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# CHAT APPLICATION

Requirement Specification & Design

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Members:

- Mourin Mondol
- 152-35-1298
- Ashiqur Rahman
- 152-35-1264
- Rifat Sarker
- 152-35-1177

Instructor: Syeda Sumbul Hossain

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# 1 Introduction

Communication is a mean for people to exchange messages. It has started since the beginning of human creation. Distant communication began as early as 1800 century with the introduction of television, telegraph and then telephony. Interestingly enough, telephone communication stands out as the fastest growing technology, from fixed line to mobile wireless, from voice call to data transfer. The emergence of computer network and telecommunication technologies bears the same objective that is to allow people to communicate. All this while, much efforts has been drawn towards consolidating the device into one and therefore indiscriminate the services. Chatting is a method of using technology to bring people and ideas together despite of the geographical barriers. The technology has been available for years but the acceptance it was quit recent. Our project is an example of a chat server. It is made up of applications the client application which runs on the users mobile and server application which runs on any pc on the network. To start chatting our client should get connected to server where they can do Group and private chatting.

## 2 Requirement specification & design

### 2.1 Requirements

RQID	Name	Functional	NonFunctional	Description	Priority	Actor
0.01	User Registration	✓		Functionality for user to create account	High	User
0.02	Login	✓		Functionality for user to get access	High	User
0.03	Logout	✓		Functionality for user to delete session.	High	User
0.04	Add friend	✓		Functional to be friend with each other.	Medium	User
0.05	Friend List	✓		Functionality to see list of friend	High	User
0.06	Remove friend	✓		Functionality to remove friend	Medium	User
0.07	Find Friend	✓		Functionality to search find	High	User
0.08	Block friend	✓		Functionality to block friend	Medium	User
0.09	Best friend	✓		Functionality to make a friend close	Low	User
0.10	Profile	✓		Users profile	Medium	User
0.11	Send Message	✓		Functionality that send message	High	User
0.12	Message Status	✓		To show message time	Medium	User
0.13	Delete Message	✓		To delete message	Medium	User
0.14	History	✓		To make able to see past message	High	User
0.15	Group Chat	✓		Functionality to chat in a group	Low	Users
0.16	Feedback	✓		Users can send feedback	Low	User & Admin
0.17	Privacy		✓	Users privacy	High	Admin
0.18	Robustness		✓	To make able to deal with errors	High	Admin
0.19	Performance		✓	Application performance must be better	High	Admin
0.20	Usability		✓	To make able to use even for newbie	High	Admin
0.21	Reliability		✓	To be trustworthy to users	High	Admin
0.22	Supportability		✓	To be capable of being supportive	High	Admin
0.23	Portability		✓	Application must be able to run in many different system.	High	Admin

## 2.2 Use Case Diagram

### 2.2.1 Use Case Table







Level 0	Level 1	Level 2	Actor
<b>Chat Application</b>	Authentication System	Registrar Login Logout	 User
	Contacts Form	Friend List Find Friend Add Friend Remove Friend Block Friend	 User
	Chat Form	Send Message Group Chat Best Friend	 User
	Maintenance	User's Profile Database	 Admin
	Monitor	Check History Feedback	  Admin    User

Figure 1: Use Case Table of Chat Application

### 2.2.2 Authentication System

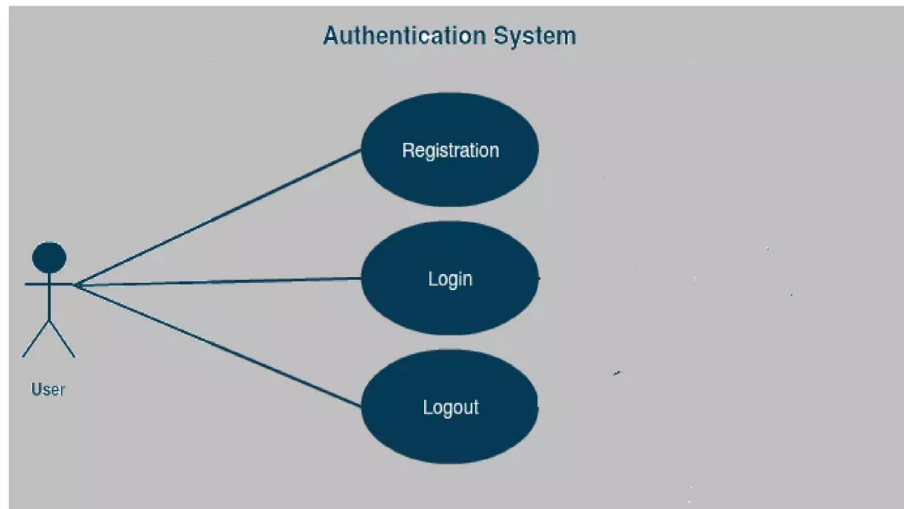


Figure 2: Use Case Diagram of Authentication System

### 2.2.3 Contacts Form

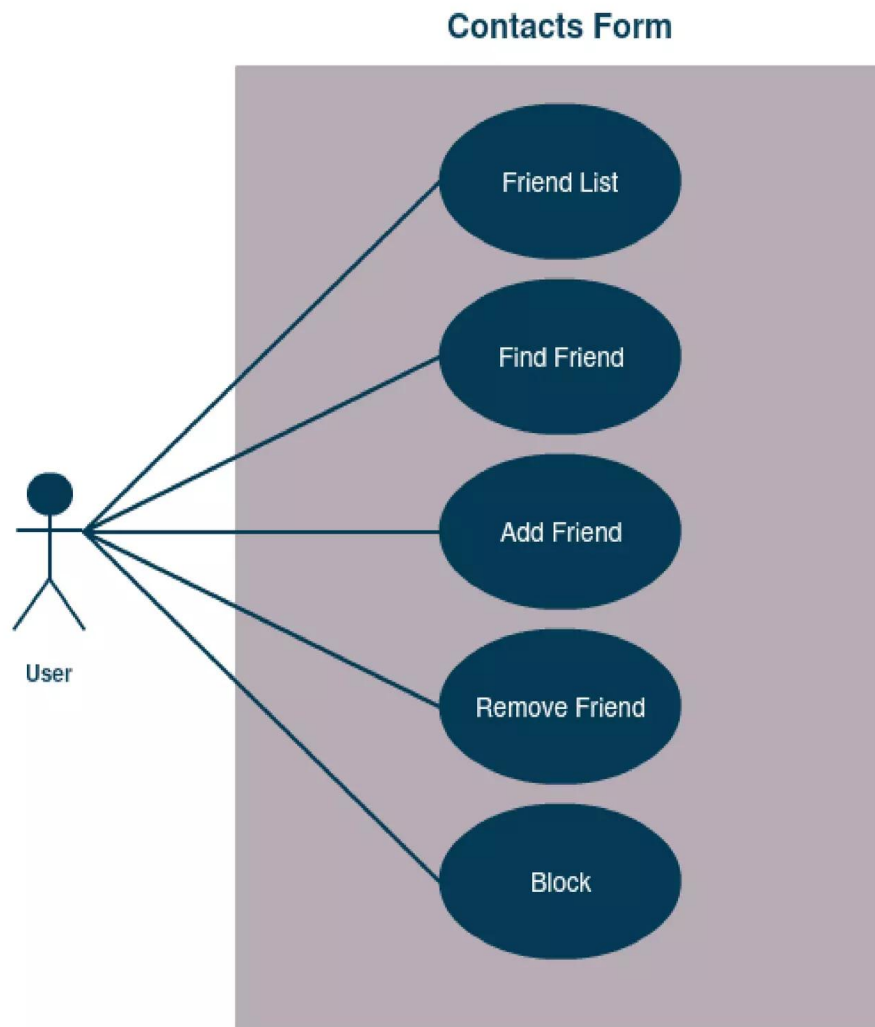


Figure 3: Use Case Diagram of Contacts Form



#### 2.2.4 Chat Form

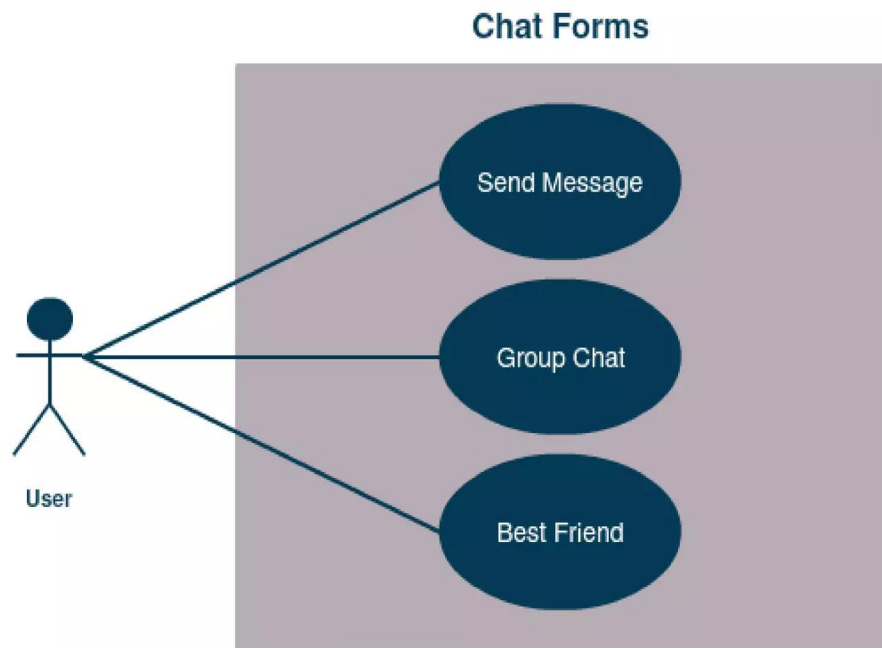


Figure 4: Use Case Diagram of Chat Form

### 2.2.5 Maintenance

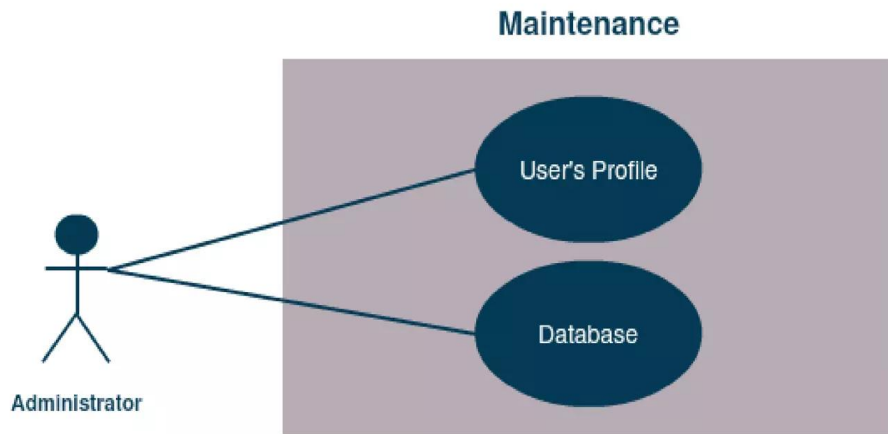


Figure 5: Use Case Diagram of Maintenance

### 2.2.6 Monitor

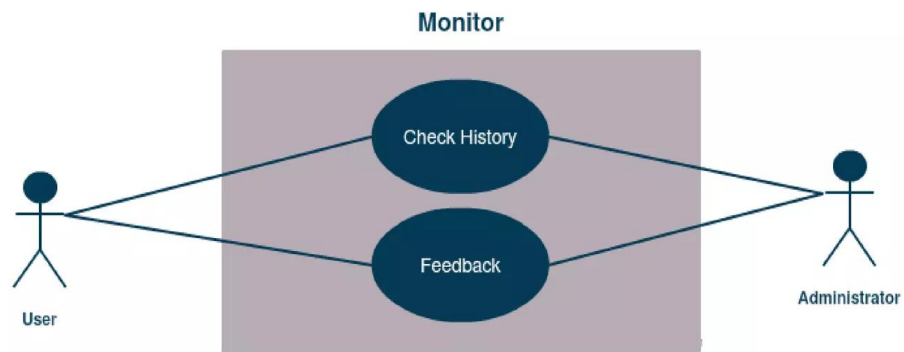


Figure 6: Use Case Diagram of Monitor

## 2.3 Activity Diagram

### 2.3.1 Authentication System, Maintenance, Monitor

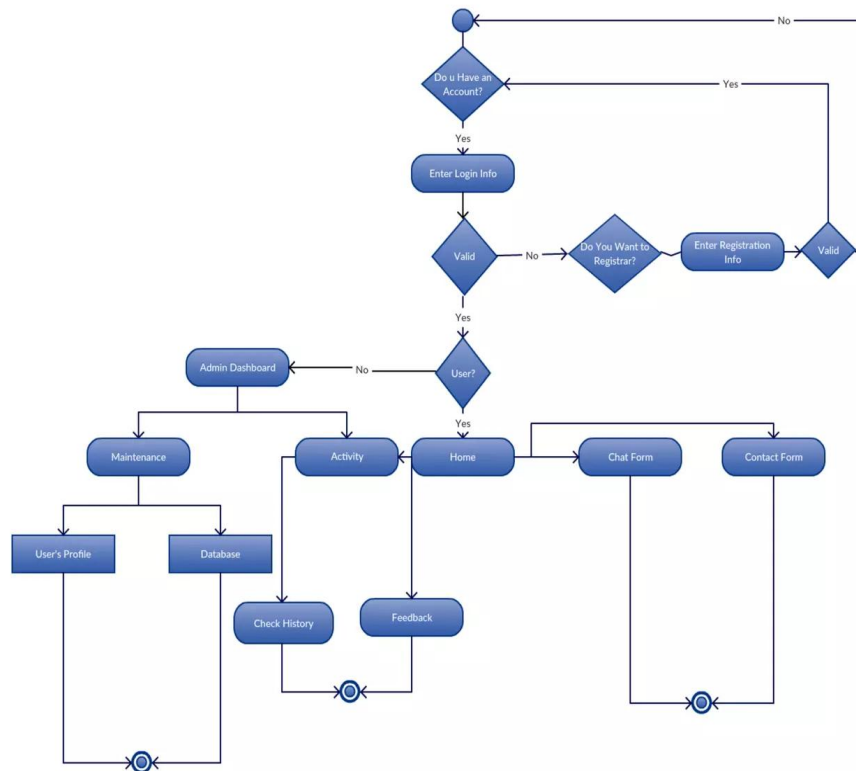


Figure 7: Activity Diagram of Authentication System, Maintenance, Monitor

### 2.3.2 Contacts Form, Chat Form

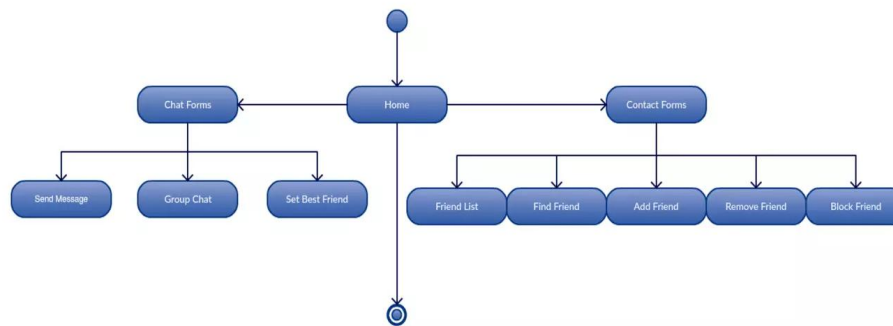


Figure 8: Activity Diagram of Contacts Form, Chat Form

## 2.4 Contacts Form, Chat Form

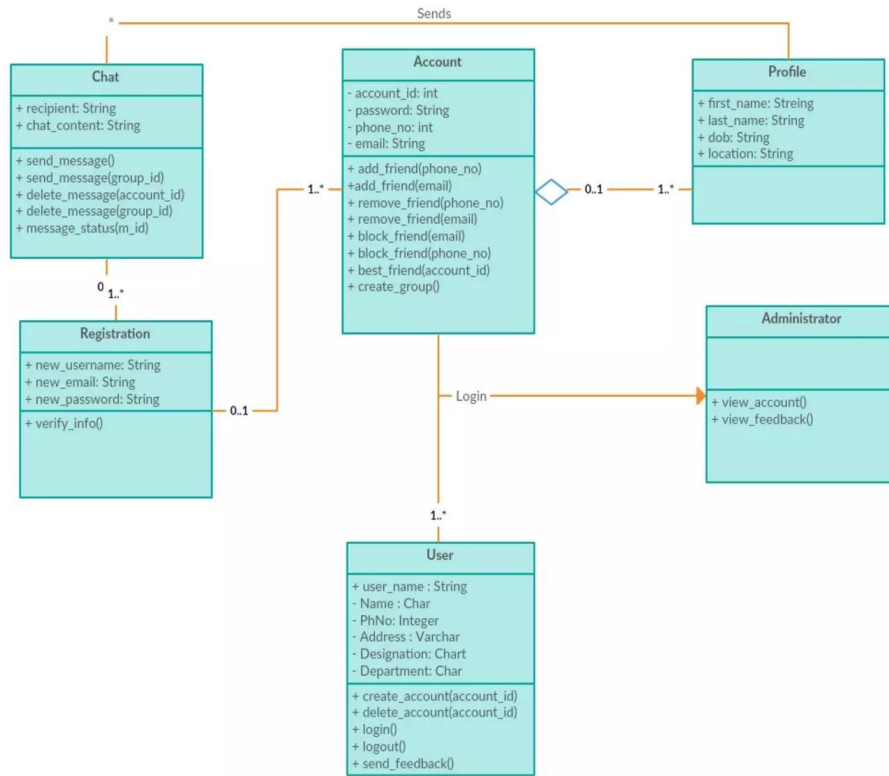


Figure 9: Class Diagram of Chat Application

## 2.5 Entity Relationship Diagram

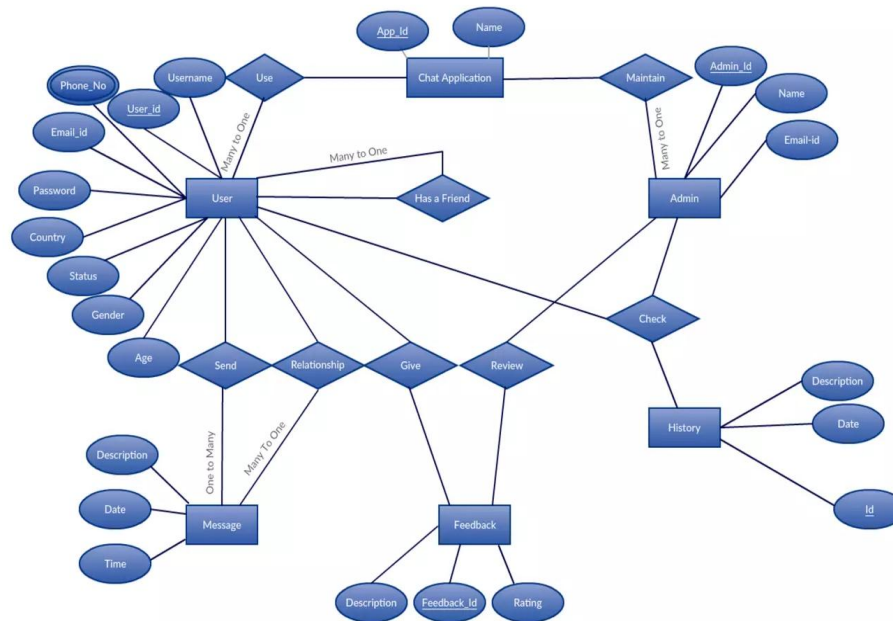


Figure 10: Entity Relationship Diagram of Chat Application

## 2.6 Sequence Diagram

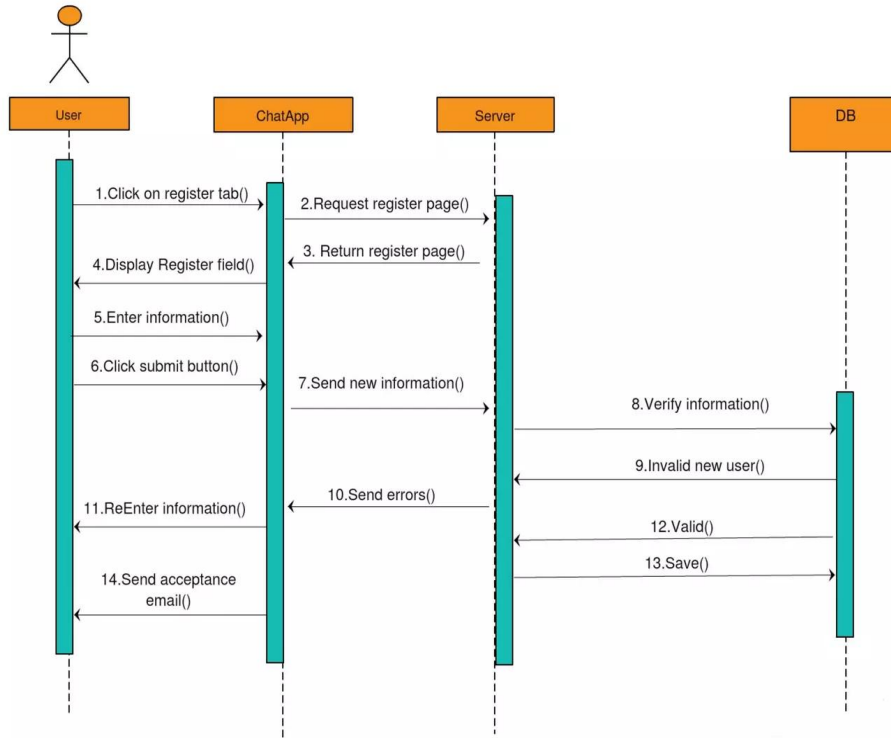


Figure 11: Sequence Diagram of Registration Functionality



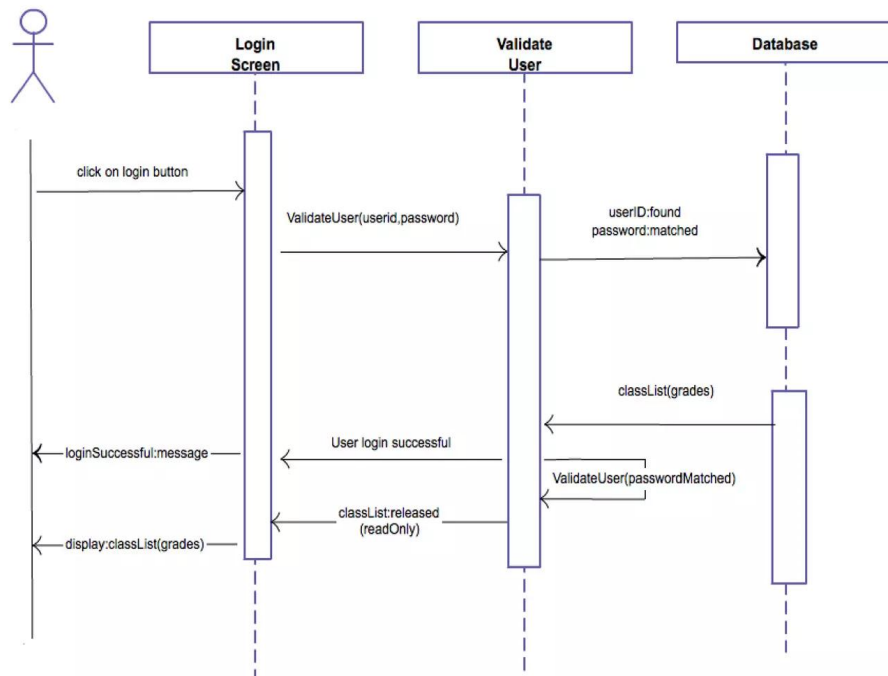


Figure 12: Sequence Diagram of Login Functionality

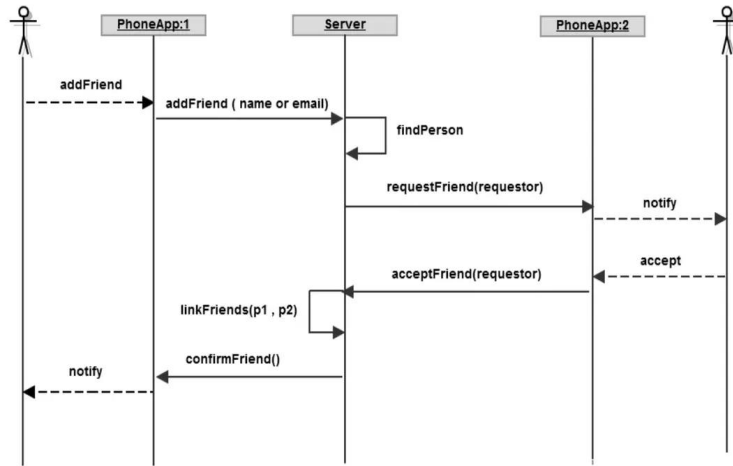


Figure 13: Sequence Diagram of Add Friend Functionality

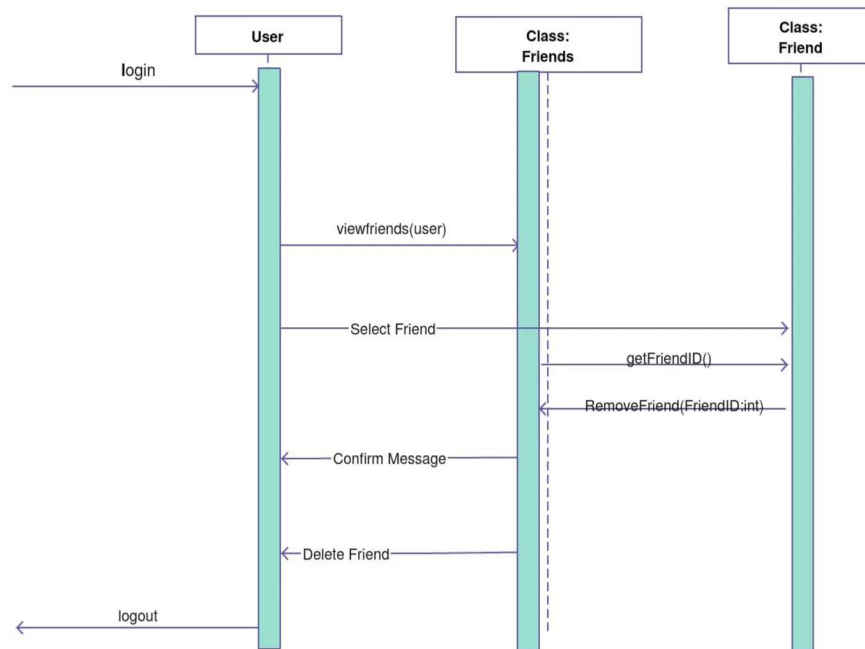


Figure 14: Sequence Diagram of Remove Friend Functionality

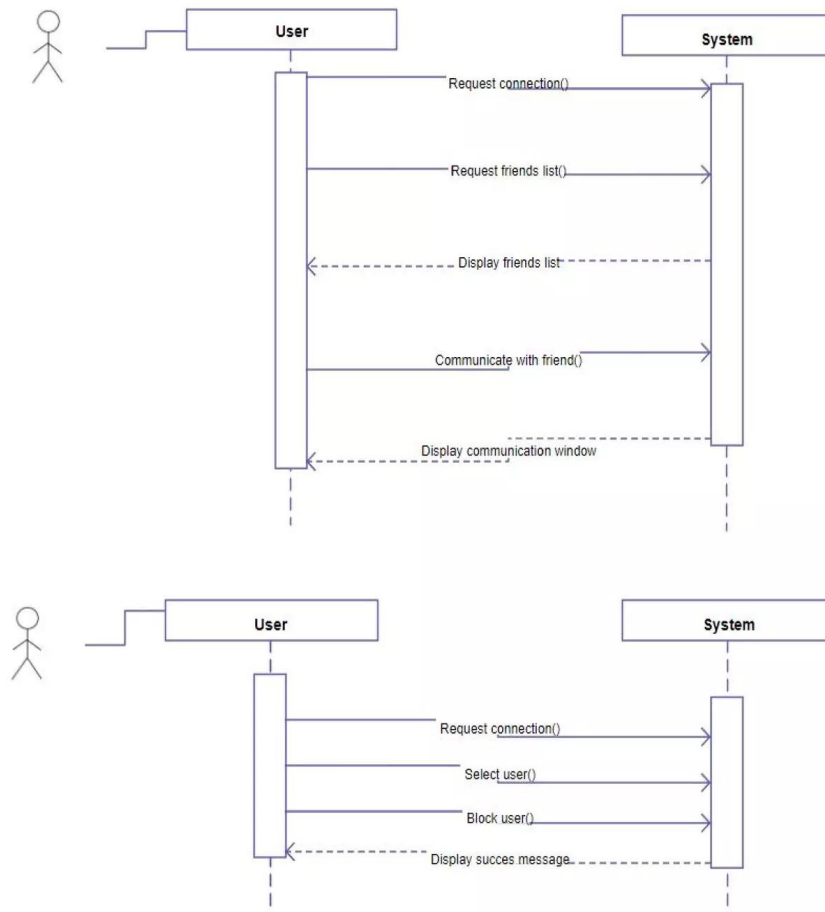


Figure 15: Sequence Diagram of Block friend Functionality

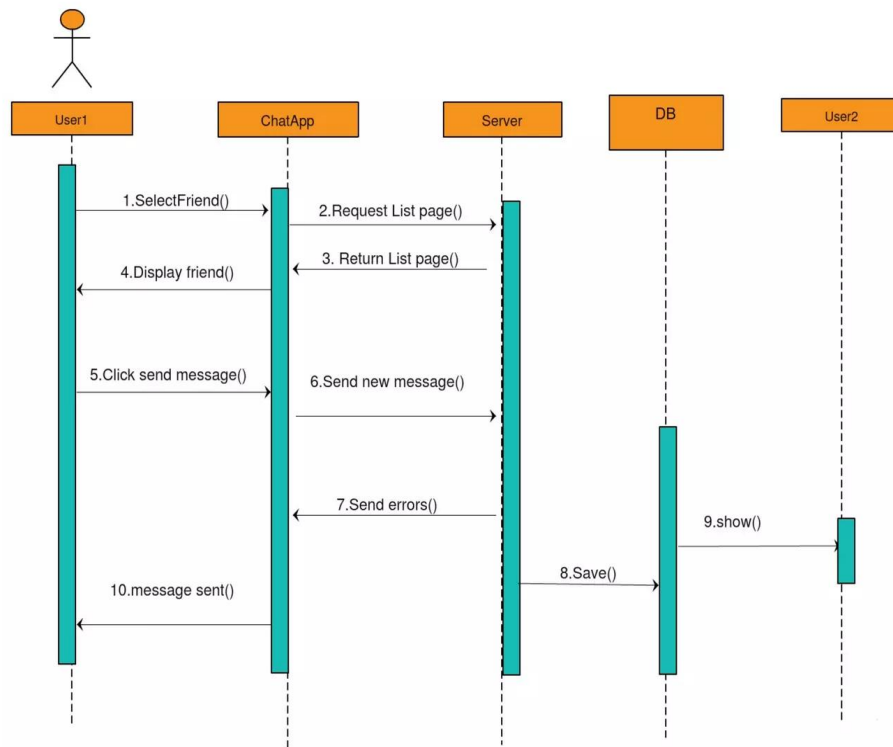


Figure 16: Sequence Diagram of Send Message Functionality

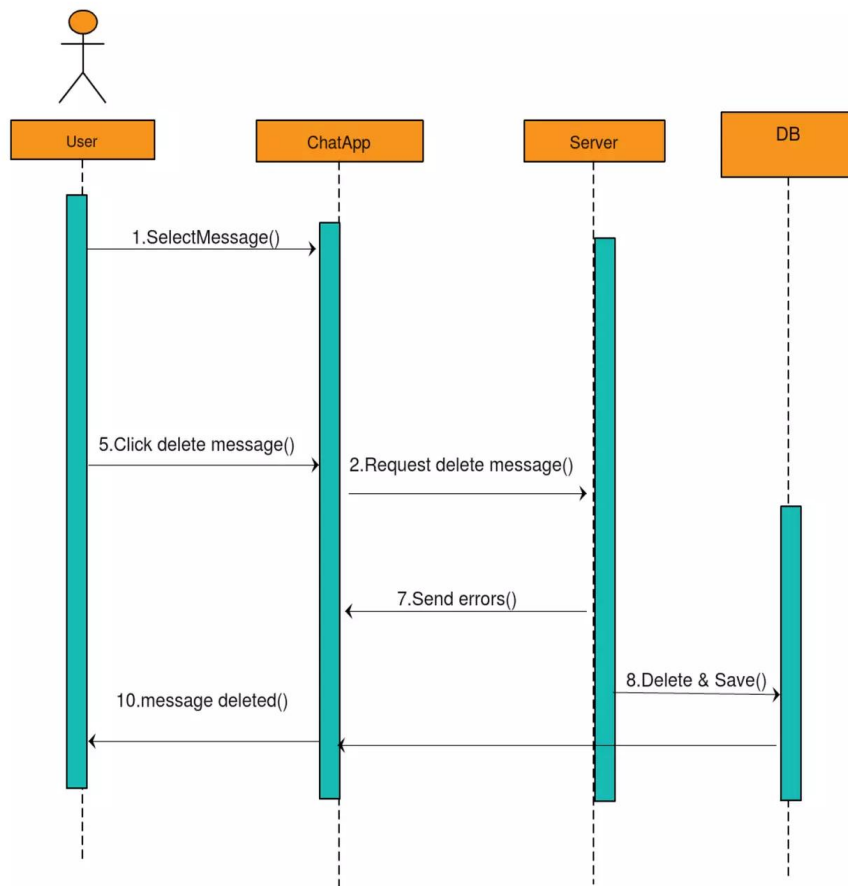


Figure 17: LSequence Diagram of Delete Message Functionality

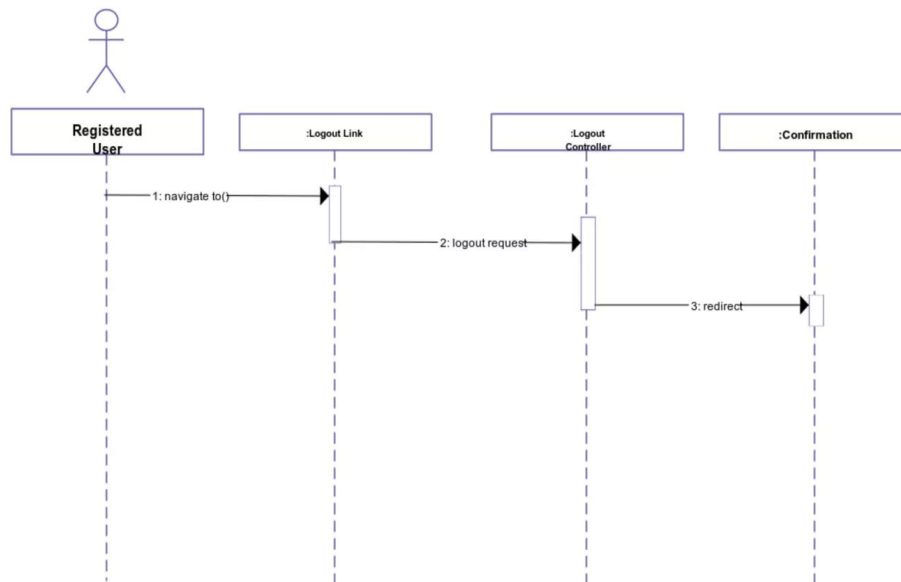


Figure 18: Sequence Diagram of Logout Functionality

## 2.7 Data Flow Diagram

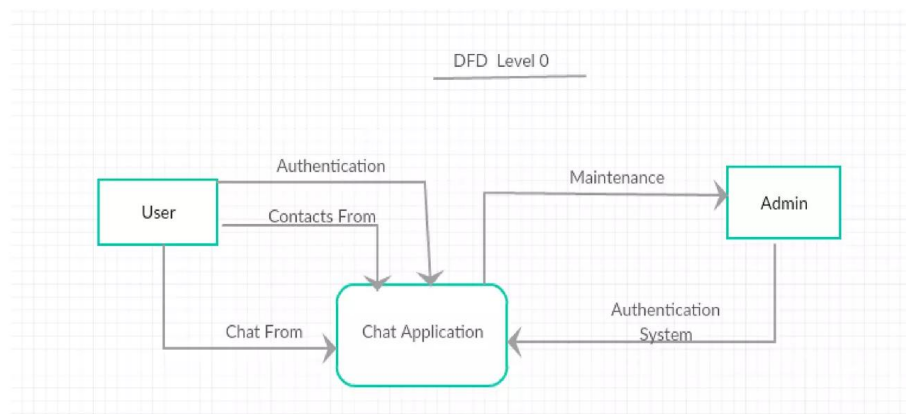


Figure 19: Level-0 Data Flow Diagram of Chat Application

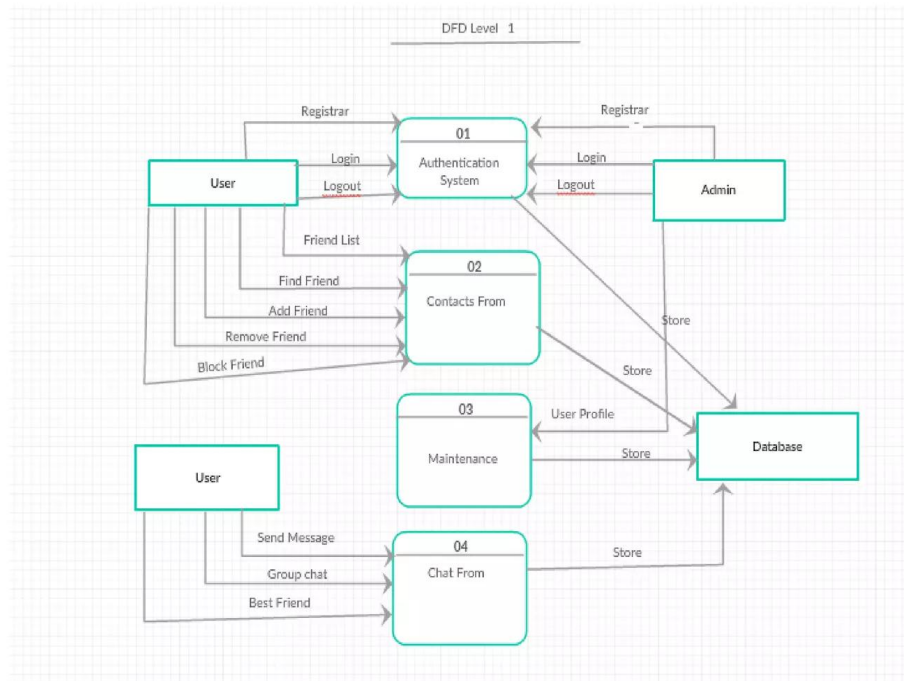


Figure 20: Level-1 Data Flow Diagram of Chat Application