

Software Requirements Specification (SRS)

Frontend Framework:

Flutter: A UI toolkit developed by Google for building natively compiled applications for mobile, web, and desktop from a single codebase.

Backend:

Firebase: A comprehensive mobile and web app development platform provided by Google. It offers various features such as authentication, real-time database, cloud storage, and hosting.

Programming Language:

Dart: The programming language used for building Flutter applications. Dart is an object-oriented, class-based language with C-style syntax.

Database:

Firebase Realtime Database: A cloud-hosted NoSQL database provided by Firebase. It stores data as JSON and synchronizes data between clients in real-time.

Authentication:

Google Sign-In: Allows users to sign in to the application using their Google accounts.

Guest Login: Provides access to limited features for users who do not wish to sign in with their Google accounts.

Features:

Authentication:

Google Sign-In

Guest Login

Community Management:

Create and join communities

Edit community description and avatar

User Profile Management:

Edit user profile

Post Management:

Share text, link, or image-based posts

Upvote and downvote posts

Comment on posts

Award posts

Delete posts

Moderator Features:

Add other moderators

Delete any post

Theme Toggle:

Switch between dark mode and light mode

Responsive UI:

Support for Android, iOS, and Web platforms

State Management:

Utilizes Riverpod 2.0 for state management within the application

Routing:

Flutter's navigation system is utilized for managing routing within the application.

Complex Queries:

Firebase queries are used for retrieving and managing data from the Firebase Realtime Database, including complex queries to support various features such as post management and user interaction.

Accessibility:

The application is designed to be accessible on multiple platforms (Android, iOS, Web) with a responsive user interface.

Security:

Firebase Authentication ensures secure user authentication. Proper authorization mechanisms are implemented to manage user roles and permissions, especially for moderator features.

Testing:

Testing strategies are employed to ensure the functionality and usability of the application across different platforms and devices.

Deployment:

The application is deployed on appropriate platforms such as Google Play Store, Apple App Store, and web hosting services for web deployment.

This SRS outlines the software requirements, features, and technologies involved in building the Discussify application using Flutter as the frontend framework and Firebase as the backend platform.