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Assignment # 4

CS322 - SC - Software Construction

**─** (Case Study # 4)

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**Submission Date:** 25-03-2024 09:00 AM

Signature Page

Quaid e Azam University

Department of Computer Science

**Social Platform Case Study**

The submitted document titled “Social Platform” is authentic work submitted by Awais Ali ( 04072212008 ), Hania Naeem ( 04072113009 ), Ghulam Anwar ( 04072013029 ) conducted at Quaid-I-Azam University, Islamabad. The document strictly follows the IEEE guidelines and ensures secure coding practices. All data from any source is referenced in the documentation. This document is not submitted to any platform but is a genuine combined effort of all our team members.

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Sign of instructor\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Change of History**

**Version 1.0** – Change in usecase diagram

**Preface**

In an era where digital platforms dominate news consumption, the development of a dedicated social news platform is imperative. This case study embarks on crafting such a platform, aimed at ordinary web users seeking authentic news experiences. Through user ratings, the platform strives to distinguish credible sources from misinformation, empowering users with informed choices. With robust search functionalities, users can navigate news articles by date, location, category, or content, tailoring their consumption to personal preferences. Additionally, the platform emphasizes user engagement, offering features like registration, multimedia news posting, commenting, favoriting, and user following, fostering a vibrant community. Ultimately, this platform endeavors to reshape news dissemination, fostering transparency, accountability, and trust in the digital news landscape.

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# Summary

The project aims to create a social news platform where users can post and read news. News authenticity is determined by user ratings, with interesting content receiving higher ratings and fake news being downvoted. Users can search for news based on various criteria, register, post news with multimedia, comment, mark favorites, and follow other users for updates. Overall, the platform encourages authentic news sharing and user engagement.

**1.Introduction:**

**1.1 Purpose:**

(1.1.1) Purpose:

The purpose of this Software Requirements Specification (SRS) document is to provide a comprehensive understanding of the News Vine, its functionalities, and the requirements for its development. This document serves as a detailed guide for software developers, designers, project managers, and stakeholders involved in the development and implementation of the News Vine.

(1.1.2) Audience:

**1.Project Managers:** Individuals overseeing the development process and project timelines.

**2.Software developers:** Those responsible for designing, coding, and testing the Course Evaluation System.

**3.System Designers:** Professionals responsible for architecting the system’s structure.

**4.Testing Team:** Those responsible for testing and Quality Assurance.

**1.2 Scope:**

(1.2.1) Product to be produced:

The software product to be produced is the” News Vine”. The project aims to create a social news platform where users can post and read news. News authenticity is determined by user ratings, with interesting content receiving higher ratings and fake news being downvoted. Users can search for news based on various criteria, register, post news with multimedia, comment, mark favorites, and follow other users for updates. Overall, the platform encourages authentic news sharing and user engagement.

(1.2.2) Functionality:

**1.News Posting:** Users can submit news articles, including multimedia content such as images and videos.

**2.News Consumption:** Users can browse and read news articles posted by others.

**3.Authentication:** News authenticity is determined through user ratings, promoting credible information sharing.

4.**Interaction**: Users can comment on news articles, mark favorites, and follow other users for updates.

**5.Search and Filtering:** Users can search for news based on criteria like posting date, city, category, and content.

**6.User Management:** Administrators oversee user registration, profile management, and content moderation.

**1.3 Definitions, acronyms, and abbreviations:**

|  |  |
| --- | --- |
| **Terms** | **Descriptions** |
| SRS | Software Requirement Specifications: |
| UAT | User Acceptance Test |
| PMP | Project Management Plan |
| PMP | Quaid-e-Azam University |
| Java | Computer-based Programming Language |

**1.4 References**

IEEE Std 830 - 1998

Code-complete-2nd-edition by Steve McConnell.

**2. Overall Description:**

**2.1 Product Perspective:** This social platform for sharing news aims to provide an interactive environment for users to post, read, and engage with news content. It operates as a standalone system accessible through web browsers.

**2.1.1 System Interfaces:** The system interfaces with web browsers for user interaction and data exchange. It may integrate with external APIs for additional functionalities such as social media sharing or authentication.

**2.1.2 User Interfaces:** The user interface includes web pages for viewing news, posting news, commenting, searching, and user profiles. It should be spontaneous, responsive, and accessible across different devices.

**2.1.3 Hardware Interfaces:** The system operates on standard web servers and interacts with client devices through web browsers. There are no specific hardware requirements beyond those typical for web applications.

**2.1.4 Software Interfaces:** The system may utilize databases MySQL for storing user data, news content, and ratings.

**2.1.5 Communications Interfaces:** Communication occurs over HTTP/HTTPS protocols between the client's web browser and the server hosting the application. Secure communication protocols should be implemented to ensure data privacy and integrity.

**2.1.6 Memory Constraints:** Memory constraints will depend on the hosting environment and database requirements. The system should be designed to efficiently handle memory usage to ensure scalability and performance.

**2.1.7 Operations:** The system supports operations such as posting news, reading news, commenting, searching, following users, and rating news authenticity. These operations should be performed seamlessly and efficiently to provide a smooth user experience.

**2.1.8 Site Adaptation Requirements:** The system should be adaptable to different screen sizes and resolutions to provide a consistent user experience across various devices. It should also support localization for different languages and regions.

**2.2 Product Functions:**

* User Registration: Allow users to create accounts and provide necessary information.
* Posting News: Enable users to post news articles, including text, images, and videos.
* Rating News: Allow users to rate news articles based on authenticity.
* Commenting: Enable users to comment on news articles.
* Searching: Provide search functionality to find news based on various criteria.
* Following Users: Allow users to follow other users to see their published news.
* Marking Favorites: Allow users to mark news articles as favorites for easy access.

**2.3 User Characteristics:** Users of the platform are ordinary web users with varying levels of technological proficiency. They may range from casual news readers to active contributors who frequently post news articles.

**2.4 Constraints:**

* Compliance with privacy regulations regarding user data handling.
* Use of Java Programming Language
* Implementation of measures to prevent the spread of fake news and misinformation.
* Scalability to handle a potentially large user base and news content.
* Compatibility with modern web browsers and mobile devices.

**2.5 Assumptions and Dependencies:**

* Assumption: Users will provide accurate information during the registration process.
* Dependency: Relies on external services for authentication and potentially for social media integration.
* Assumption: Users will actively engage in rating news to establish authenticity.
* Dependency: Relies on a stable internet connection for accessing the platform and its functionalities.

**3. Specific Requirements**

**3.1. External Interfaces**

This section provides a detailed description of all inputs into and outputs from the Course Evaluation System. Each interface is defined with the following attributes:

**3.1.1. User Interface(UI):**

* **Name of Item:** User Interface(UI)
* **Purpose:** To facilitate user input , display output and interaction betweenuser and the system
* **Source of input and destination of output:** The UI serves as both
* **Valid range:** As specified by the stystem
* **Units of Measures:** N/A
* **Timing:** Responds to user inputs in a timely manner
* **Releationship:** The UI interacts with various inputs and outputs
* **Data formats:** text files, tables, charts, graphs, images, videos
* **Command Format:** button clicks, keyboard shortcuts
* **End Message:** must display end messages to inform users

**3.1.2. User Registration and Authentication:**

* **Name of Item:** User Registration and Authentication
* **Purpose:** To allow users to create more acounts and verify them
* **Source of input and destination of output:** Input: User provide information. Output: Confirmation message
* **Valid range:** must follow username strength and password rules
* **Units of Measures:** N/A
* **Timing:** The process should be efficient
* **Releationship:** Inputs:User inputs are used to create user profiles and other things. Outputs: Confirmation message
* **Data formats:** Should follow specified format
* **Command Format:** Mostly clicking(e.g: create user acount)
* **End Message:** Receive confirmation message(Registration Successful)

**3.1.3. Content Delivery Network(CDN):**

* **Name of Item:** Content Delivery Network(CDN)
* **Purpose:** To optimizes the delivery of user-generated content, such as images, videos, and other content
* **Source of input and destination of output:** Input: Upload of users’s content. Output: Optimized content delivered to users' devices
* **Valid range:** Acceptable file formats and sizes
* **Units of Measures:** N/A
* **Timing:** CDN optimizes content delivery by minimizing latency and load times,
* **Releationship:** Inputs: User’s content upload to the system Outputs: Optimized content delivered to users' devices
* **Data formats:** images (e.g., JPEG, PNG), videos (e.g., MP4, AVI),
* **Command Format:** Delivery command are mostly automated
* **End Message:** N/A

**3.1.4. Social Media Integration:**

* **Name of Item:** Social Media Integeration
* **Purpose:** Integration with social media platforms for sharing news
* **Source of input and destination of output:** Input: Shared news articles, user authentication data. Output: Posted news articles on social media platforms.
* **Valid range:** Compliance with social media API usage policies and data privacy regulations.
* **Units of Measures:** N/A
* **Timing:** Real-time interaction during news sharing and user authentication.
* **Releationship**: Enhances platform reach and user engagement through social media channels.
* **Data formats:** JSON, social media API-specific formats (e.g., Graph API for Facebook).
* **Command Format:** HTTP requests, API calls for posting content and authentication.
* **End Message:** N/A

**3.1.5. Analytics and Monitoring Tools Integration:**

* **Name of Item:** Analytics and Monitoring Tools Integration:
* **Purpose:** Integration with analytics and monitoring services for tracking user behavior.
* **Source of input and destination of output:** Input: User Interaction data. Output: Analytical reports,
* **Valid range:** Real Time Monitoring
* **Units of Measures:** N/A
* **Timing**: Continuous monitoring and periodic reporting.
* **Releationship**: Identifies issues and and enhance user experience
* **Data formats:** JSON, analytics data formats
* **Command Format:** API requests,
* **End Message:** N/A

**3.1.6. Payment Gateway Integeration:**

* **Name of Item:** Payment Gateway Integeration
* **Purpose:** To process payments and secure transactions
* **Source of input and destination of output:** Input: Payment requests. Output: Payment processing results.
* **Valid range:** Secure handling of payment data.
* **Units of Measures:** N/A
* **Timing:** Real-time payment processing.
* **Releationship**: Enable other features acess
* **Data formats:** Payment transaction formats.
* **Command Format:** API requests for payment processing
* **End Message:** N/A

**3.1.7. Email and Notification Services Integration:**

* **Name of Item:** Email and Notification Services Integration
* **Purpose:** To transfer important emails to users.
* **Source of input and destination of output:** Input: Email Content. Output: Sent Emails
* **Valid range:** Ensuring email deliverability.
* **Units of Measures:** N/A
* **Timing:** Real-time email delivery.
* **Releationship**: Enhance user communication and experience.
* **Data formats:** HTML, Email Formats.
* **Command Format:** API calls for email delivery.
* **End Message:** N/A

**3.2. Functional Requirements**

Functional requirements should define the fundamental actions that must take place in the software in accepting and processing the inputs and in processing and generating the outputs. These are generally listed as “shall” statements starting with “The system shall...”

a) **Validity checks on the inputs:**

* The system shall validate user inputs for user registration, including username, email address, password, and profile information, to ensure they meet specified criteria (e.g., valid email format, password strength requirements).
* Validity checks shall include checking for uniqueness of usernames and email addresses to prevent duplicate registrations.

**b)Exact sequence of operation**

* The system shall follow a predefined sequence of operations for user registration, which includes:

1. User provides registration information (username, email, password, profile details).
2. The system validates input data.
3. If inputs are valid, the system creates a new user account and stores registration data.
4. Confirmation message is displayed to the user upon successful registration.

**c)Respnse to abnormal situations**

1. **Overflow:**

The system handle the situation when user enter the input data outside the limit.

1. **Communication facilities:**
   * The system shall send email services for registration purposes and other tasks during communication.
   * The system shall notify for delayed notification in case unavailability of email services.
2. **Error Handling and Recovery:**

* The system shall recover error handling such as database issues, servor errors and registration issues and display error message.

**d) Effects of parameters**

* The system shall consider configurable parameters such as password complexity rules, email verification settings, and account activation policies.
* Changes to parameters (e.g., updating password strength requirements) shall be reflected immediately and enforced for new registrations and password updates.

**e)Relationship of outputs to inputs**

**1. Input/Output sequences:**

* The system shall generate messages in responds of users’s inputs and during registration of the users.
* When registration is done, the system shall redirect users to the login page.

**2. Formulas for input to output conversion:**

* To create the tokens for email verification, the system shall use cryptographic algorithms.
* The conversion of user’s data to database it should follow predefined data models.

**3.3. Performance Requirement**

1. **Static Numerical Requirements:**

a) The system shall support a 1000 terminals at a same time.

b) The system shall support a minimum of 50,000 users interacting with the plateform.

c). The system shall handle a maximum of 500 news posts per minute, including text, images, and videos.

1. **Dynamic Numerical Requirements:**

a) The system shall process a minimum of 200 user registrations per minute during normal workload conditions.

b) The system shall process a minimum of 1000 search queries per minute during peak workload conditions.

c) The system shall handle a maximum of 10,000 comments and interactions (likes, shares) per hour on posted news articles.

* 1. **Logical Database Requirements**
  2. **Types of information used by the various functions:**
* User Registration Function: (username, email, password etc.)
* News Posting Function: (News title, content, category,tags, author ID,images,videos etc.)
* Commenting Function: (Comment content, user ID etc.)
  1. **Frequency of use:**

User profile informatiom and new articles and comments sections frequently used.

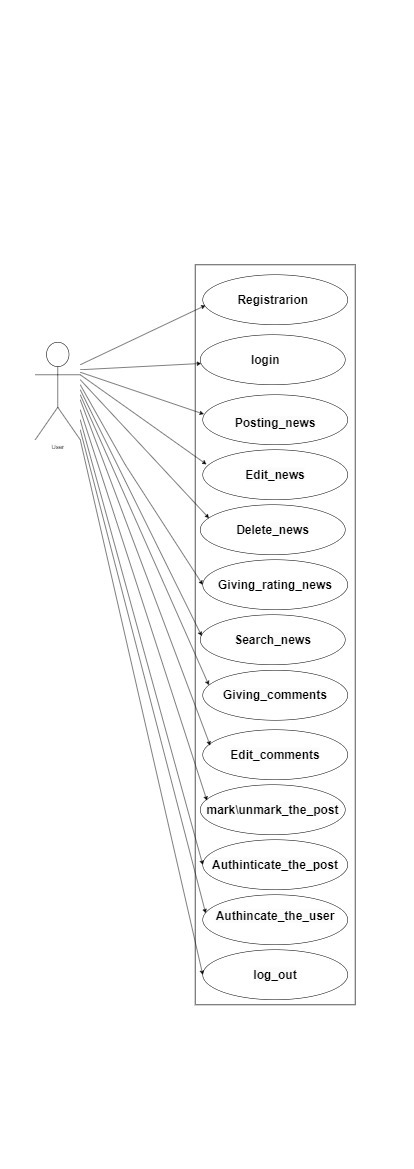
* 1. **Accesibility capabilities:**
* Administrator have full access to every kind of data.
* Ordinary users have limited access related to their acount.
  1. **Data entities and their relationships:**
* User entity with attributes like user ID (primary key), username, email (unique), password (hashed), and profile details.
* News entity with attributes like news ID (primary key), title, content, category, tags, timestamp, author ID (foreign key), and multimedia paths.
* Comment entity with attributes like comment ID (primary key), user ID (foreign key), news ID (foreign key), content, timestamp.

**e)Integrity Constraints:**

* Use User ID as the primary key.
* Foreign key constraint is also used.
  1. **Non-Functional Requirements**
  2. **Performance:**
     + The system shall have less than 2 second average responses time.
     + The shall support a over 10,000 users at a time without degradation of performance.
     + The system shall hold more than 1,000 posts at the peak time
  3. **Security:**
     + Users password shall be stored.
     + The system shall ensures that only authorized users can perform administrative functions.
  4. **Reliability:**
     + The system shall ensure continuous availability of users.
     + To prevent data loss, automated backup is initated after every 24 hours.
  5. **Usability:**
     + The user interface shall be user-friendly.
     + The system shall use tooltip and guidance interface for the understanding of the user.
  6. **Compatibility:**
     + The system shall be compatible with the major web browsers and (Android,iOS).
     + The system shall support multiple languages.

**4. Appendix**

## Appendix A: Use Case Model



### Name: Hania Naeem

### Registration number: 04072212008

## Use cases:

UC-1: Registration

|  |  |
| --- | --- |
| **Use Case ID** | UC-1 |
| **Use Case Name** | Registration |
| **Primary Actor** | User |
| **Input** | Username, Password, Email, Profile Information |
| **Output** | Registered User Account |
| **Stake Holder and Interests** | Users want to join the platform, Platform owners want to increase user base. |
| **Pre-conditions** | User does not have an existing account with the platform. |
| **Post-conditions** | User's account is created. |
| **Basic Flow** | 1. User navigates to the registration page. 2. User fills out the registration form with required details. 3. User submits the form. 4. System validates the information. 5. If information is valid, system creates a new account for the user. 6. User receives confirmation of successful registration. |
| **Alternative flow** | 4a. If information is invalid:   * User is prompted to correct the invalid information. |
| **Special Requirements** | Captcha to prevent bots, email verification for account activation. |
| **Technology and Data Variation List** | Option for social media account registration. |
| **Frequency** | Occurs each time a new user wants to join the platform. |

UC-2: Log in

|  |  |
| --- | --- |
| **Use Case ID** | UC-2 |
| **Use Case Name** | Log in |
| **Primary Actor** | User |
| **Input** | Username, Password |
| **Output** | Logged In User Session |
| **Stake Holder and Interests** | * Users want secure access to their accounts * Platform owners want to ensure proper authentication. |
| **Pre-conditions** | User account exists. |
| **Post-conditions** | User gains access to their account. |
| **Basic Flow** | 1. User navigates to the login page. 2. User inputs their username and password. 3. System verifies the credentials. 4. If credentials are valid, the system creates a session for the user. 5. User gains access to their account. |
| **Alternative flow** | 3a. If credentials are invalid:   * User is prompted to re-enter their credentials. |
| **Special Requirements** | Secure password handling, encryption for user data. |
| **Technology and Data Variation List** | Different authentication methods (e.g., email verification, two-factor authentication). |
| **Frequency** | Occurs each time a user wants to access their account. |

UC-3: Search\_news

|  |  |
| --- | --- |
| **Use Case ID** | UC-3 |
| **Use Case Name** | Search\_news |
| **Primary Actor** | User |
| **Input** | Search Query (posted date, city, category, content, etc.) |
| **Output** | Relevant News Articles |
| **Stake Holder and Interests** | * Users want to find specific news * Platform owners want to provide efficient search functionality. |
| **Pre-conditions** | User is on the platform. |
| **Post-conditions** | User finds relevant news articles. |
| **Basic Flow** | 1. User navigates to the search bar. 2. User enters their search query. 3. System processes the query. 4. System retrieves relevant news articles based on the query. 5. User is presented with a list of relevant news articles. |
| **Alternative flow** | 4a. If no relevant articles are found:   * User is notified that no articles matching the query were found. |
| **Special Requirements** | Advanced search filters, real-time indexing of news articles. |
| **Technology and Data Variation List** | Natural language processing for search query understanding. |
| **Frequency** | Occurs whenever a user wants to search for news. |

UC-4: Giving\_comments

|  |  |
| --- | --- |
| **Use Case ID** | UC-4 |
| **Use Case Name** | Giving\_comments |
| **Primary Actor** | User |
| **Input** | Comment text, News article ID |
| **Output** | Comment posted successfully |
| **Stake Holder and Interests** | Users want to engage with news articles, Platform owners want to encourage user interaction and feedback. |
| **Pre-conditions** | User is logged in and viewing a news article. |
| **Post-conditions** | Comment is posted on the news article. |
| **Basic Flow** | 1. User reads a news article and decides to leave a comment. 2. User clicks on the comment section below the news article. 3. User types their comment in the provided text box. 4. User submits the comment. 5. System validates the comment text. 6. If the comment is valid, the system posts it below the news article. |
| **Alternative flow** | 5a. If the comment is empty or contains invalid characters:   * + User is prompted to correct the comment before submission.   6a. If the system encounters an error while posting the comment:   * + User is notified that the comment couldn't be posted, and the system logs the error for investigation. |
| **Special Requirements** | * Profanity filter to moderate comments. * Limit on comment length. |
| **Technology and Data Variation List** | 1. Real-time updating of comments section. 2. Option for users to edit or delete their comments. |
| **Frequency** | Occurs whenever a user wants to comment on a news article. |

### Name: Awais Ali

### Registration number: 04072113009

UC-1:Posting News

|  |  |
| --- | --- |
| **Use Case ID** | UC-1 |
| **Use Case Name** | Posting News |
| **Primary Actor** | User |
| **Input** | Post is the input. |
| **Output** | News is posted on to the platform. |
| **Stake Holder and Interests** | 1. User: Interested in posting news. 2. Platform Administrators: Interested in preventing abuse of the posting news system. |
| **Pre-conditions** | Users must be logged in. |
| **Post-conditions** | User’s posts is added to the system. |
| **Basic Flow** | 1.users clicks on the post interface.  2. selects the posts.  3. Put the post on to the system. |
| **Alternative flow** | 1. User retracts their posting and submits a different one. |
| **Special Requirements** | Prevention of spam posting. |
| **Technology and Data Variation List** | 1.Database for storing specific user’s posts.  2.Algorithm for calculating post specifications. |
| **Frequency** | 1.Many times per day |
|  |  |

UC-2: Edit News

|  |  |
| --- | --- |
| **Use Case ID** | UC-2 |
| **Use Case Name** | Edit News |
| **Primary Actor** | User |
| **Input** | Clicks on the edit button on the system. |
| **Output** | Post is edited. |
| **Stake Holder and Interests** | 1. User: Interested in editing news. 2. Platform Administrators: Interested in preventing abuse of the posting news system. |
| **Pre-conditions** | Users must be logged in. |
| **Post-conditions** | Users posts is edited to the system. |
| **Basic Flow** | 1.users clicks on the edit interface.  2. selects the posts.  3. Edit the post on to the system. |
| **Alternative flow** | User retracts their posting and submits a different one. |
| **Special Requirements** | Prevention of spam posting and editing. |
| **Technology and Data Variation List** | 1.Database for storing specific user’s posts.  2.Algorithm for calculating post specifications. |
| **Frequency** | Many times per day |

UC-3: Delete News

|  |  |
| --- | --- |
| **Use Case ID** | UC-3 |
| **Use Case Name** | Delete News |
| **Primary Actor** | User |
| **Input** | Clicks on the delete button on the system. |
| **Output** | Post is deleted. |
| **Stake Holder and Interests** | 1. User: Interested in deleting news. 2. Platform Administrators: Interested in preventing abuse of the posting news system. |
| **Pre-conditions** | Users must be logged in. |
| **Post-conditions** | User’s posts is deleted at the system. |
| **Basic Flow** | 1.users clicks on the delete interface.  2. selects the posts.  3.delete the post on to the system. |
| **Alternative flow** | User retracts their posting and submits a different one. |
| **Special Requirements** | Prevention of spam posting and deleting. |
| **Technology and Data Variation List** | 1.Database for storing specific user’s posts.  2.Algorithm for calculating post specifications. |
| **Frequency** | Many times per day |

UC-4: Edit Comments

|  |  |
| --- | --- |
| **Use Case ID** | UC-4 |
| **Use Case Name** | Edit Comments |
| **Primary Actor** | User |
| **Input** | Clicks on the edit interface below the comment section of the system. |
| **Output** | Comment is edited successfully. |
| **Stake Holder and Interests** | 1. User: Interested in editing comment. 2. Platform Administrators: Gave response of the edited comment. |
| **Pre-conditions** | 1 Users must be logged in.  2 Comment is already entered or posted. |
| **Post-conditions** | User’s comment is edited to the system. |
| **Basic Flow** | 1.users clicks on the edit interface.  2. selects the comment.  3. Edit the comment on to the system. |
| **Alternative flow** | User retracts their posting and submits a different one. |
| **Special Requirements** | Prevention of spam posting and editing. |
| **Technology and Data Variation List** | 1.Database for storing specific user’s posts.  2.Algorithm for calculating post specifications. |
| **Frequency** | Many times per day |

### Name: Ghulam Anwar

### Registration number: 04072013029

UC-1: mark/unmark\_the\_post.

|  |  |
| --- | --- |
| **Use Case ID** | UC-1 |
| **Use Case Name** | mark/unmark\_the\_post. |
| **Primary Actor** | User |
| **Input** | Post is the input. |
| **Output** | News is marked or unmarked. |
| **Stake Holder and Interests** | 1. User: Interested in mark and unmark the news. 2. Platform Administrators: Interested in preventing abuse of the sposting news system. |
| **Pre-conditions** | 1. User must have registered an account. |
| **Post-conditions** | 1.Users posts marked or unmarked to the system. |
| **Basic Flow** | 1.users clicks on the post interface.  2. selects the posts.  3. Select the mark\unmark option. |
| **Alternative flow** | 1. User retracts their posting and submits a different one. |
| **Special Requirements** | Prevention of spam posting. |
| **Technology and Data Variation List** | 1.Database for storing specific user’s posts.  2.Algorithm for calculating post specifications. |
| **Frequency** | 1. Many times, per day |
|  |  |

UC-2: Authenticate\_the\_post.

|  |  |
| --- | --- |
| **Use Case ID** | UC-2 |
| **Use Case Name** | Authenticate\_the\_post. |
| **Primary Actor** | User and platform Administration. |
| **Input** | Clicks on the authenticate the post button on the system. |
| **Output** | Post is authenticated. |
| **Stake Holder and Interests** | 1. User: Interested in authenticate the post. 2. Platform Administrators: Interested in authenticate the post based on ratings/stars. |
| **Pre-conditions** | 1. Users must be logged in. |
| **Post-conditions** | 1.Users posts is authenticated to the system. |
| **Basic Flow** | 1.users clicks on the authenticate interface.  2. selects the posts.  3. Authenticate the post on to the system. |
| **Alternative flow** | 1. User retracts their ratings and submits a different one. |
| **Special Requirements** | Prevention of spam authentication. |
| **Technology and Data Variation List** | 1.Database for storing specific user’s posts.  2.Algorithm for calculating post specifications. |
| **Frequency** | 1.Many times per day |

UC-3: Authenticate\_the\_user.

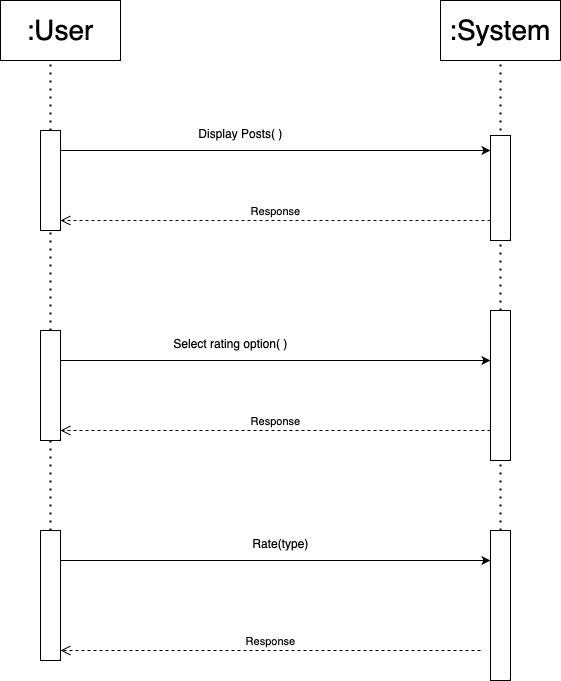
|  |  |
| --- | --- |
| **Use Case ID** | UC-3 |
| **Use Case Name** | Authenticate\_the\_user |
| **Primary Actor** | User |
| **Input** | Clicks on the authenticate the user button on the system. |
| **Output** | User is authenticated. |
| **Stake Holder and Interests** | 1. User: Interested in authenticate others or itself. 2. Platform Administrators: authenticate the user by system through ratings. |
| **Pre-conditions** | 1. Users must be logged in. |
| **Post-conditions** | 1.Users is authenticated to the system. |
| **Basic Flow** | 1.users clicks on the authenticate the user interface.  2. selects the users.  3.Authenticate the user on to the system. |
| **Alternative flow** | 1. User retracts their authenticate request and submits a different one. |
| **Special Requirements** | Prevention of spam posting and deleting. |
| **Technology and Data Variation List** | 1.Database for storing specific user’s posts.  2.Algorithm for calculating post specifications. |
| **Frequency** | 1.Many times per day |

UC-4: Log out.

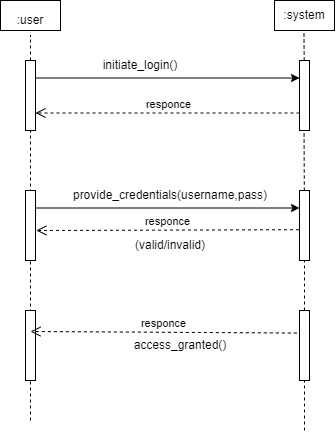
|  |  |
| --- | --- |
| **Use Case ID** | UC-4 |
| **Use Case Name** | Log out. |
| **Primary Actor** | User |
| **Input** | Clicks on the log out button on the system. |
| **Output** | User is logged out from the system. |
| **Stake Holder and Interests** | 1. User: Interested in safely logging out of the system to protect their account and privacy. 2. Platform Administrators: Interested in ensuring secure session management and user authentication. |
| **Pre-conditions** | 1. Users must be logged in. |
| **Post-conditions** | 1.Users is logged out of the system and session is terminated. |
| **Basic Flow** | 1. User navigates to the profile or settings section of the system. 2. User locates and clicks on the "Log Out" button. 3. System confirms the action and terminates the user's session. 4. User is redirected to the login page or a confirmation page. |
| **Alternative flow** | 1. User's session expires due to inactivity, and the system automatically logs them out. 2. In case of technical issues, the system fails to log the user out, and an error message is displayed prompting the user to try again or contact support. |
| **Special Requirements** | 1. Protection against session hijacking or unauthorized access after logout. 2. Clear communication to the user about the logout action and its consequences.   . |
| **Technology and Data Variation List** | 1.Database for storing specific user’s posts.  2.Algorithm for calculating post specifications. |
| **Frequency** | 1.Many times per day |

## System Sequence Diagram

### (User Ratings)



### (Authentication and Authorization)



## Domain Model

