M2: Project Description and Requirements

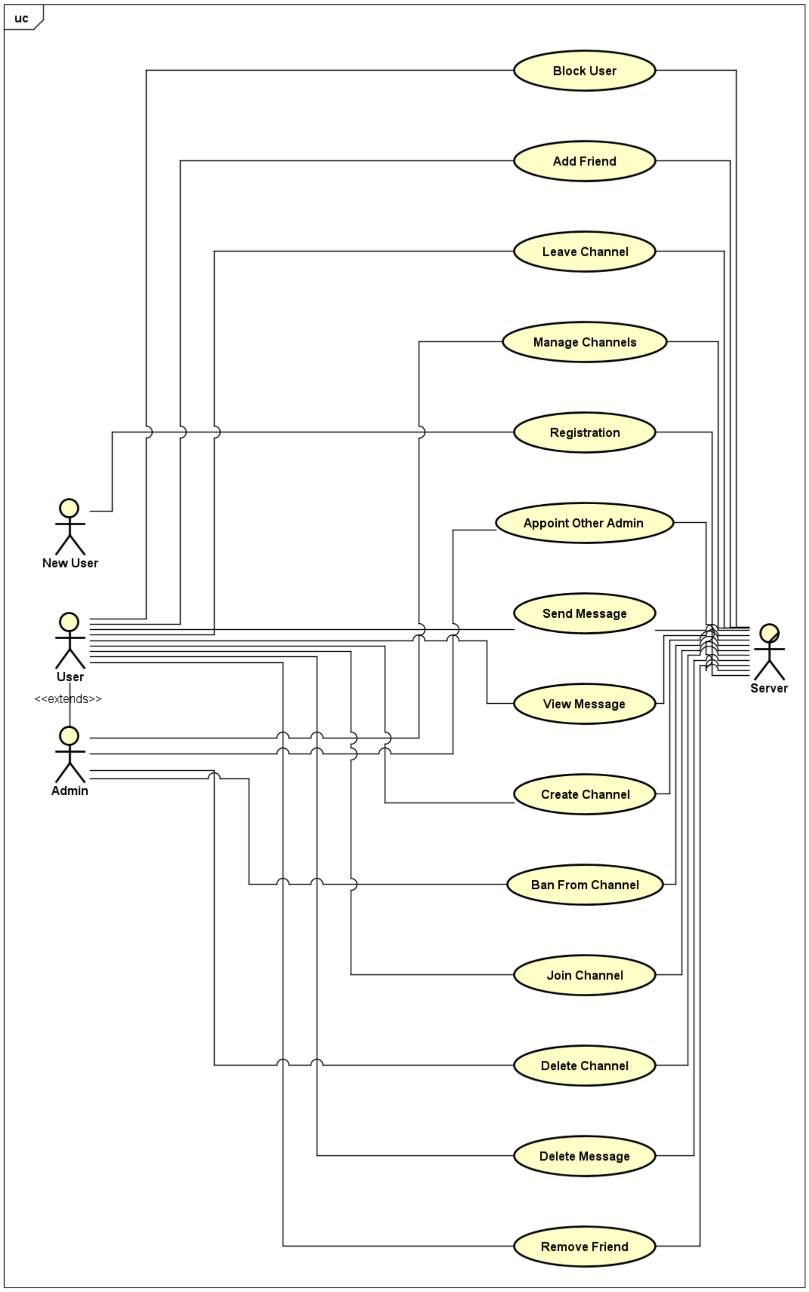
Discord Clone is our project. Our project is a chat application created to communicate and collaborate with others around the world. It offers a wide variety of features, allowing users to create an account in order to effectively communicate with others. Our project will allow users to add friends to directly talk with them in private messages or even create lobbies which contain channels and allows multiple users to seamlessly connect together.

With the system, new users can register for an account, while users with an account can log in to their accounts. Users are able to join and leave channels, send direct messages privately and within channels. Users can input their personal information, add and remove friends and invite other users to their channel. Admins also have requirements which are being able to manage channels, removing users from channels and appointing other users to become the admins of channels.

The functional requirements of our system include hiding channels that users are not in, a database that contains all channels including message and channel history, users that are connected or banned and admins. The system stores channel ID’s to invite other users to the channel, it stores user’s personal information and prevents the public from viewing it and the system stores a list of admins and regular users. Lastly, the system requires that users can only view friends and channels when logged in.

Use case diagrams.

There will be two main classes of users for this program “Users” and “Admins” (Primary Actors) Admins will have primary control of their created channels including managing who is in the channel to Removing members or deleting the channel itself and appointing other admins, while maintaining the same actions as normal users. All interactions will be stored in a server (Secondary Actor). Furthermore new users will be able to access an account registration page that will submit a new User ID to the server allowing them access to the program as well as channels.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Block User
Add Friend
Leave Channel
Manage Channels
Registration
Appoint Other Admin
Send Message
View Message
Create Channel
Ban From Channel
Join Channel
Delete Channel
Delete Message
Remove Friend
New User
User
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Admin
Server

Requirements:

1. User Requirements
2. Allow users to log into account
3. Allow new Users to Register for an account
4. Allow Users to join & Leave Channels
5. Allow users to Send messages to each other and within a channel
6. Users can Add/remove friends
7. Invite other users to Channels
8. Users should be able to input personal info in their bio page

Admin Requirements:

9. Admins should be allowed to manage channels
10. Admins should be able to remove members of channels
11. Appoint other users to be admins of a channel

System Requirements

1. Database containing all Channels, including message/channel history, connected users, banned users and admins.
2. User can only view channels and friends when logged in
3. Store channel ID's to invite other users to channel
4. System should store user's personal information and not display it publically
5. System should store a list of Admins and Regular users
6. System should store ID’s of friends together
7. System should Store ID’s of banned/blocked Users
8. Hide Channels user is not in

Non - Functional Requirements:

1. System should store User’s personal info
2. Program should be developed mostly in Python
3. Program should be developed utilizing Flask
4. System should not disclose login information with other users

User Stories:

As a user, I want to be able to use a safe and reliable communication app, so that I can communicate with my classmates and friends.

As a user, I want to be able to create channels in a trustworthy server, so that my personal information is secure and easily accessible.

As a user, I want to be able to add/remove/block people, so that I can prevent scammers/bots and protect my personal privacy.

As a user, I want to be able to directly message people, so that I can privately communicate with them without making a channel.

As a user, I want to be able to use an app that requires an account, so that random people can't view your account/information.