Software Requirements Specification

for

<Vibez>

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of developing Vibez as a project is to create a functional and user-friendly social media networking website. By building this platform, we aim to offer users a familiar experience while adding our unique touch to the interface and features. Vibez will serve as a convenient space for users to connect, share thoughts, engage in conversations, and follow updates in real-time. Moreover, the project allows us to demonstrate our software engineering capabilities, problem-solving skills, and creativity in designing and implementing a scalable web application. Through this project, we seek to provide users with an enjoyable and interactive social media platform, fostering a sense of community and communication in the digital realm.

1.2 Document Conventions

Important points have been underlined to provide emphasis. Headings and Subheadings have been written in bold font to provide emphasis. The points in all sections have been written in the order of their priority, from higher priority points to lower priority points, so that important points are not missed out. Abbreviations are used in some places which will be understood by the developers of the application.

1.3 Intended Audience and Reading Suggestions

The intended audience for the "Vibez" social media networking website would primarily be tech-savvy individuals, social media enthusiasts, and users who enjoy connecting and engaging with others online. It aims to attract a diverse range of users, including students, young professionals, and individuals interested in sharing thoughts, interests, and staying updated with current trends and news. To ensure a successful implementation, the team should consider reading materials covering web development technologies such as HTML, CSS, JavaScript, and frameworks like React or Angular. Additionally, learning about database design and management, user authentication, real-time updates using WebSockets, and scalable server-side technologies (e.g., Node.js, Django) would be beneficial. Reading up on UI/UX design principles and social media platform guidelines will help in creating an appealing and intuitive user interface, encouraging user retention and interaction.

1.4 Product Scope

The product scope for "Vibez" social media networking website includes creating a user-centric and interactive platform for users to share thoughts, connect with others, and engage in discussions. The website will allow users to create profiles, post updates, like, comment, and follow others. It will support real-time updates to ensure timely content delivery and user notifications. The product will focus on ensuring a seamless and intuitive user experience, with responsive design for various devices. Additionally, Vibez will prioritize user privacy and data security, implementing robust authentication and data encryption measures. The platform will be scalable, accommodating a growing user base and potential future features. The scope also encompasses implementing a user-friendly admin panel for content moderation and analytics to monitor user engagement and interactions effectively. Lastly, Vibez will adhere to accessibility guidelines to ensure inclusivity for users with different abilities.

1.5 References

From a product perspective, "Vibez" social media networking website aims to offer a dynamic and user-centered platform that fosters meaningful connections and interactions among its users. The primary focus is on creating an intuitive and visually appealing user interface that encourages seamless navigation and engagement. Vibez will prioritize real-time updates, ensuring users receive timely content and notifications for a more immersive experience. The product perspective also emphasizes robust data management, safeguarding user privacy and implementing effective measures for data security. Additionally, Vibez will provide analytics and insights tools to enable users to track their interactions and engagement on the platform. The website will continuously innovate, incorporating new features and functionalities to stay relevant and meet users' evolving needs. Overall, the product perspective is geared towards delivering a vibrant and inclusive social media platform that captivates users and fosters a strong sense of community.

2. Overall Description

2.1 Product Perspective

From a product perspective, "Vibez" social media networking website aims to offer a dynamic and user-centered platform that fosters meaningful connections and interactions among its users. The primary focus is on creating an intuitive and visually appealing user interface that encourages seamless navigation and engagement. Vibez will prioritize real-time updates, ensuring users receive timely content and notifications for a more immersive experience. The product perspective also emphasizes robust data management, safeguarding user privacy and implementing effective measures for data security. Additionally, Vibez will provide analytics and insights tools to enable users to track their interactions and engagement on the platform. The website will continuously innovate, incorporating new features and functionalities to stay relevant and meet users' evolving needs. Overall, the product perspective is geared towards delivering a vibrant and inclusive social media platform that captivates users and fosters a strong sense of community.

2.2 Product Functions

The key functions of the Vibez include:

1) User registration and login
2) Creating and posting tweets
3) Following other users
4) Like and retweet functionality
5) User timeline display

2.3 User Classes and Characteristics

Vibez will cater to various user classes, including general users, administrators, and moderators. Users will have varying levels of technical expertise and will engage in different activities on the platform.

2.4 Operating Environment

Since the application is a web application it can work on any device having a browser.

- Device: Mobile Phone, Computer, Laptops, Tablets.
- Operating System: Windows, Linux distributions, Mac OS, Android
- RAM: 128 MB or more
- Disk Space: 20 MB or more.
- Browsers: Mozilla Firefox 30+, Google Chrome 27.0+, Microsoft Edge. Other browsers can also be used.
- Internet connection: Strong internet connection with speed of at least 1 Mbps for best experience

2.5 Design and Implementation Constraints

The development of Vibez should adhere to the incremental component-based software model. It will be implemented using primarily React JS, HTML, CSS, JavaScript, and a suitable backend programming language(Firebase) and framework.

2.6 User Documentation

Vibez will come with user documentation, including user manuals and on-site help to guide users through its functionalities.

2.7 Assumptions and Dependencies

Assumptions:

Vibez will be developed using modern web development tools and frameworks.

Users will have a stable internet connection for using the platform.

Dependencies:

Vibez will use the Firebase API for some functionalities, such as user authentication and displaying messages.

3. External Interface Requirements

3.1 User Interfaces

The user interface of Vibez will be designed to be user-friendly and intuitive. It will follow the style guide for social networking websites, ensuring a consistent and familiar user experience.

3.2 Hardware Interfaces

Vibez will interact with standard hardware components, such as web browsers and mobile devices.

3.3 Software Interfaces

Vibez will communicate with the Firebase API to perform actions like user authentication and fetching text.

3.4 Communications Interfaces

The application will utilize standard communication protocols, such as HTTP, for interactions with the backend server and external APIs.

4. System Features

4.1 Authentication and Authorization

4.1.1 Description and Priority:

The application will be having multiple users and so authentication becomes a high priority system feature. When the user creates a new account on the application, they will have to provide their email address and password. The password must be at least 8 characters long and must have at least one uppercase character, one digit and one special character. The passwords in the system will be hashed and stored so that no other person can get to know the password.

4.1.2 Response Sequences:

Once the user registers in the application, they will be guided to a login page where they will have to enter their email address and password to login. After successful login, the user will be redirected to the landing page of the application. There will also be a logout button on the navigation bar. On clicking the logout button, the user will be logged out.

4.1.3 Functional Requirements:

REQ-1: We use google login using firebase module for authentication and authorization functionality. The authentication will be a session-based authentication.

4.2 Post Photographs Feature:

4.2.1 Description and priority:

The user gets to post photographs which he intends to put on his feed. This is again a high priority feature. The user gets the option to choose images using file system or simply drag and drop the pictures into the provided area.

4.2.2 Response Sequences:

The user can add images using the drag and drop functionality or simply choose images from the files that he wants to upload. In case any image exceeds the maximum file size the user will be notified Software Requirements Specification using alerts. On adding the images, the user is redirected to the add location page.

4.2.3 Functional Requirements:

REQ-1: For uploading photos we will use firebase in built functions.

4.3 Add location Feature

4.3.1 Description and Priority:

The user gets to add the location for the image uploaded by using the map. The user will simply have to add a marker by clicking on the location where the picture was clicked. The priority of the feature is moderate.

4.3.2 Response Sequences:

On adding the location, the image is successfully added to the database and the user is redirected to the landing page of the website.

4.3.3 Functional Requirements:

REQ-1: JavaScript APIs will be used for geolocation functionality.

4.4 Search Properties Feature:

4.4.1 Description and Priority:

The user can search different accounts using the search functionality. This feature is of high priority and is primarily for users searching each other.

4.4.2 Response Sequence:

On filling the required information based on desired features, the results will be displayed on the webpage.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

5.1.1 Scalability:

The application should be scalable and should perform without any interruption for all the users.

5.2 Safety Requirements

- Backup power supply should be present for server, so that it does not stop functioning in case of power failure.
- API keys of the APIs used should not be made open source.
- Code backup should be taken at regular time intervals.

5.3 Security Requirements

- The passwords of the users are hashed and then stored in the database so that no person can access the passwords of the users.
- The passwords should be at least 8 characters long and must have at least one uppercase character, one digit and at least one special symbol.
- The website should HTTPS protocol for security.
- POST requests are used for transferring information regarding authentication, adding properties, adding advertisements etc. through forms.

5.4 Software Quality Attributes

5.4.1 Usability:

The user interface should be simple to use and not cluttered with a lot of information.

5.4.2 Availability:

- The system should be available at all times.
- The system should be reliable and there should be no loss of data in case the server breaks down when operations are going on.

5.4.3 Maintainability:

The code for the application should be written cleanly and should be

well documented. The code should contain comments to help new

programmers and developers make changes in the application.

5.4.4 Testability:

The code should be written with proper test cases to be tested upon so

that no errors during production take place.

5.5 Business Rules:

The administrator of the application has full permission of controlling the

system.

6.Other Requirements

Appendix A: Glossary

- HTTPS: Hypertext Transfer Protocol Secure
- API: Application Programming Interface
- GUI: Graphical User Interface