

Software Requirements Analysis

Communities : A Social Media Platform

SM02

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1 Overview

The purpose of this software application is to provide a platform where users can create communities of their choice and indulge in communities of similar interests. This product intends to be a social media platform where users can create communities of their choice with different visibilities and indulge in communities of similar interests. Users can also interact with other users through direct messaging.

In order to prevent malicious users, the platform also employs a moderation system where users can report posts and comments and moderators can moderate posts and comments in their communities. The product also intends to employ a recommender system to recommend communities and create a user-specific feed for each user.

The product is a web application and hence is intended to be independent of any underlying operating system.

1.1 System Overview:

The principal actors in the system are:

- Guest Users: Users which have not created an account on the platform.
- Registered Users: Users which have created an account on the platform.
- Community Admins: Users which have created a community on the platform.
- Community Moderators: Users which have been appointed as moderators in a community.
- Superuser: Users which have the highest privileges on the platform.
- System: The system is also an actor in the system.

1.2 System Context:

1.3 Stakeholders of Communities:

- **Guest Users** can view public communities, posts and other registered users with public profiles.
- Guest Users can view the Trending page.
- User authentication including login and signup and a referral system.
- **Registered users** can create communities with different visibilities and can join communities.
- Users can create posts in communities and perform other CRUD operations. They can comment on posts.
- Users can upvote and downvote posts and comments.

- Users can report posts and comments.
- Users can search for communities, users and posts.
- Users can follow other users.
- Users can view their user-specific-feed and their notifications.
- Users can use a direct messaging system to communicate with other users
- **Community moderators** can moderate posts and comments in their communities.
- Community moderators can ban users from their communities.
- Community moderators can issue warnings to members of their communities.
- **Community admins** can add and remove moderators from their communities.
- Community admins can delete their communities.
- Community admins can revoke user-bans.
- **Platform admins/superusers** can delete users and communities.

1.4 Scope of this Document:

The this document we describe architecture for our software.

1.5 Definitions and Acronyms:

2 Architecture Design

2.1 Architecture 1: The Repository Model

- This architecture revolves around the data repository, which contains communities data, user data, conversation data, roles data for communities, posts/comments data for communities and authorization data
- All other components are connected to data repository through different connectors

Component	Component Type	Description
Data Repository	Database	This module contains communities data, user data, conversation data, roles data for communities, post/comments data for communities, authorization data for users
Create, Update, Delete User Profiles	Database Insertion	This module creates, deletes and updates user profiles for which it deletes data from repository or insert different parameters in data repository
Follow/UnFollow Users, View Followers	Database Insertion and Database Access	This module allows user to view followers of other users and follow/unFollow other users in system
Send, Receive Messages	Database Access	This module provides a messaging interface to users to send and receive messages from different users
Compute and Display user specific home feed	Processing(database access)	This modules creates home feed specific to each user by using the people and communities they follows.
Compute and Display common trending feed	Processing(database access)	This modules creates trending feed common for all users by using the recent activity in communities.
Vote in polls, Comment, Up-vote and Down-vote on comments and Posts	Database Access	This module enables user to vote in polls created by other users, Comment on different posts, up-vote or down-vote on comments and posts created by other users
Join, Leave Communities	Database Access	This module enables users to send join requests or join directly to communities and leave communities joined before
Create, View, Update and Delete Posts, Polls and Profiles	Database Access	This module enables user too to create posts for communities, create polls, delete and update these posts
Assign, Remove Moderator	Database Access	This module enables community admin to assign new moderators and remove existing moderators
Create and Update Community Guidelines	Database Access	This module enables community admin to create and update respective community guidelines
Create, Delete Communities	Database Access	This module enables users to create communities and community admins to delete communities

Table 1: **Above Table contains components in the architecture:**