profile feature allows users to view each other's public profiles. The profile serves as a personal showcase, revealing the user's uploaded content. It displays the number of followers, the user's bio, and includes any website links the user has chosen to share.

2.3.6 Edit Profile

The edit profile feature offers users control over their profile, allowing them to update their username, bio, profile images, and website links. Any updates are updated in real-time and can be revised at any time to ensure the profile represents the user.

2.3.7 Search

With an integrated search feature, users can locate and connect with others within the platform simply by entering a username. Upon searching, the function directs the user to the corresponding profile page, reducing the process of finding and engaging with others.

2.3.8 Explore

The Explore Product feature allows users to discover a wide range of fashion and beauty-related products. This feature is regularly updated with new content, providing users with an engaging way to discover and learn about new products. Users can view details and purchase links, making it simple to discover and connect with the latest in fashion and beauty.

2.3.9 Like Post

like feature is intended to be a quick and pleasant way to show appreciation for a post. When a user comes across content that appeals to them, a simple click on the like icon will let the creator know their content is valued.

2.3.10 Follow

The following feature allows users to manage their feeds by following other users. When a user follows another, they are updated on the most recent post and receive updates and new content from that user instantly in their feed.

2.3.11 Unfollow

The unfollow feature allows users to personalize their feed by removing content from any user they no longer wish to follow. Enabling users to personalize their social experience as their preferences and interests expand.

2.3.12 Share Post

The share feature allows users to increase their audience. It enables users to share a post to their social network, encouraging community engagement and interaction. The feature is intended to make it simple for users to share and promote content that they think their followers will find appealing or interesting.

2.3.13 Comment Post

The comment feature is intended to enhance user interaction by allowing users to leave comments on posts they find engaging. It's a space where users can share their ideas, provide feedback, and start conversations, creating a more connected and interactive community.

2.3.14 Delete Post

The delete feature allows users to control their content. A user is able to remove a post from their profile if they decide it no longer shows their style or message. This feature ensures that users keep an up-to-date personalized style that corresponds to their current content.

2.3 User Classes and Characteristics

Casual Users

Casual users who log in to OutfitSpotlight to view fashion and beauty trends. They want an easy-to-use platform with quick access to the latest styles.

Active Contributors

Contributors are regular users who share and engage with content. They require a range of features for creating posts and interacting with the community.

Industry Professionals

Professionals such as stylists and artists showcase their work and network with potential clients, requiring a polished profile and networking.

2.4 Operating Environment

Hardware Environment

Computers and Mobile Devices: OutfitSpotlight is designed to be accessible on a wide range of devices including desktop computers, laptops, tablets, and smartphones.

Memory and Storage: The platform is optimized for devices with standard memory and storage capacities, ensuring smooth performance across commonly used devices.

Software Environment

Operating Systems: OutfitSpotlight is compatible with major operating systems such as Windows, macOS, iOS, and Android, ensuring a broad user base can access the platform.

Web Browsers: The platform is designed to be compatible with popular web browsers including Google Chrome, Firefox, Safari, and Microsoft Edge, supporting their latest stable releases.

Mobile App: OutfitSpotlight is available as a mobile application, ensuring ease of access for users on the go. The application is designed to be compatible with current versions of mobile operating systems, offering to both iOS and Android users.

Network Environment

Connectivity: OutfitSpotlight requires a stable internet connection for optimal functionality. It is designed to perform well under various network conditions, including both Wi-Fi and cellular data.

2.5 Design and Implementation Constraints

For OutfitSpotlight, a social network platform dedicated to fashion and beauty, the software's design and implementation constraints would focus significantly on user privacy and data security.

User Privacy Management

OutfitSpotlight allows users to control who can view their shared content. Users have the option to restrict access to their posts and personal information based on their privacy preferences.

Data Protection and Usage

The platform is committed to protecting user data and privacy. OutfitSpotlight guarantees that private user information remains confidential and is not sold or disclosed to any outside parties.

3. External Interface Requirements

3.1 User Interfaces



Figure 1: Login-Page

OUTFIT SPOTLIGHT

Enter the spotlight at OutfitSpotlight. Elevate your style to new heights. [Join us now!](#)

Email

Password

[Log in](#)

Don't have an account? [Sign up](#)

OUTFIT SPOTLIGHT

Sign up to embrace the spotlight. Experience stunning outfits to redefine your signature style

Username

Email

Password

[Sign up](#)

Have an account already? [Log in](#)

Figure 2: Register-Page



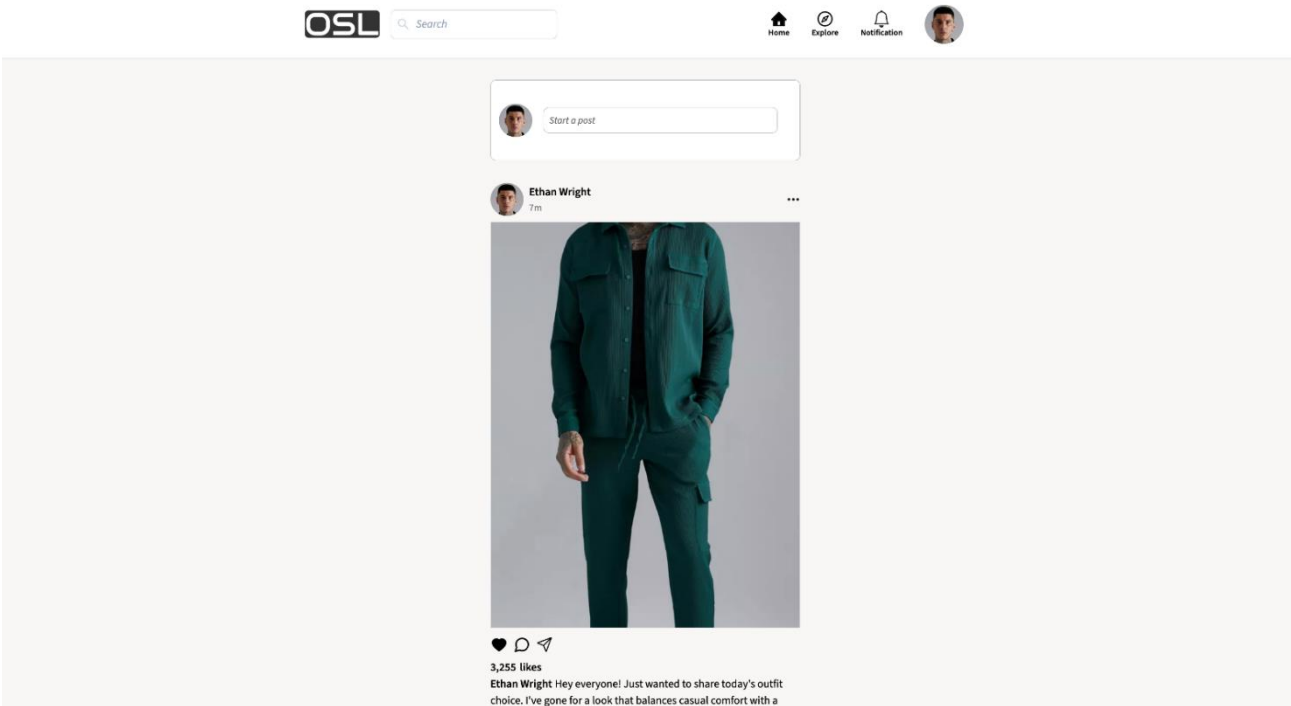


Figure 3: Home-Page

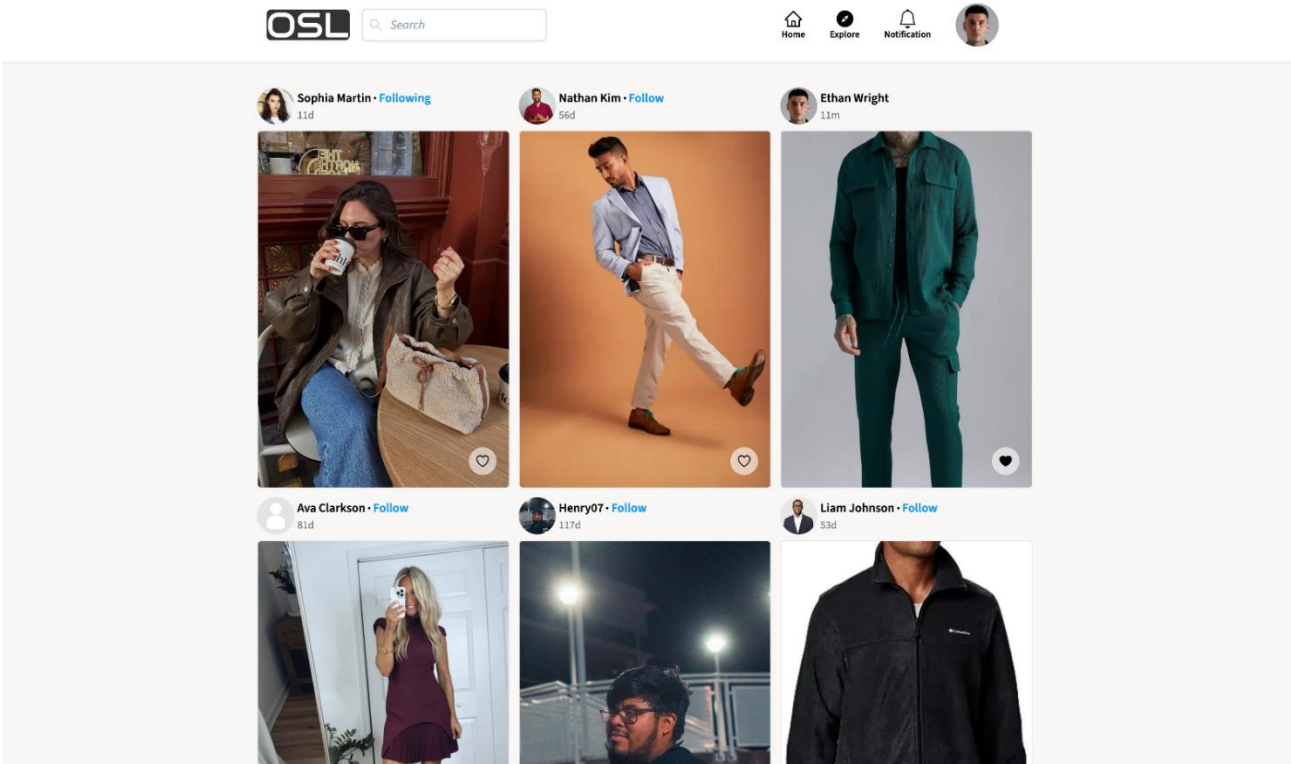


Figure 4: Explore-Page

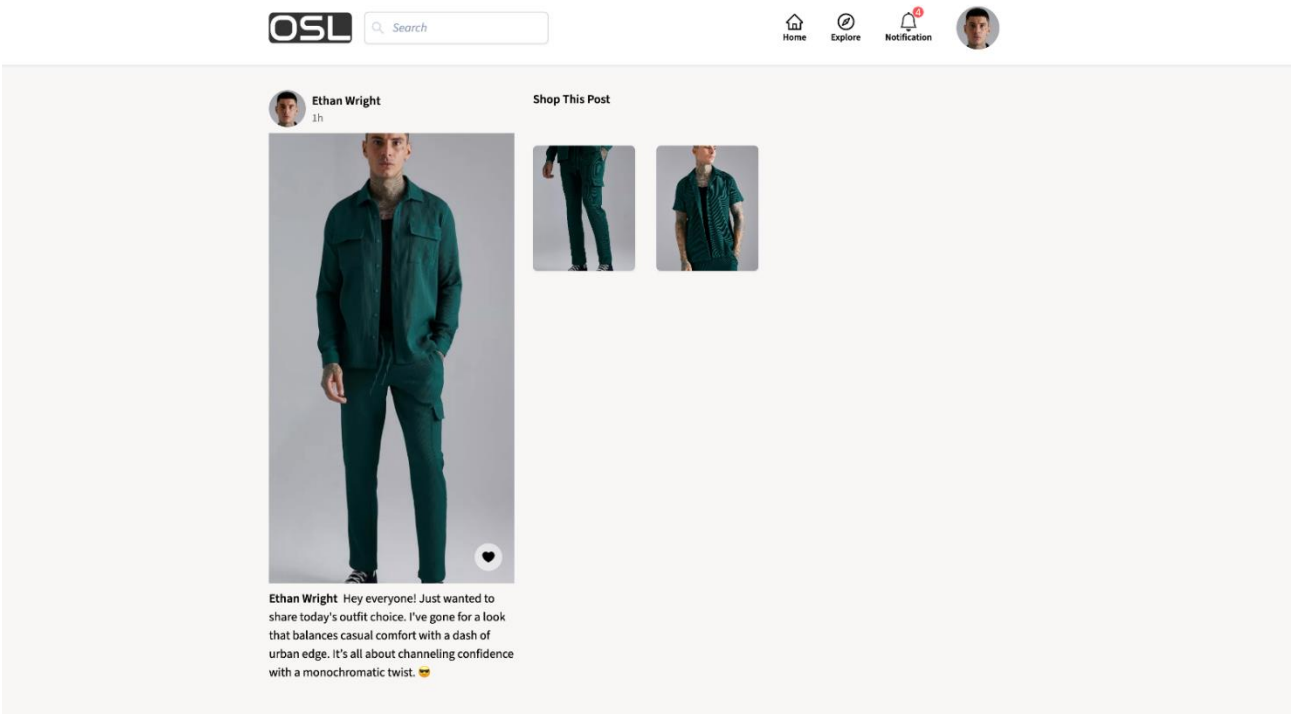


Figure 5: Product-Page

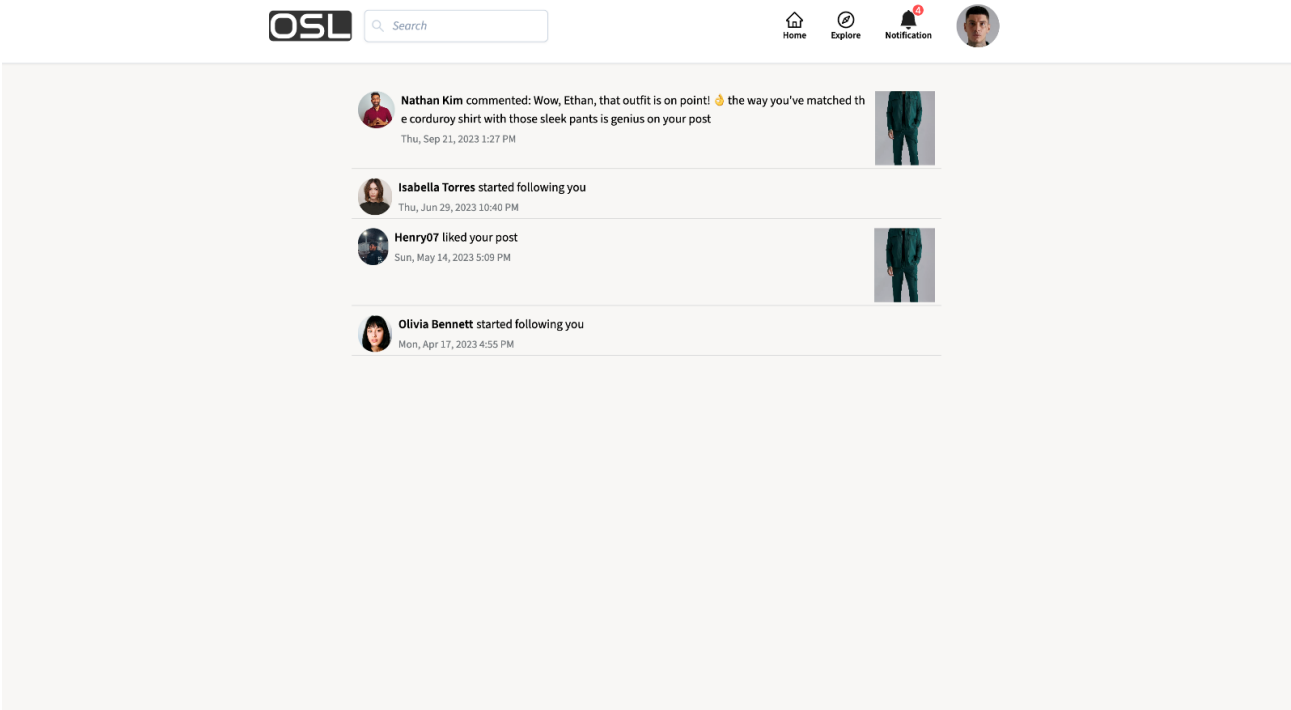


Figure 6: Notification-Page

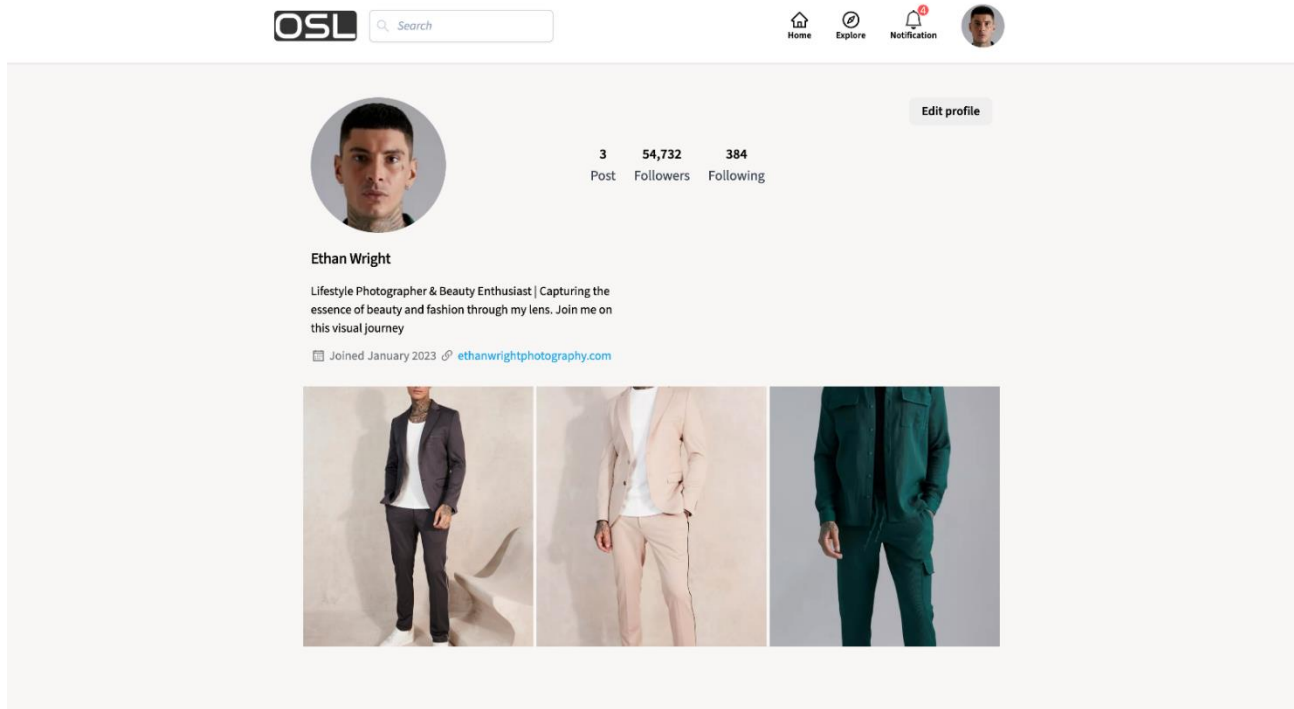


Figure 7: Profile-Page

3.2 Hardware Interfaces

This section describes the hardware requirements and interfaces for OutfitSpotlight application. The essential hardware requirements are as follows:

Desktops and Laptops: A basic modern processor comparable to or better than a general entry-level processor and at least 4GB RAM are required for desktops and laptops.

Smartphones and Tablets: Standard modern processors and a minimum of 2GB RAM are required for smartphones and tablets.

Web Browser Compatibility: The application works with the most recent versions of major web browsers such as Chrome, Firefox, Safari, and Edge.

Internet Connectivity: A fast internet connection (at least 5 Mbps) is required for the best performance and data syncing with Firebase.

Camera Functionality: For users who wish to upload photos, a functioning camera on their device is recommended.

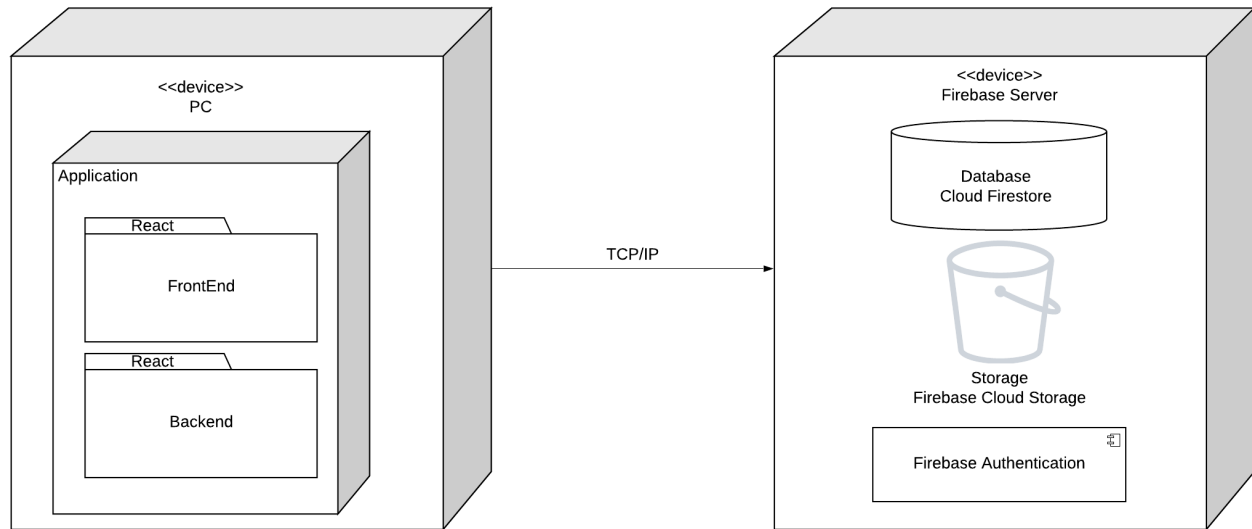
3.3 Software Interfaces

OutfitSpotlight utilizes React.js alongside with Google Firebase for database operations and Google Cloud Storage for image storage. All database interactions will be managed by Firebase using JSON formats and Firebase Authentication for secure user access.

Google Cloud Storage will store and retrieve user-uploaded images, as well as image formats such as JPG and PNG, using HTTPS to ensure secure transfers. Firebase Authentication and security rules will control storage access.

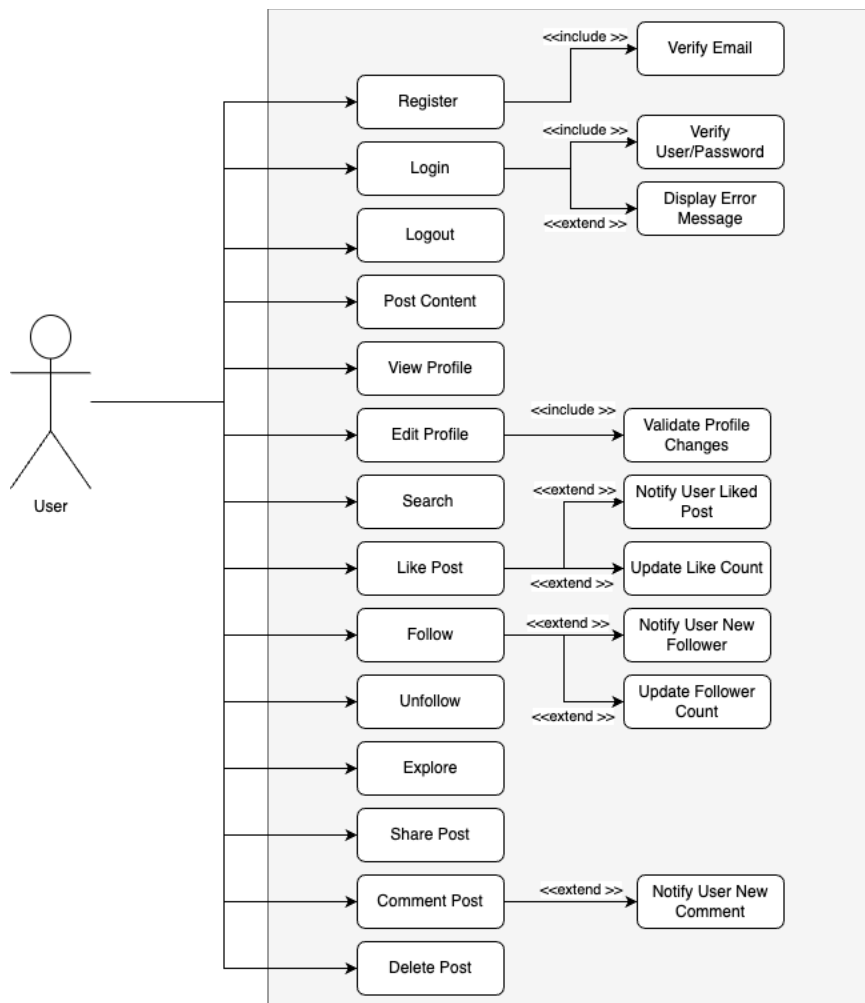
In terms of front-end, our system uses the latest stable version of React.js, supported with additional frameworks for enhanced functionality. These include Moment.js for date operations, React Icons and Ant Design (AntD) for UI components, React Share for social media integration, and Tailwind CSS for styling. Each of these frameworks will be integrated into our application to provide a strong, easy-to-use, and visually appealing interface.

3.4 Communications Interfaces



The OutfitSpotlight system utilizes TCP/IP to ensure secure communication between the PC and Firebase services, exchanging data in the commonly recognized JSON format. The application is developed with React, which provides a responsive interface and efficient back-end process. The OutfitSpotlight system requires a stable internet connection for it to operate properly, and it strictly follows security measures, with continuous reviews to protect data.

4. System Features



4.1 Register

4.1.1 Description and Priority

Description: The Register feature allows new users to sign up for the platform by providing a username and password, as well as a profile picture of their choice. This feature enables users to create accounts and start using the platform.

Priority: High

Benefit: 9 - Important for platform growth and user engagement.

Penalty: 8 - Failure to register users effectively can result in a significant drop in new users.

Cost: 5 - Requires investment in a secure authentication system and user database management.

Risk: 6 - Risks include the possibility of user input mistakes as well as the handling of sensitive user data.

4.1.2 Stimulus/Response Sequences

Stimulus: User initiates the registration process.

Response: The system presents the registration form to the user to fill out.

4.1.3 Functional Requirements

REQ-1: The system must display a registration form requesting a username and password.

REQ-2: The system must validate the chosen username against existing usernames to ensure uniqueness.

REQ-3: The system must enforce password length to ensure account security.

REQ-4: The system must log the user in automatically upon successful registration.

REQ-5: The system must provide clear feedback for any input validation failures.

REQ-6: The system must direct the user to the main user interface upon successful registration.

4.2 Login

4.2.1 Description and Priority

Description: The Login feature enables existing users to access their accounts by entering their username and password. This feature is essential for user authentication and account security.

Priority: High

Benefit: 9 - Allows users to securely access their personal accounts and interact with the platform.

Penalty: 8 - Users may become annoyed and stop using the platform if the login process is difficult or not working.

Cost: 4 - Relatively inexpensive given the feature's common use, which often results in the use of common authentication methods.

Risk: 7 - In the case that login security fails, there is a risk of unauthorized access.

4.2.2 Stimulus/Response Sequences

Stimulus: User attempts to log in to their account.

Response: The system processes the credentials and grants access to the user's account if the credentials are valid.

4.2.3 Functional Requirements

REQ-1: The system must provide input fields for the username and password on the login interface.

REQ-2: The system must verify the entered credentials.

REQ-3: The system must identify the user and establish a secure connection once they have successfully logged in.

REQ-4: The system must provide an error message if the login attempt fails.

REQ-5: The system must limit the number of failed logins attempts to prevent brute force attacks.

REQ-6: The system must direct the user to the main user interface upon successful registration.

4.3 Logout

4.3.1 Description and Priority

Description: The Logout feature allows users to securely end their session on the platform. It ensures that the user's account cannot be accessed by unauthorized users after the user has finished their session.

Priority: High

Benefit: 9 - Protects the user's account from unauthorized access after they have completed their session.

Penalty: 7 - Users may experience security issues if their sessions remain active after leaving the platform.

Cost: 3 - commonly low because it involves regular actions such as ending a session.

Risk: 6 - There is a possibility that user sessions will remain visible and open if the feature fails.

4.3.2 Stimulus/Response Sequences

Stimulus: The user initiates the logout process.

Response: The system returns the user to the login page to end the user's session and confirm that the logout was successful.

4.3.3 Functional Requirements

REQ-1: The system must provide a clearly visible and accessible logout option in the user interface.

REQ-2: The system must end the current user session when the user logs out.

REQ-3: The system must redirect the user to the login page stating that they have been successfully logged out.

REQ-4: The system must ensure that the user cannot navigate back to any authenticated session pages using browser back functionality after logging out.

4.4 Post Content

4.4.1 Description and Priority

Description: The Post Content feature allows users to share new content in the form of text and images, along with URLs to products related to the content. This feature is crucial for user interaction, enabling users to engage with the community by sharing personal ideas, images, and links to external products.

Priority: High

Benefit: 9 - Allows users to share relevant products and ideas, which increases user engagement and brings value to the social network.

Penalty: 7 - Platform engagement may decline if users are unable to exchange content efficiently.

Cost: 3 - Developing an efficient system that can handle text, image uploads, and URL sharing might be costly.

Risk: 6 - involves making sure content created by users meets with platform standards as well as monitoring external links, which contain risks.

4.4.2 Stimulus/Response Sequences

Stimulus: The user initiates the process of creating a new post by adding text, images, and the URL of the product.

Response: The system processes the content and presents it to the user's profile and the platform's feed.

4.4.3 Functional Requirements

REQ-1: The system must provide an interface that allows users to enter text and upload images.

REQ-2: The system must include a field for users to provide the product's URL.

REQ-3: The system must validate the format of the URL and ensure it is a valid link.

REQ-4: The system must securely store the text, image, and URL data and ensure that it is correctly displayed in posts.

REQ-5: The system must allow the user to preview their post.

REQ-6: The system must update the content feed in real time to display the new post.

4.5 View Profile

4.5.1 Description and Priority

Description: The View Profile feature allows users to view profiles of users, which include details such as username, profile picture, bio, and posted content. This feature is essential for user engagement and interaction with the community.

Priority: Medium

Benefit: 8 - Encourages user involvement as well as helps in building of community connections

Penalty: 5 - The inability to access profiles can reduce the platform's interactivity and accessibility, affecting user engagement.

Cost: 3 - Low, profile viewing is a standard feature that needs minimal data retrieval and display features.

Risk: 5 - The primary risks are the management of privacy and unauthorized data access.

4.5.2 Stimulus/Response Sequences

Stimulus: User selects an option to view another user's profile or their own.

Response: The system retrieves and displays the profile information.

4.5.3 Functional Requirements

REQ-1: The system must allow users to view their own profile information as well as other users' public profile information.

- REQ-2:** The system must display necessary profile information such as the username, profile picture, and bio.
- REQ-3:** The system must ensure that private information is not displayed.
- REQ-4:** The system must enable the display of a user's posted content within their profile view,
- REQ-5:** The system must ensure that all profile information is up to date and that any recent changes are displayed.
- REQ-6:** The system must update the content feed in real time to display the new post.

4.6 Edit Profile

4.6.1 Description and Priority

Description: The Edit Profile feature allows users to edit their profile information, such as their username, profile photo, bio, and inserting a web URL. This feature is critical for personalizing and maintaining up-to-date user information.

Priority: Medium

Benefit: 8 - Gives users the ability to personalize their profile, encouraging creativity and engagement with the community.

Penalty: 5 - The inability to access profiles can reduce the platform's interactivity and accessibility, affecting user engagement.

Cost: 3 - Low, profile viewing is a standard feature that needs minimal data retrieval and display features.

Risk: 4 - The primary risks are the management of privacy and unauthorized data access.

4.6.2 Stimulus/Response Sequences

Stimulus: User selects an option to view another user's profile or their own.

Response: The system retrieves and displays the profile information.

4.6.3 Functional Requirements

- REQ-1:** The system must allow users to view their own profile information as well as other users' public profile information.
- REQ-2:** The system must display necessary profile information such as the username, profile picture, and bio.
- REQ-3:** The system must ensure that private information is not displayed.

REQ-4: The system must enable the display of a user's posted content within their profile view.

REQ-5: The system must ensure that all profile information is up to date and that any recent changes are displayed.

REQ-6: The system must update the content feed in real time to display the new post.

4.7 Search

4.7.1 Description and Priority

Description: The Search feature allows users to find other users on the platform by searching for their usernames. This feature makes it easier to find and view other users' profiles, which improves connections and community interaction.

Priority: Medium

Benefit: 8 - Allows easy discovery of other users' profiles, allowing user connectivity and community engagement.

Penalty: 6 - Unsuitable search features may limit user interaction.

Cost: 5 - A moderate development effort is required to create an efficient search process and user interface.

Risk: 5 - There are only minor risks associated with ensuring the accuracy of search results.

4.7.2 Stimulus/Response Sequences

Stimulus: User enters a username or part of it into the search bar.

Response: The system processes the search query and displays a list of matching user profiles.

4.7.3 Functional Requirements

REQ-1: The system must provide a search bar for users to input username queries.

REQ-2: The system must accurately search for user profiles based on the provided username query.

REQ-3: The system must display search results in a list, showing usernames and profile thumbnails.

REQ-4: The system must ensure that only public profile information of users is shown in the search results.

REQ-5: The system must handle partial username matches and suggest relevant profiles.

REQ-6: The system must provide feedback to the user if no matches are found.

REQ-7: The system must allow users to access a user's profile directly from the search results.

4.8 Explore

4.8.1 Description and Priority

Description: The Explore feature provides users with a collected feed of content, including posts, images, and product URLs. This feature enhances user engagement by exposing them to a broader range of content and users.

Priority: High

Benefit: 9 - Increases user engagement and time spent on the site by providing a wide range of engaging content.

Penalty: 7 - Inefficient collection can lead to a poor user experience and lower engagement.

Cost: 6 - Moderate. It involves developing a system to efficiently gather and display content from all users.

Risk: 6 - Potential risks include receiving wrong content and managing an enormous amount of data.

4.8.2 Stimulus/Response Sequences

Stimulus: The user navigates to the Explore section of the platform.

Response: The system shows a feed of content posted by all platform users, allowing for general content discovery.

4.8.3 Functional Requirements

REQ-1: The system must provide an Explore section that is reachable from the main user interface.

REQ-2: The system must continually update the Explore feed to keep up with changing trends and user interactions.

REQ-3: The system must allow users to interact with the content in the Explore feed, such as liking and following.

REQ-4: The system must effectively manage a high volume of content and user interactions, ensuring fast and accurate feed updates.

4.9 Like Post

4.9.1 Description and Priority

Description: The like feature must effectively manage a high volume of content and user interactions, ensuring fast and accurate feed updates. The Like Post feature allows users to express their satisfaction or support for a post. This interaction is a simple yet powerful way for users to interact with content, contributing to the platform.

Priority: Medium

Benefit: 7 - Enhances user interaction and provides feedback to content creators to encourage more active participation and content creation.

Penalty: 4 - The disadvantages or issues with this feature might mean that there are less chances for user input and involvement.

Cost: 3 - Relatively low, as it involves a simple user interface element and internal functionality to track and count likes.

Risk: 2 - This feature has a minimal risk, mostly in terms of making sure that likes are recorded and shown accurately.

4.9.2 Stimulus/Response Sequences

Stimulus: When a user clicks the like button next to a post, they are choosing to like it.

Response: The system stores the user's like, updates the like count on the post, and provides quick visual feedback to the user.

4.9.3 Functional Requirements

REQ-1: The system must provide a like button on each post.

REQ-2: The system must increment the like count of a post when a user clicks the like button.

REQ-3: The system must provide quick visual feedback to the user after liking a post.

REQ-4: The system must ensure that each user can only like a post once in order to prevent multiple counts from the same user.

REQ-5: The system must update the posts like count in real-time.

REQ-6: The system must maintain its accuracy and reliability of like counts.

4.10 Follow

4.10.1 Description and Priority

Description: The Follow feature allows users to follow the profiles of other users. This feature allows them to receive updates about the following user's activities, posts, and interactions, creating a connected and interactive community.

Priority: High

Benefit: 8 - Encourages a more dynamic and interactive community by significantly enhancing user engagement and connectivity.

Penalty: 6 - A lack of an efficient follow system may limit user interaction and reduce the platform's social connectivity.

Cost: 4 - A moderate amount of development effort is required to implement the following functionality, notifications, and updates structure.

Risk: 3 - There are only minor risks, which are mainly related to ensuring privacy are respected and managing notification.

4.10.2 Stimulus/Response Sequences

Stimulus: A user chooses to follow another user by clicking the follow button.

Response: The system records the follow action, updates the follower count, and starts providing updates from the followed user to the follower.

4.10.3 Functional Requirements

REQ-1: The system must provide a follow button.

REQ-2: The system must update the follower count of a user's profile when another user follows them.

REQ-3: The system must provide quick visual confirmation to the user when they follow someone.

REQ-4: The system must start providing updates and notifications to the follower about the followed user's activities on the platform.

REQ-5: The system must be scalable so that it can handle a large number of follow actions and related updates without reducing performance.

4.11 Unfollow

4.11.1 Description and Priority

Description: The Unfollow feature allows users to discontinue following other users profiles. This action stops the user from receiving updates about the activities and posts of the unfollowed user, providing control over their content feed and connections.

Priority: High

Benefit: 6 - Provides users with the flexibility and control to choose their own content feed and connections, thereby bettering their platform experience.

Penalty: 4 - An ineffective unfollowing process could cause disorganized feeds and reduced user satisfaction.

Cost: 3 - relatively low since it requires changing the follow system's current features to undo the follow action.

Risk: 2 - Minimal risk, mostly associated with making sure the unfollow process runs smoothly and without errors.

4.11.2 Stimulus/Response Sequences

Stimulus: A user chooses to unfollow another user by clicking the unfollow button.

Response: The system processes the unfollow action, updates the follower count, and discontinues sending updates to the follower from the unfollowed user.

4.11.3 Functional Requirements

REQ-1: The system must provide an unfollow button that the current user is following.

REQ-2: The system must decrement the follower count when another user unfollows them.

REQ-3: The system must provide quick visual confirmation to the user when they unfollow someone.

REQ-4: The system must stop providing updates to the unfollower about the unfollowed user's activities.

REQ-5: The system must handle the unfollow action efficiently, ensuring that the unfollowed user's content updates stop immediately.

REQ-6: The system must update the user's profile and feed preferences to show the change in their following list.

4.12 Share Post

4.12.1 Description and Priority

Description: The Share Post feature allows users to share platform posts to external social networks. This feature extends content distribution beyond the platform, increasing the post's reach and visibility across various social media.

Priority: Medium

Benefit: 5 - Enhances content view and platform existence in other social networks, which may draw new users.

Penalty: 4 - Limited external sharing features may limit the platform's exposure and reduce content spreading outside the platform.

Cost: 4 - A moderate development effort is required to integrate sharing features with various external social networks

Risk: 4 - Involves keeping an eye on how shared content works with various social networks

4.12.2 Stimulus/Response Sequences

Stimulus: A user chooses which external social networks to share a post on.

Response: The system presents sharing options for different social networks and processes the user's choice to share the content externally

4.12.3 Functional Requirements

REQ-1: The system must provide a share button for each post for external sharing.

REQ-2: The system must offer a selection of popular social networks to which users can share posts.

REQ-3: The system must generate a shareable link social network selected.

REQ-4: The system must ensure that the shared content follows the social network's formatting and content standards.

REQ-5: The system must provide the user with quick visual feedback after they choose to share a post externally.

4.13 Comment Post

4.13.1 Description and Priority

Description: The Comment Post feature allows users to add comments to posts made by others on the platform. This feature encourages user interaction, discussion, and engagement with the community by allowing users to express their opinions, ask questions, or provide feedback on posted content.

Priority: High

Benefit: 9 - It is essential for increasing user engagement, encouraging community discussions, and enhancing content with different points of view.

Penalty: 7 - A lack of effective commenting could significantly reduce user interaction and engagement with content.

Cost: 5 - A light amount of development effort is required for a commenting system that is simple to use, scalable, and capable of handling large amounts of data.

Risk: 6 - Risks include managing offensive remarks, ensuring that users follow content moderation policies, and maintaining a respectful user interaction environment.

4.13.2 Stimulus/Response Sequences

Stimulus: A user decides to comment on a post and submits their comment.

Response: The system processes and displays the comment under the post, making it visible to other users.

4.13.3 Functional Requirements

REQ-1: The system must provide a comment interface on each post, allowing users to enter and submit comments.

REQ-2: The system must allow users to view all comments on a post, with options to expand/collapse lengthy comment threads.

REQ-3: The system must provide notifications to post creator when new comments are added.

REQ-4: The system must ensure that comments are loaded quickly and responsively, even on posts with a large number of comments.

REQ-5: The system must provide the user with quick visual feedback after they choose to share a post externally.

4.14 Delete Post

4.14.1 Description and Priority

Description: The Delete Post feature allows users to permanently delete their own posts from the platform. This functionality is essential for giving users control over their content.

Priority: High

Benefit: 8 - Provides content management abilities to users, increasing their sense of control and satisfaction with the platform.

Penalty: 7 - Users may become frustrated with their inability to manage their posted content if there is no efficient deletion process, affecting their experience.

Cost: 3 - Generally low, as it involves adding a deletion option and backend logic to remove content.

Risk: 5 - Risks include ensuring that the deletion process is permanent and does not affect other unrelated data.

4.14.2 Stimulus/Response Sequences

Stimulus: A user decides to delete one of their posts and initiates the delete action.

Response: The system processes the request, permanently removes the post, and updates the user interface to reflect the deletion.

4.14.3 Functional Requirements

REQ-1: The system must provide a delete option for users on their own posts.

REQ-2: The system must permanently remove the post and all associated data

REQ-3: [00] The system must update the user interface immediately to reflect the removal of the post.

REQ-4: The system must ensure that the deletion process is secure and does not affect other user data.

REQ-5: The system must efficiently handle the deletion process while ensuring that it does not negatively impact system performance.

5. Other Nonfunctional Requirements

The following are the basic nonfunctional requirements for the system to fulfill. For readability, they have been categorized into performance, safety, and security based.

5.1 Performance Requirements

Scalability:

Description: The system should automatically scale resources to meet the demands of an increasing number of users, up to 1,000 users at once.

Rationale: To ensure that the system can handle growth without a decrease in performance.

Fit Criterion: The system should automatically scale within 5 minutes when the user load increases by 50% above average increase usage.

5.2 Safety Requirements

Data Integrity:

Description: The system should ensure verification processes to prevent data corruption.

Rationale: To maintain the accuracy and reliability of user data.

Fit Criterion: Data corruption problems shouldn't go above 0.01% of all transactions.

5.3 Security Requirements

Authentication:

Description: The system shall implement secure authentication for users using email and password.

Rationale: To ensure that user accounts are protected by strong authentication processes.

Fit Criterion: The system should log failed login attempts and alert users of repeated unsuccessful attempts to prevent attacks.

Data Access:

Description: The system must enforce strict data access rules, ensuring that users can only gain access to and change their own data.

Rationale: To ensure that users' private data remains confidential and is not exposed to other users.

Fit Criterion: The system must check itself to make sure that only the right people can see or change information based on their roles.

5.4 Software Quality Attributes

Maintainability:

Description: The system should be built to make it possible for simple updates and maintenance with minimal interruptions.

Rationale: The ability to quickly deploy updates is essential for responding to user needs as well as fixing issues.

Fit Criterion: The system must support zero-downtime quick fixes deployments and major updates with no more than few hours of scheduled downtime.

Usability:

Description: The system should offer a user-friendly interface that allows users to navigate and perform core actions such as posting, searching, and profile editing intuitively.

Rationale: A clear and simple-to-use user interface is necessary for usage and engagement.

Fit Criterion: User testing should show that at least 95% of participants can complete core actions without assistance.

Reliability

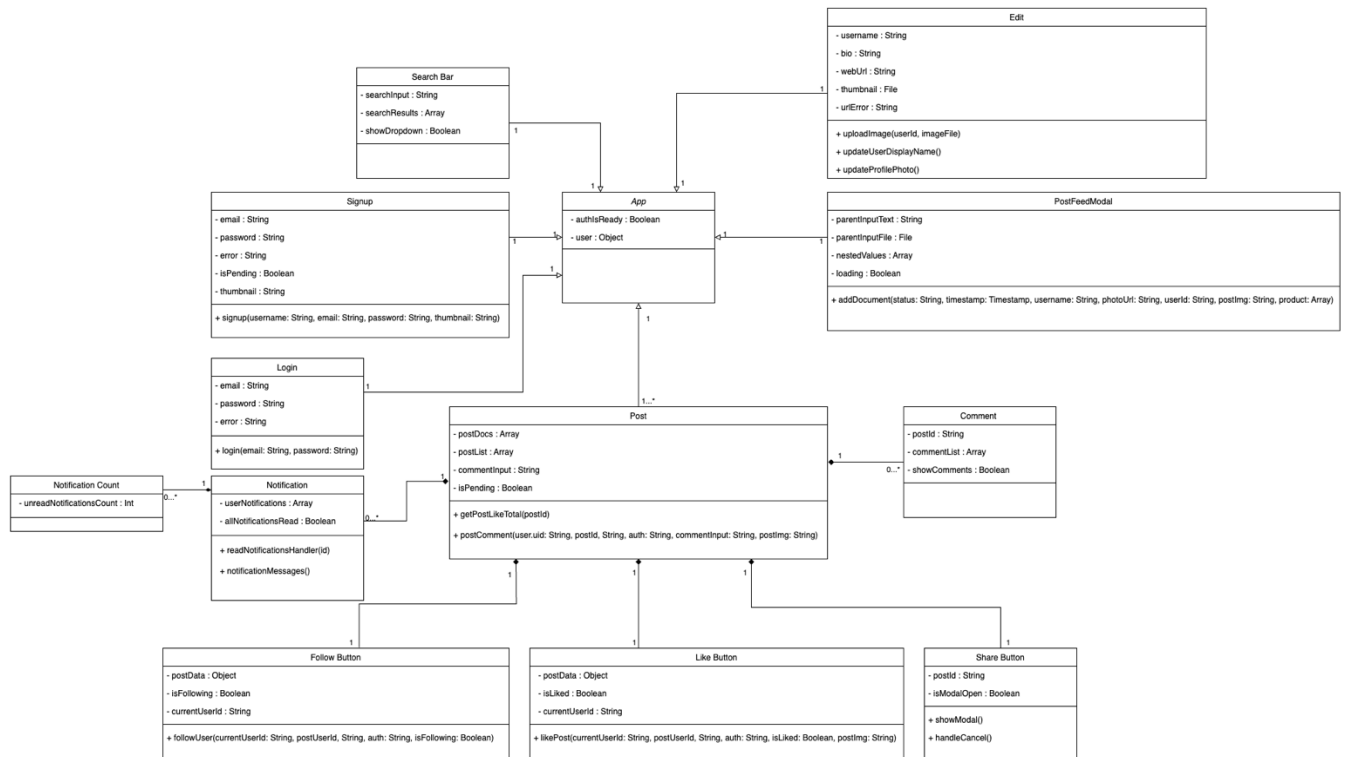
Description: The system should be reliable, with minimal unexpected downtime or errors.

Rationale: Reliability ensures that users have consistent access and a positive experience.

Fit Criterion: The application should have an uptime of 99.9%, with real-time monitoring to detect and address issues as soon as they appear.

Appendix B: Analysis Models

Class Diagram:



Sequence Diagram:

