# Project Part 2 - GROUP

- **Team:** Mridula Natrajan
  Hari Shreenivash Madras Vanamamalai
  Rajarshi Basak

- **Title:** ChatApp

- **Project Summary:** A java-based messaging application which implements Object-oriented concepts and includes basic functionalities. The system is based on a client-server model in which multiple clients (contacts wishing to initiate a chat with other contacts) can request access through the server.

- **Requirements**

**Business Requirements**

| ID | Requirement | Topic Area | Actor | Priority |
|---|---|---|---|---|
| BR – 01 | A username must be a gmail.com or colorado.edu email address for registration | Authentication | All | Critical |
| BR – 02 | A password must contain at least 8 characters | Authentication | All | Critical |
| BR - 03 | A password must contain at least one lowercase letter, one uppercase letter, one digit, and one special character | Authentication | All | Critical |

**User Requirements**

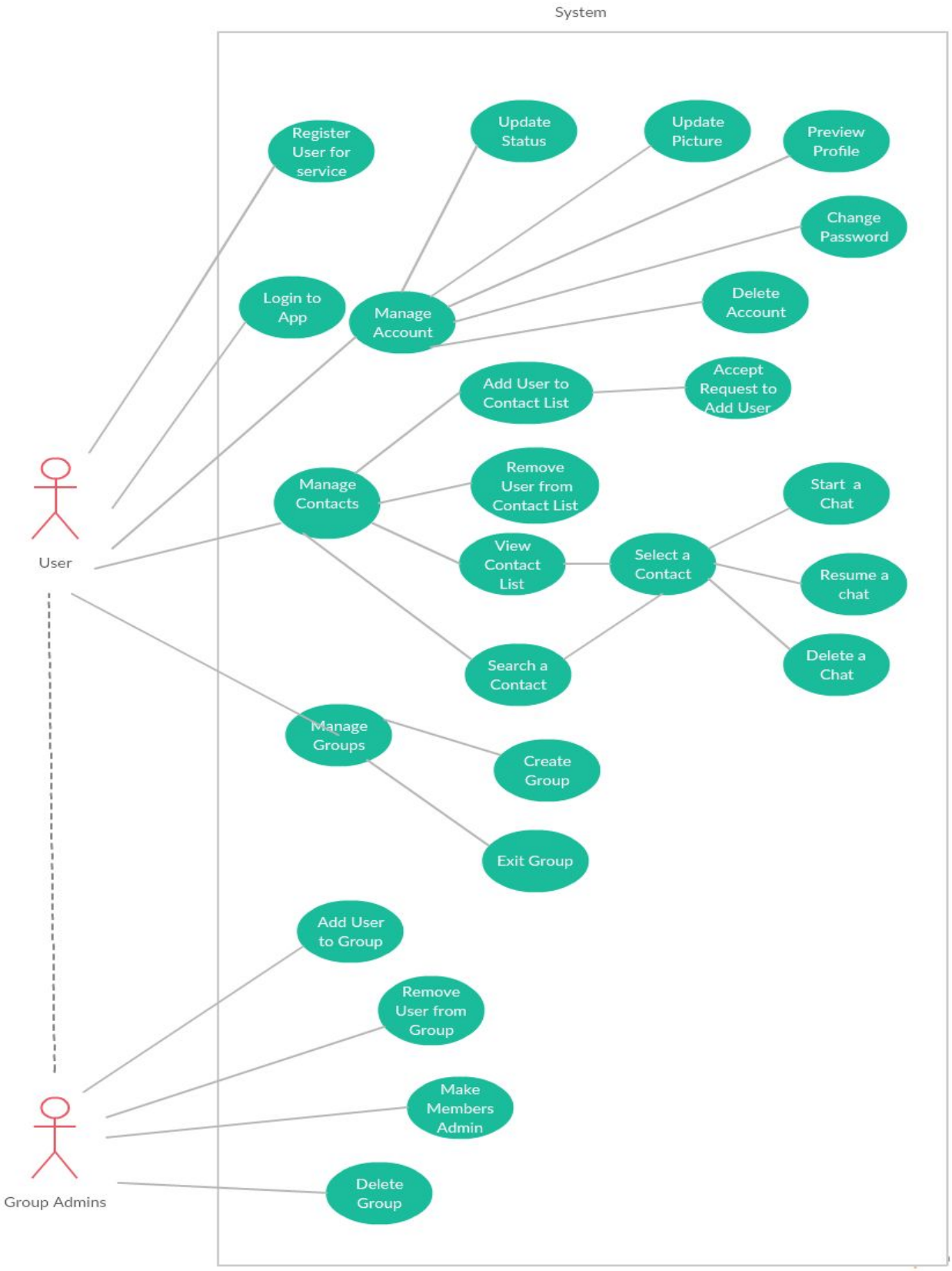
| ID | Requirement | Topic Area | Actor | Priority |
|---|---|---|---|---|
| US – 01 | As a user, I should be able | Authentication | User | Critical |

| | | | | |
|---|---|---|---|---|
| | to register for the service | | | |
| US – 02 | As a user who has registered, I should be able to login to the system | Authentication | User | Critical |
| US – 03 | As a user, I should be able to change my display picture | Profile Management | User | Critical |
| US – 04 | As a user, I should be able to update my status | Profile Management | User | High |
| US – 05 | As a user, I should be able to view my profile | Profile Management | User | High |
| US – 06 | As a user, I should be able to delete my account | Profile Management | User | Critical |
| US – 07 | As a user, I should be able to add a new contact to my contact list | Contact Management | User | High |
| US – 08 | As a user, I should be able to remove an existing contact from my contact list | Contact Management | User | High |
| US - 09 | As a user, I should be able to accept a request to add a contact | Contact Management | User | High |
| US – 10 | As a user, I should be able to view my contact list | Contact Management | User | High |
| US – 11 | As a user, I should be able to select a contact from my contact list | Contact Management | User | High |
| US – 12 | As a user, I should be able to search a contact from my contact list | Contact Management | User | Medium |
| US – 13 | As a user, I should be able to start a chat with a | Messaging | User | High |

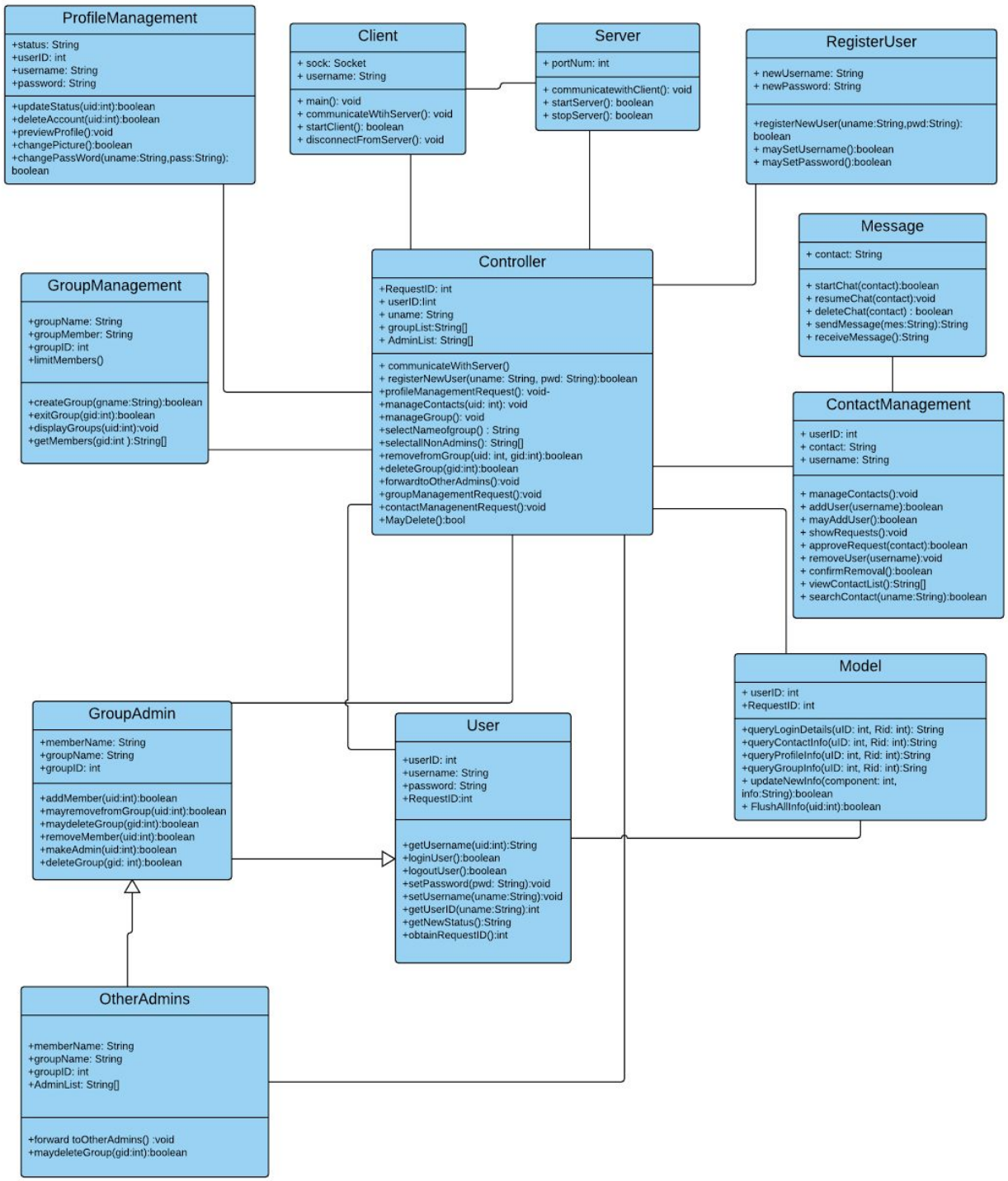
| | | | | |
|---|---|---|---|---|
| | selected contact | | | |
| US – 14 | As a user, I should be able to resume a chat with a selected contact when I have already started a chat | Messaging | User | High |
| US – 15 | As a user, I should be able to delete a chat with a selected contact | Messaging | User | High |
| US – 16 | As a user, I should be able to create a new group | Group Management | User | High |
| US – 17 | As a user who is a member of a group, I should be able to exit a group | Group Management | User | High |
| US – 18 | As a group administrator, I should be able to add users to a group | Group Management | Group admin | High |
| US – 19 | As a group administrator, I should be remove an user from a group | Group Management | Group admin | High |
| US – 20 | As a group administrator, I should be able to make a group member an administrator | Group Management | Group admin | High |
| US - 21 | As a group administrator, I should be able to delete an existing group | Group Management | Group Admins | High |
| US - 22 | As a user, I should be able to change my password | Profile Management | User | Critical |
| US - 23 | As a user, I should be able to log out | Authentication | User | Critical |

| Non-Functional Requirements | | | | |
|---|---|---|---|---|
| NFR – 01 | A login username cannot be identical to another login username | Reliability | User | Critical |
| NFR – 02 | A group should have at least 3 members to be created | Reliability | Group Admin | Critical |
| NFR – 03 | All messages in a group should be backed up at 12:00 midnight | Reliability | | Critical |

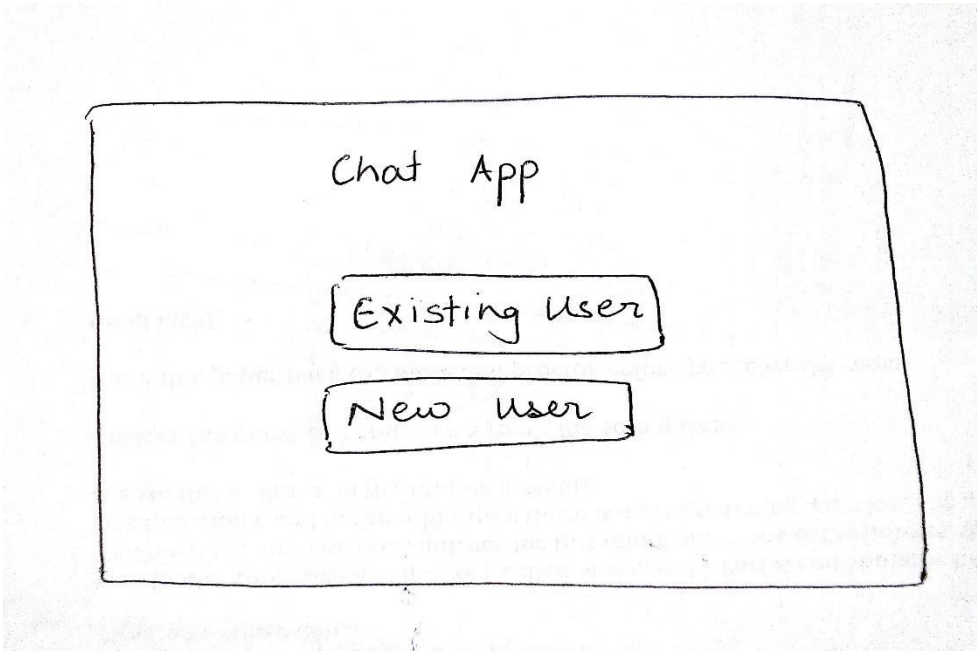
- **Use Case Diagram**

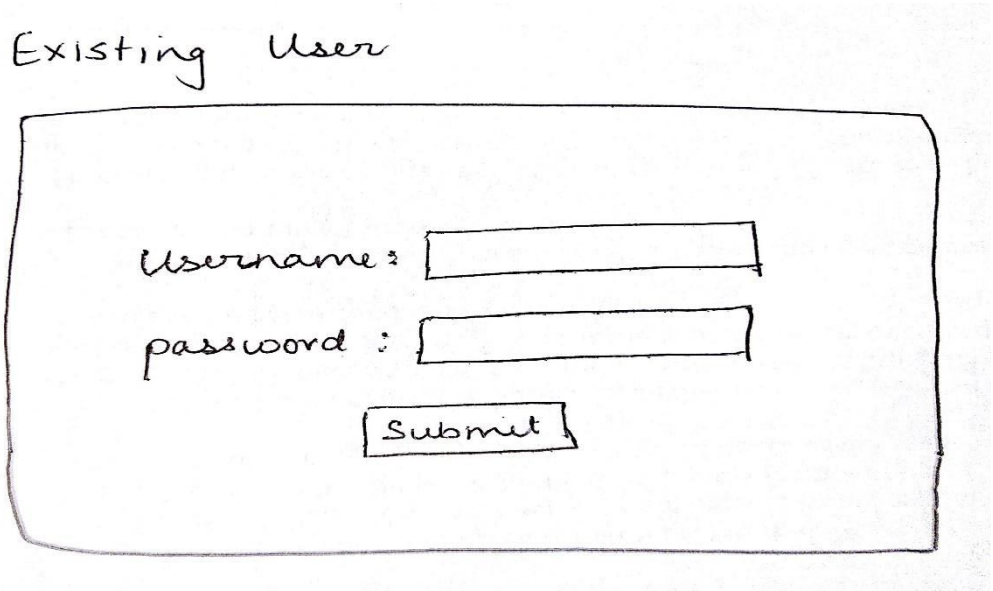


## Class Diagram

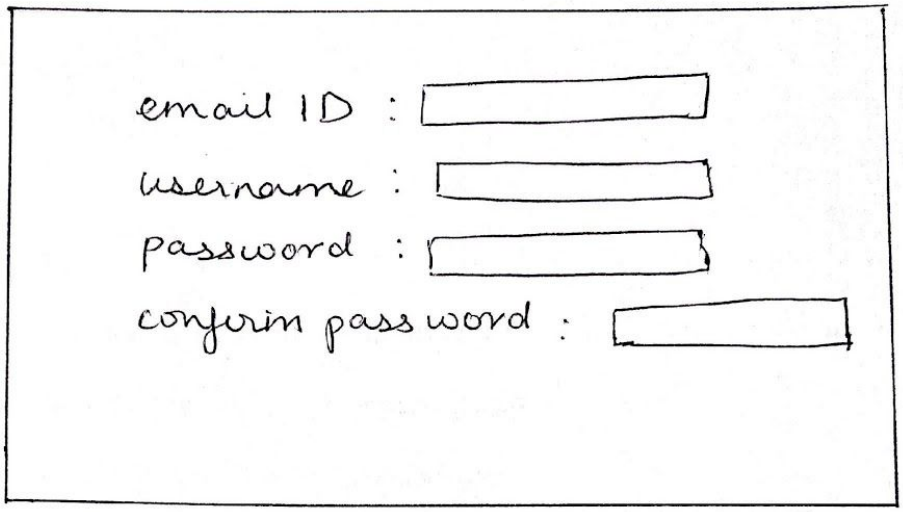


- **UI Mockups**

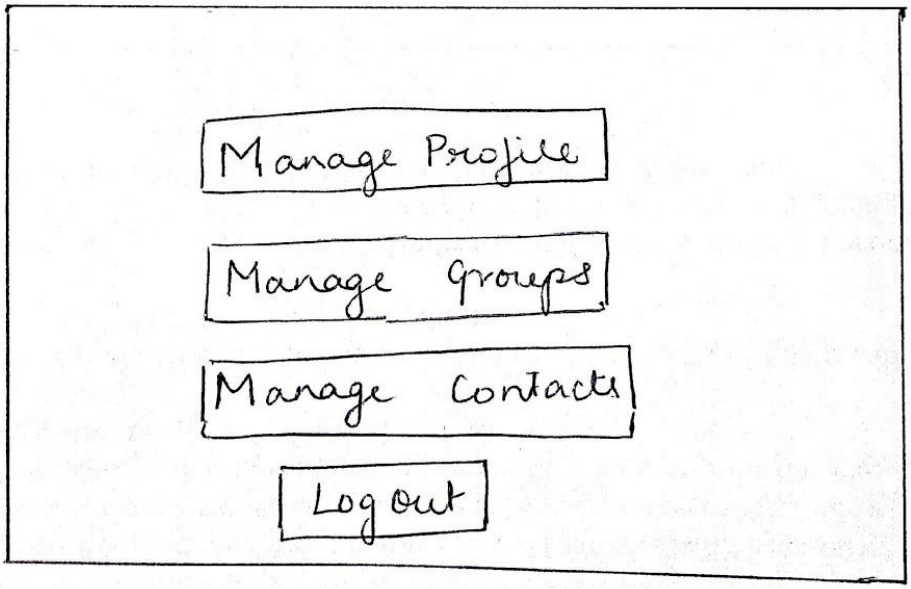

Chat App
Existing User
New User


Existing User
Username :
password :
Submit

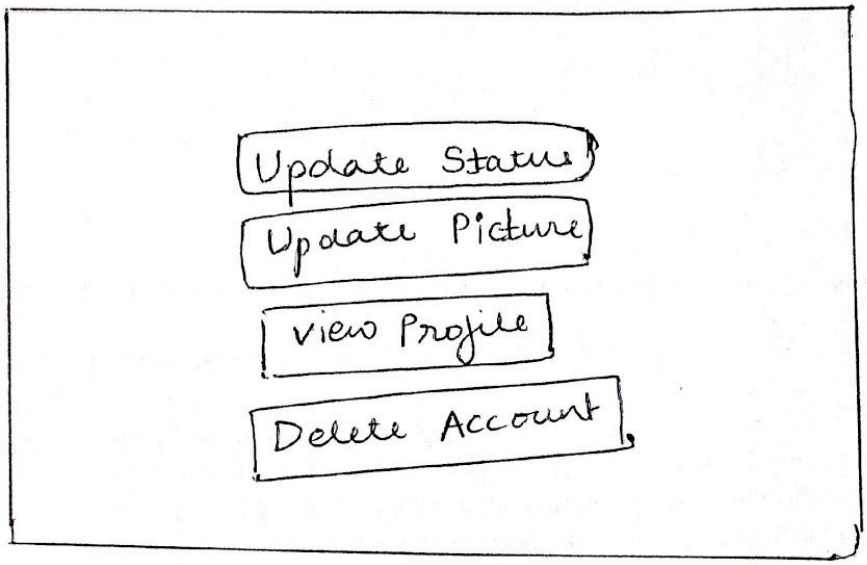
New Users



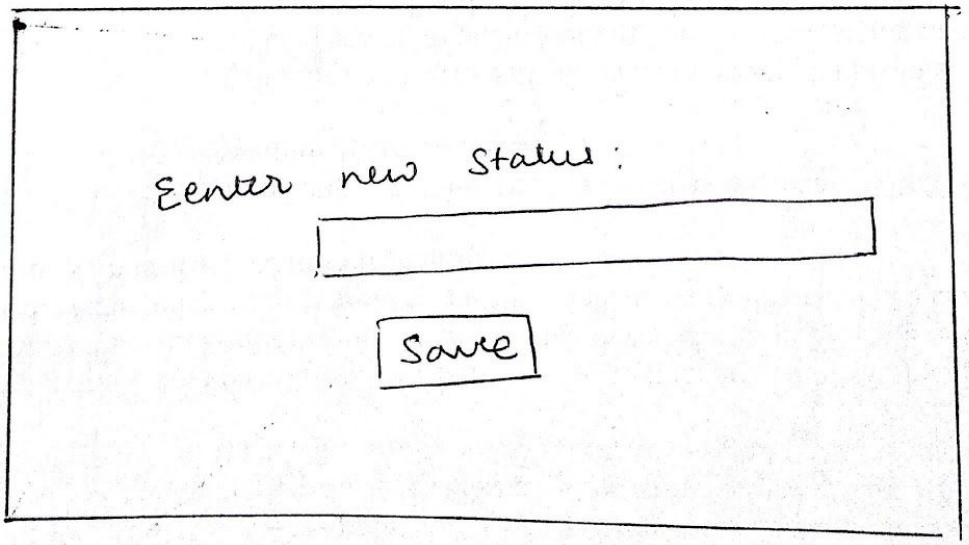

Home Page



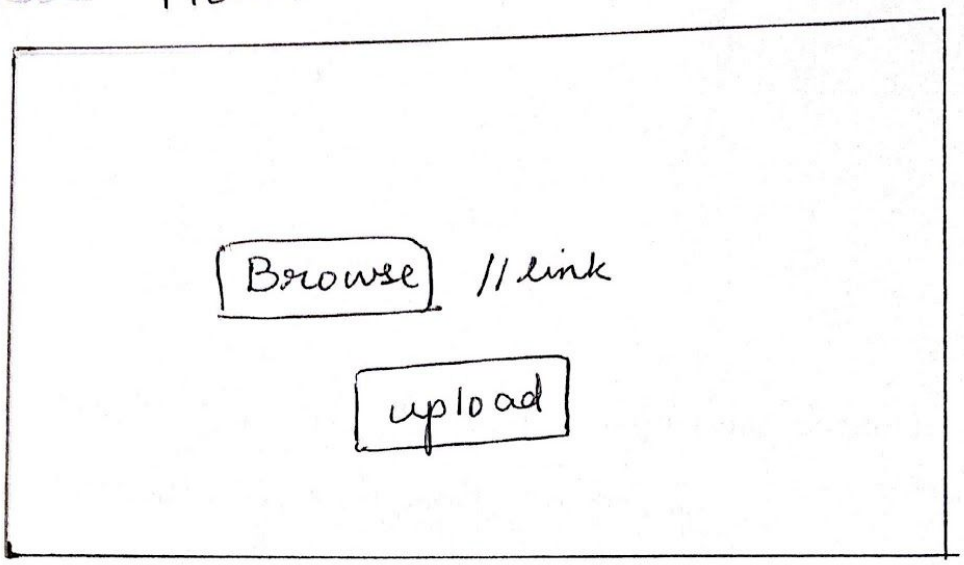
Manage Profile



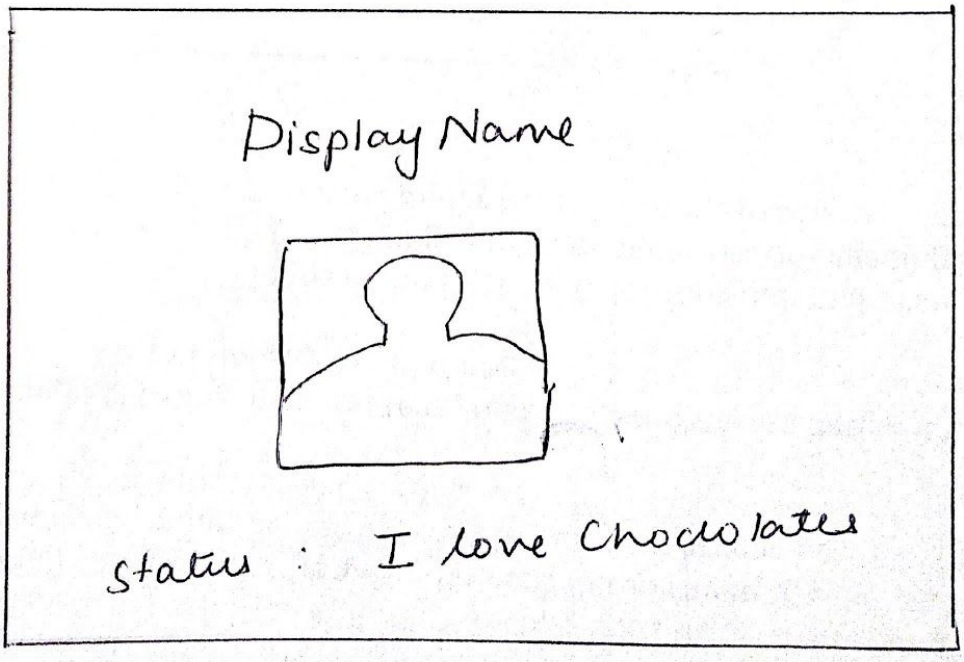

- Update Status



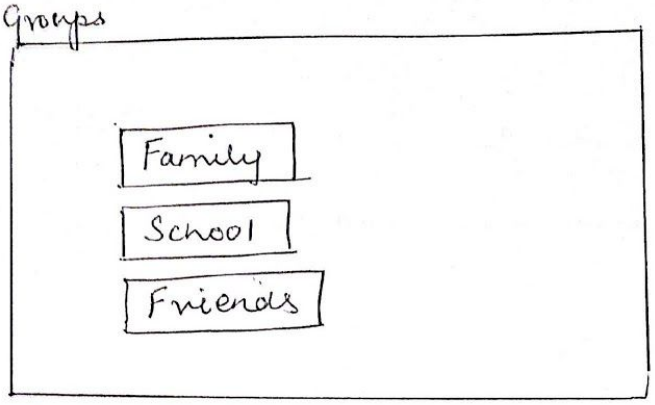
Update Picture



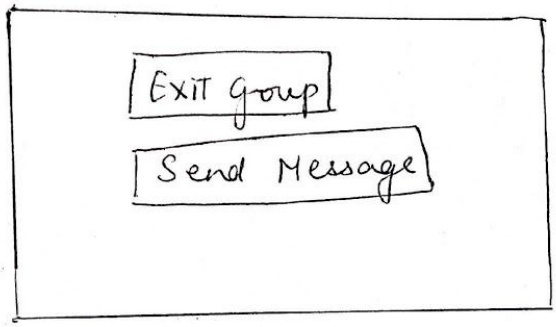

View Profile



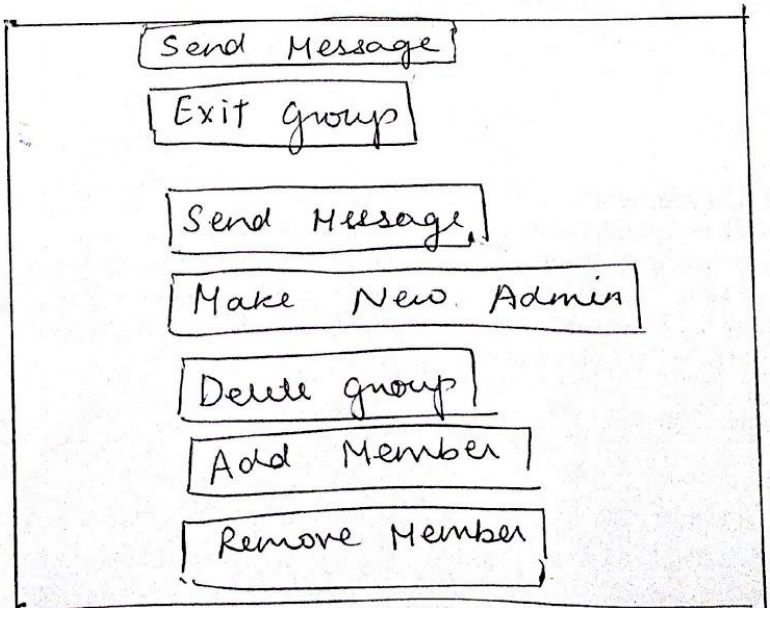
View Groups

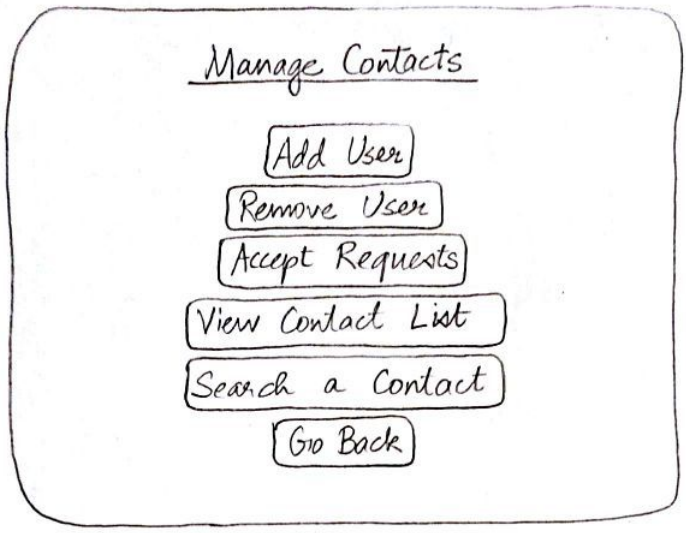


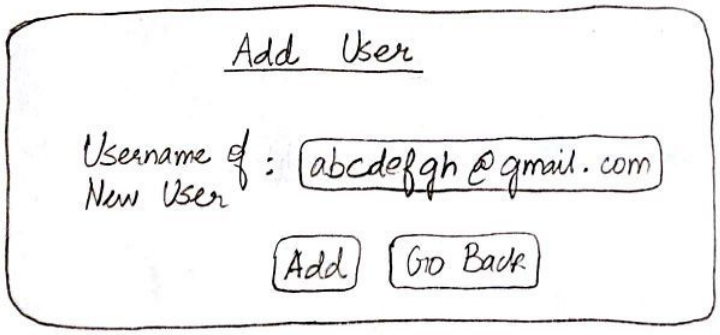

Family — User view

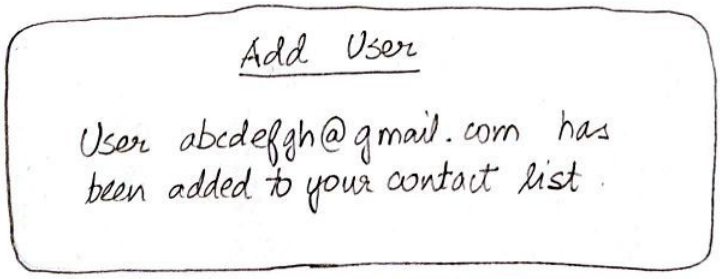


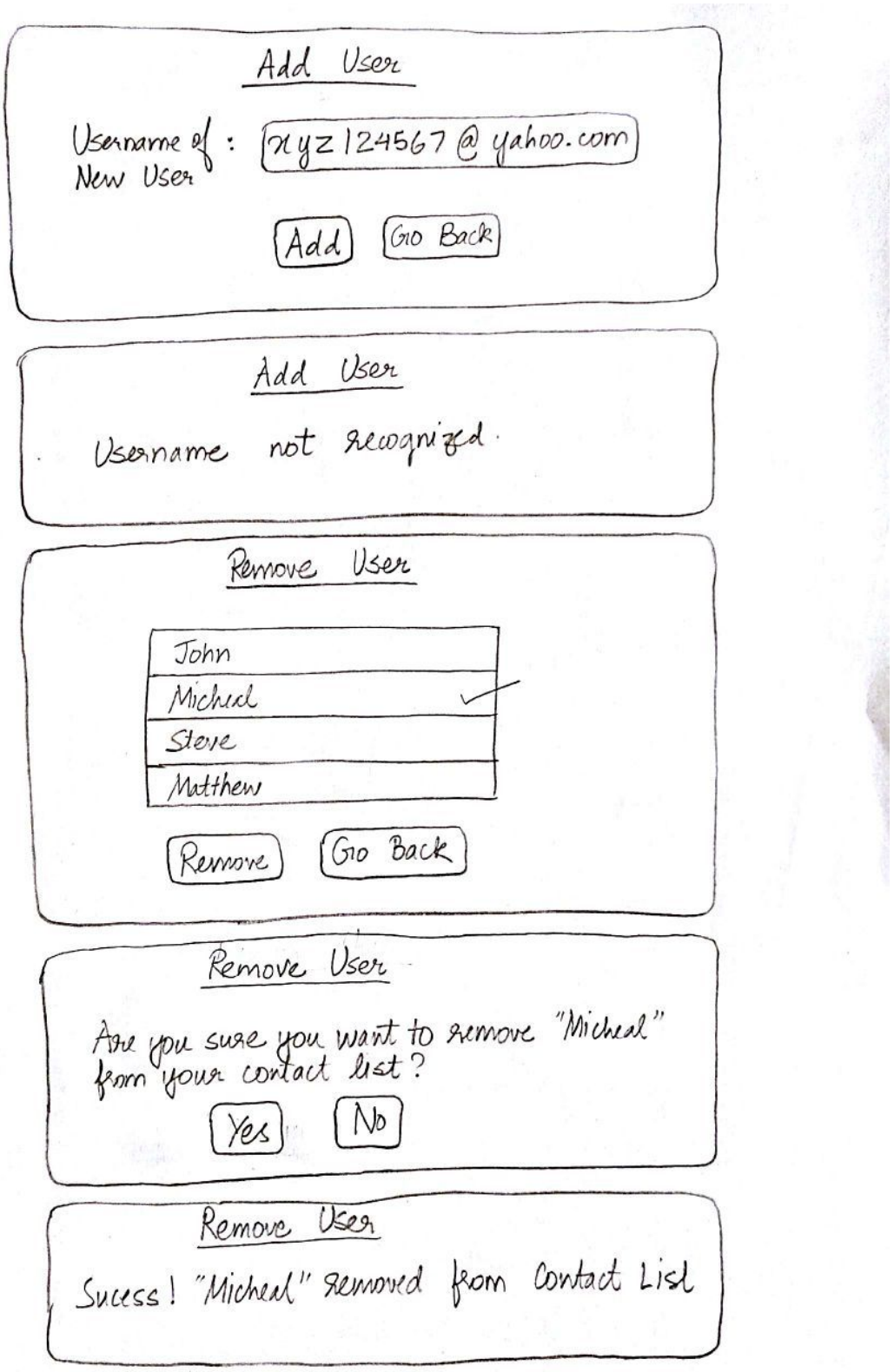

Family - Admin View

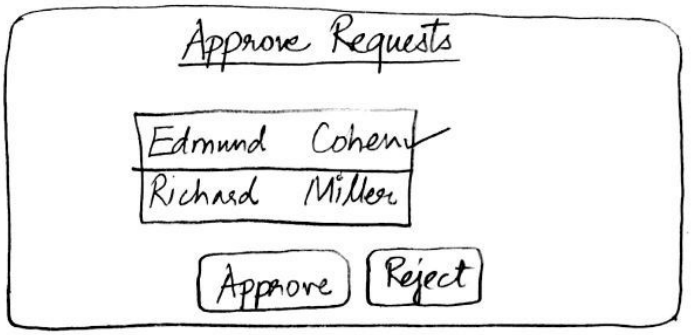


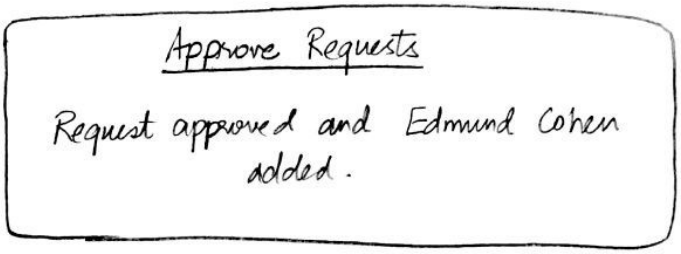

Manage Contacts
Add User
Remove User
Accept Requests
View Contact List
Search a Contact
Go Back

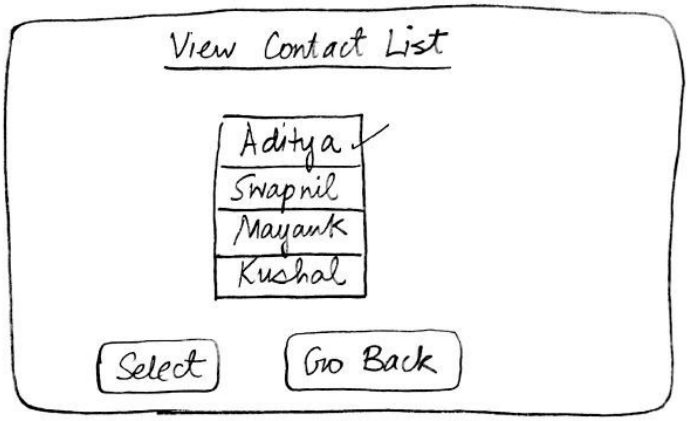

Add User
Username of New User :
abcdefgh@gmail.com
Add
Go Back

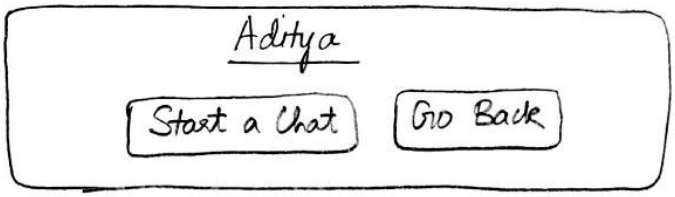

Add User
User abcdefgh@gmail.com has been added to your contact list.

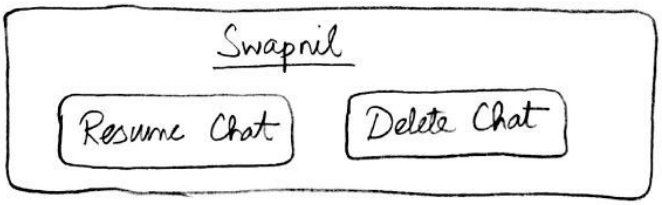

Add User
Username of New User :
xyz124567@yahoo.com
Add
Go Back
Add User
Username not recognized.
Remove User
John
Michael
Steve
Matthew
Remove
Go Back
Remove User
Are you sure you want to remove "Michael" from your contact list?
Yes
No
Remove User
Success! "Michael" removed from Contact List

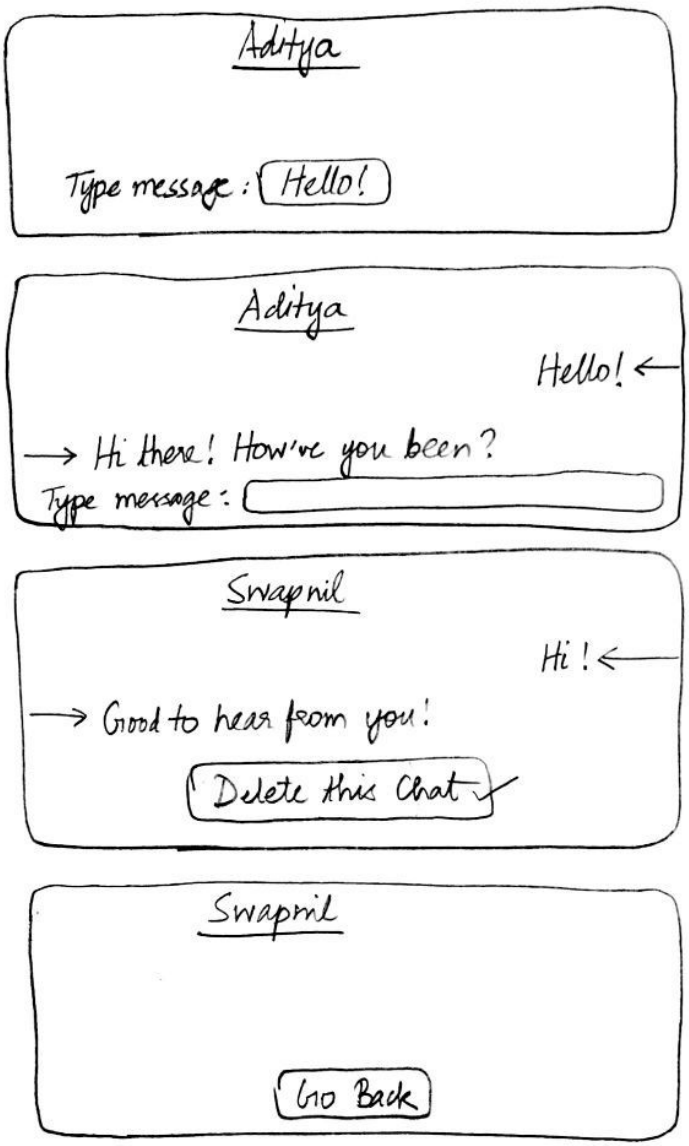

Approve Requests
Edmund Cohen
Richard Miller
Approve
Reject

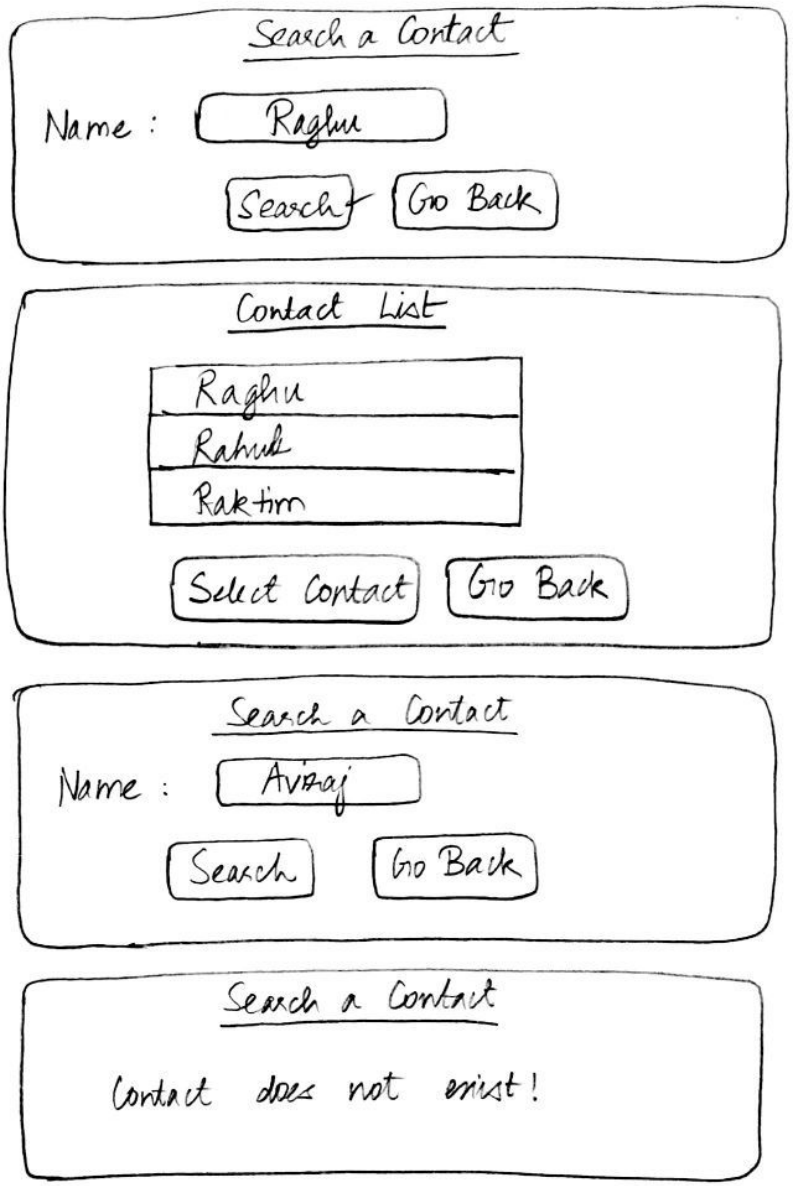

Approve Requests
Request approved and Edmund Cohen added.

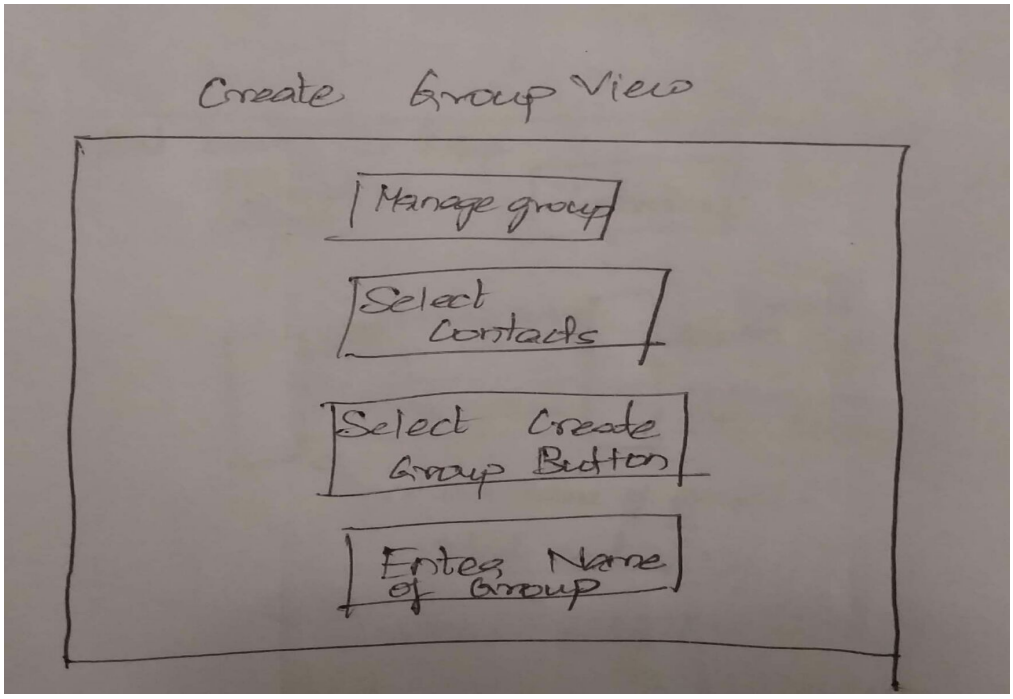

View Contact List
Aditya
Swapnil
Mayank
Kushal
Select
Go Back

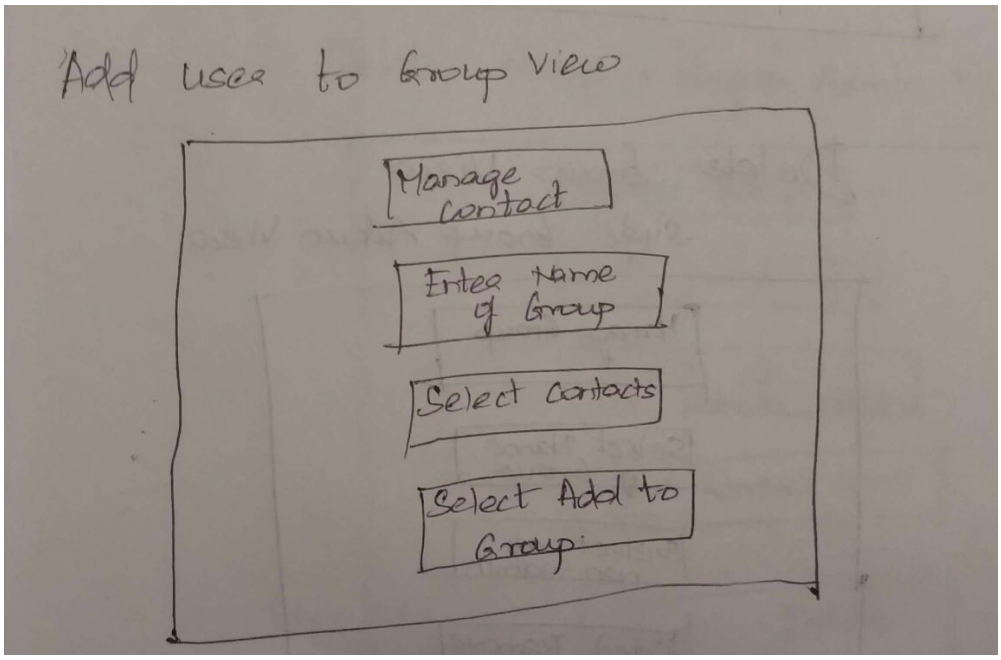

Aditya
Start a Chat
Go Back


Swapnil
Resume Chat
Delete Chat

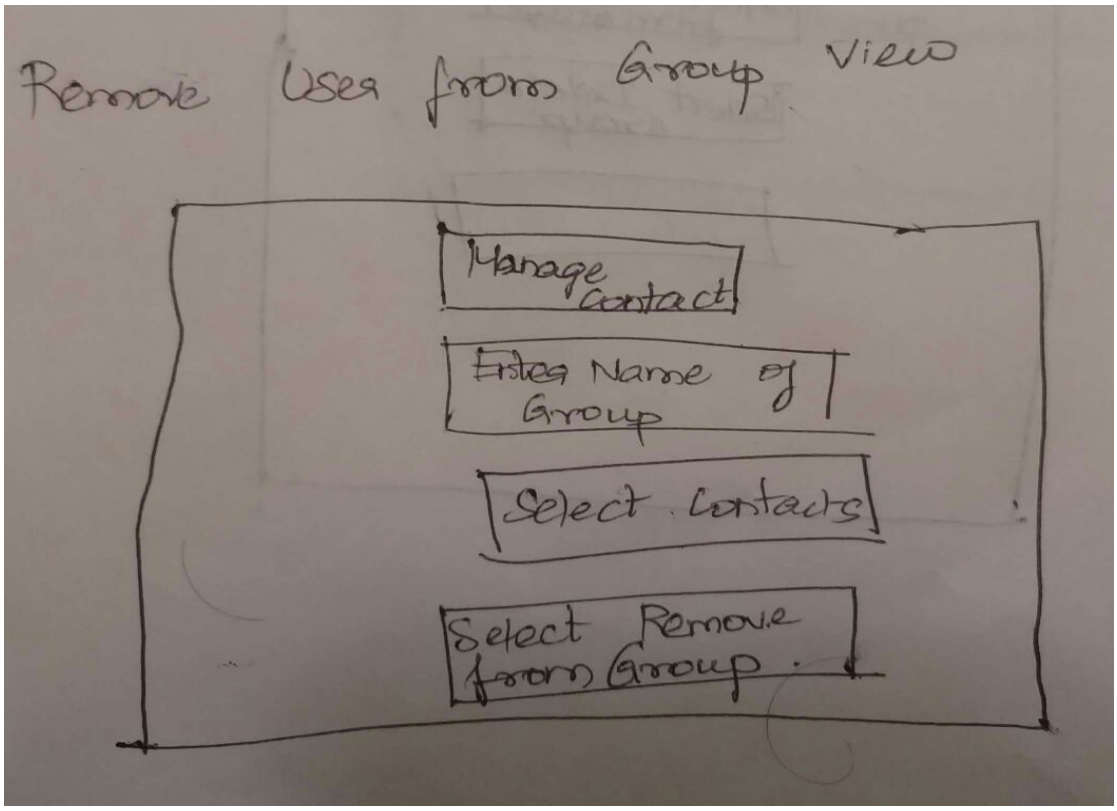

Aditya
Type message : Hello!
Aditya
Hello! ←
→ Hi there! How've you been?
Type message :
Swapnil
Hi ! ←
→ Good to hear from you!
Delete this Chat
Swapnil
Go Back


Search a Contact
Name :
Raghu
Search
Go Back
Contact List
Raghu
Rahul
Raktim
Select Contact
Go Back
Search a Contact
Name :
Avinaj
Search
Go Back
Search a Contact
Contact does not exist!

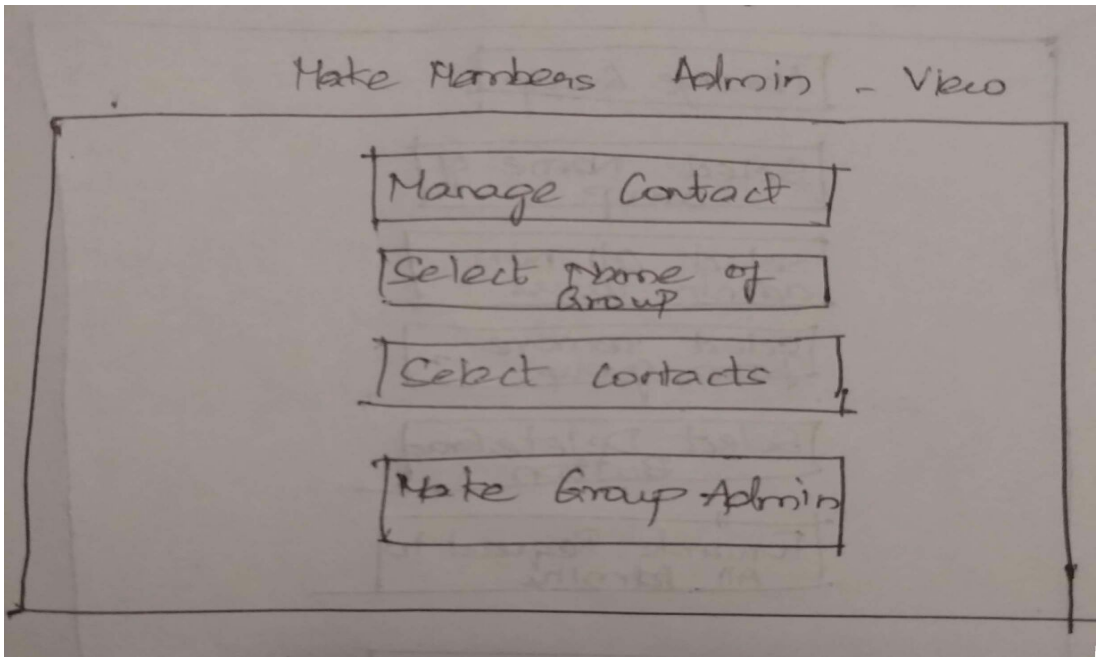

Create Group View
Manage group
Select Contacts
Select Create Group Button
Enter Name of Group

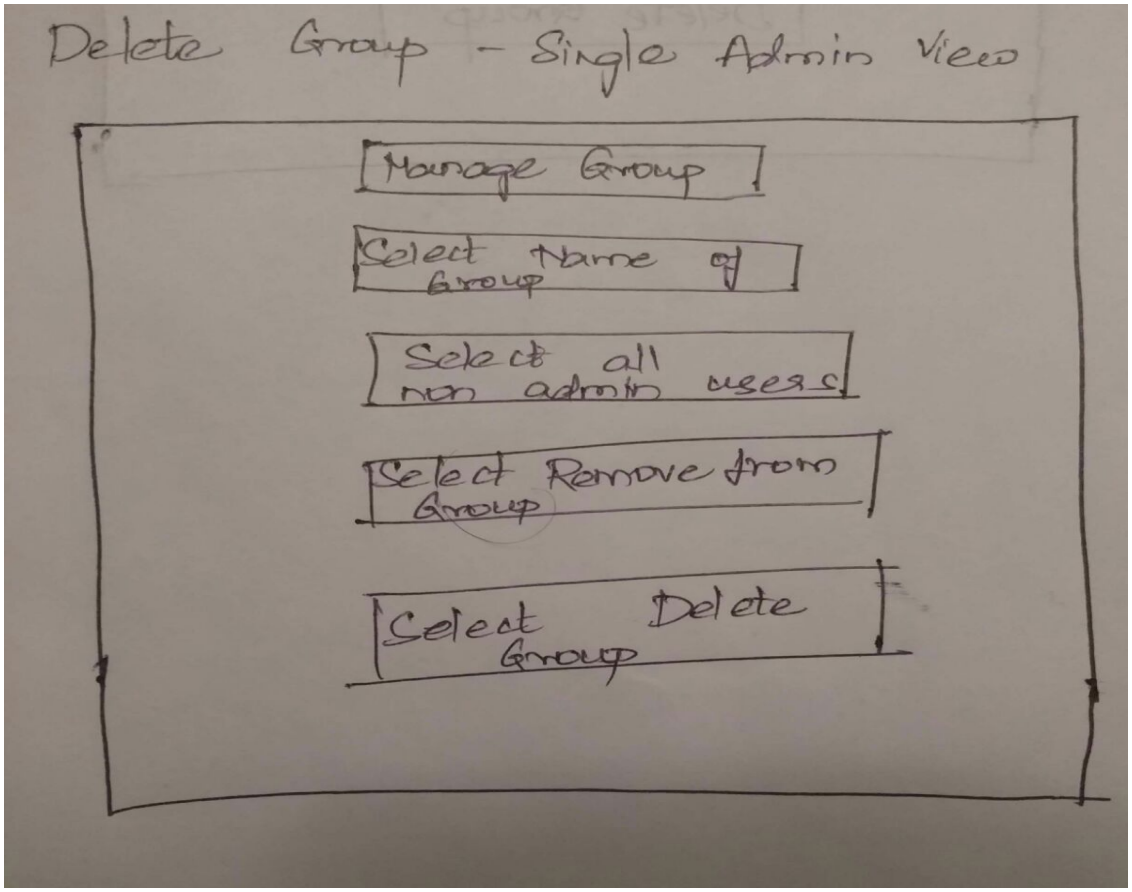

Add user to Group View
Manage contact
Enter Name of Group
Select Contacts
Select Add to Group

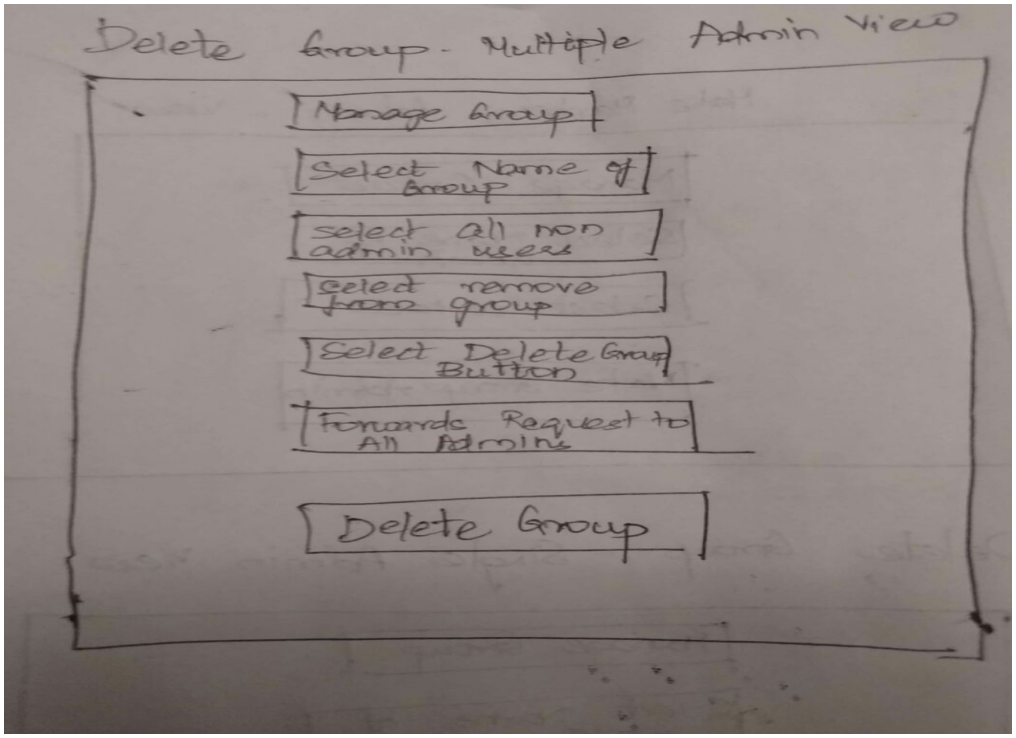
Remove User from Group View

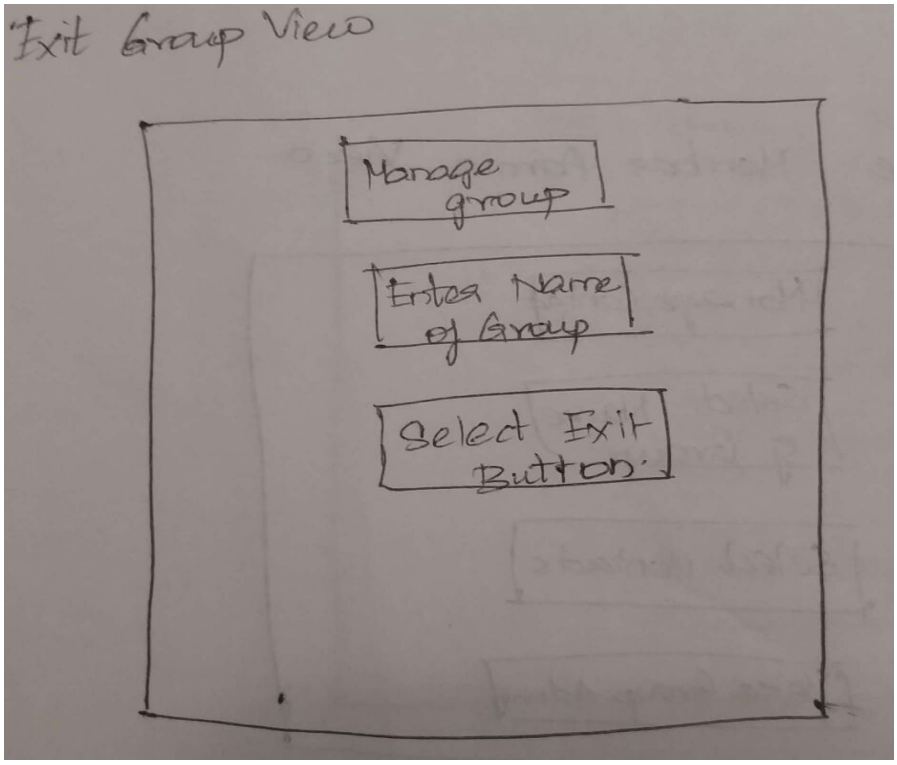



Make Members Admin - View




Delete Group - Single Admin View
Manage Group
Select Name of Group
Select all non admin users
Select Remove from Group
Select Delete Group


Delete Group - Multiple Admin View
Manage Group
Select Name of Group
select all non admin users
select remove from group
Select Delete Group Button
Forwards Request to All Admins
Delete Group




- Data Storage

  We will be using MySQL Database Management System to store and retrieve messages. The Database will also contain entries corresponding to each user such as username, password, email ID, contactlist and grouplist.