

CHAT APPLICATION

Documentation

Team Shadow

April 11 2017

Instructor: Lamisha Rawshan

ACKNOWLEDGEMENT

If words are considered as a symbol of approval and token of appreciation then let the words play the heralding role expressing my gratitude. The satisfaction that accompanies that the successful completion of any task would be incomplete without the mention of people whose ceaseless cooperation made it possible, whose constant guidance and encouragement crown all efforts with success. We are grateful to teacher Ms. Lamisha Rawshan for the guidance, inspiration and constructive suggestions that helpful us in the preparation of this project.

ABSTRACT

Teleconferencing or 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 2 applications the client application, which runs on the users Android Device and server application, which runs on any Android Device on the network. To start chatting client should get connected to server where they can do private and group chat security measures were taken during the last one.

LETTER OF TRANSMITTAL

April 11 2017

Mam Lamisha Rawshan

Daffodil International University

Sukrabad, Dhaka

Dear Mam,

We would like to take the pleasure of presenting the final documentation of our project Chat Application. The purpose of the Document is to inform you about the use, operation, maintenance, or design of software or hardware through the use of manuals, listings, diagrams, and other hard- or soft-copy written and graphic materials. We have learnt a lot of new and unique things in the path of completing this project. We tried our best to use the guidelines and counseling provided by you to make this documentation as informative as possible. We express our heartiest gratitude, for providing us with the opportunity to complete this documentation on our Documentation of Software Engineering course.

We would be greatly obliged if you call us for any explanation or any query about the report as and when deemed necessary.

Sincerely Yours,

Mourin Mondol

152-35-1298

Signature:

Date:

Ashiqur Rahman

152-35-1264

Signature:

Date:

Department of Software Engineering

Daffodil International University

Teacher's Signature & Date

Contents

1	Introduction	3
1.1	Problem Statement	3
1.2	Project Scheduling	
	3	
1.3	Business Requirement Documentation	5
1.3.1	AMENDMENT HISTORY	
	5	
1.3.2	Overview	5
1.3.3	Stakeholders	5
1.3.4	Business Process Affected	5
1.3.5	Applications	5
1.3.6	Assumptions	5
1.3.7	Risks	5
1.3.8	Related Documents	6
1.3.9	Functional Requirements	6
1.3.10	Non-Functional Requirements	6
1.4	Organization Of Document	7
2	Software Requirement Specification	7
2.0.1	Purpose	7
2.1	Project Scope & Features	7
2.2	PROJECT SUMMARY	8
2.2.1	Project Background	8
2.3	Functional and Non Functional Requirements	
	8	
2.3.1	Functional Requirements	
	8	
2.3.2	Non Functional Requirements	
	9	
2.4	Use Case Table	10
2.5	Use Case Diagram	11
2.6	Authentication System	11
2.6.1	Contacts Form	12
2.6.2	Chat Form	13
2.6.3	Maintenance	14
2.6.4	Monitor	15

2.7	Activity Diagram	16
2.7.1	Authentication System, Maintenance, Monitor	16
2.7.2	Contacts Form, Chat Form	17
2.8	Entity Relationship Diagram	18
2.9	Data Flow Diagram	19
2.10	METHODOLOGY	20
2.10.1	Project Summary	20
2.11	Project Deliverable's	20
2.12	Hardware Interface	20
2.13	Constraints and Limitations	20
2.13.1	Constraints and Limitations	20
3	Project Risk Management	21
3.1	Identification	21
3.2	Analysis and evaluation	22
3.3	Risk Registrar	23
3.4	Risk Matrix	23
4	Implementation and Testing	24
4.1	Tools & Technology	24
4.2	Test Plan	27
4.2.1	Test Plan Identifier	27
4.2.2	References	27
4.2.3	Introduction	27
4.2.4	Test Items	28
4.2.5	Software Risk Issues	29
4.2.6	Features To Be Tested	30
4.2.7	Features Not To Be Tested	31
4.2.8	Approach	31
5	User Manual	33
5.1	Processes	33
5.2	Registration for new Member	33
5.3	Login Features	34
5.4	Private Chatting	35
5.5	Adding Friend	36
5.6	Chat Forms	37
5.7	Block Friend	38

5.8	Settings	39
5.9	Conclusion	40
5.10	Troubleshooting	40
5.11	Frequently asked question	40
5.12	Technical Support	43
6	References	43

List Of Tables

1. Amendment History	4
2. Stakeholders	4
3. Functional Requirements	5
4. Non Functional Requirements	5
5. Probability of Occurrence	21
6. Seriousness of Impact	22
7. Risk Registrar	22
8. Risk Matrix	22
9. Function to be Tested	30
10. Functions not to be tested	39

List Of Figures

1. Work Breakdown Structure	3
2. Project Schedule	3
Use Case Diagrams:	
3. Use Case Table	9
4. Authentication System Use Case Diagram	10
5. Contacts Forms	11
6. Chat Form	12
7. Maintenance	13
8. Monitor	14
Activity Diagram:	
9. Authentication, Maintenance, Monitor	15
10. Contact Form, Chat Form	16
11. Entity Relationship Diagram	17
12. Data Flow Diagram	18
App Layout:	
13. Registration	32
14. Login	33
15. Private Chatting	34
16. Add Friend	35
17. Chat Form	36
18. Block Friend	37
19. Settings	38

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.

1.1 Problem Statement

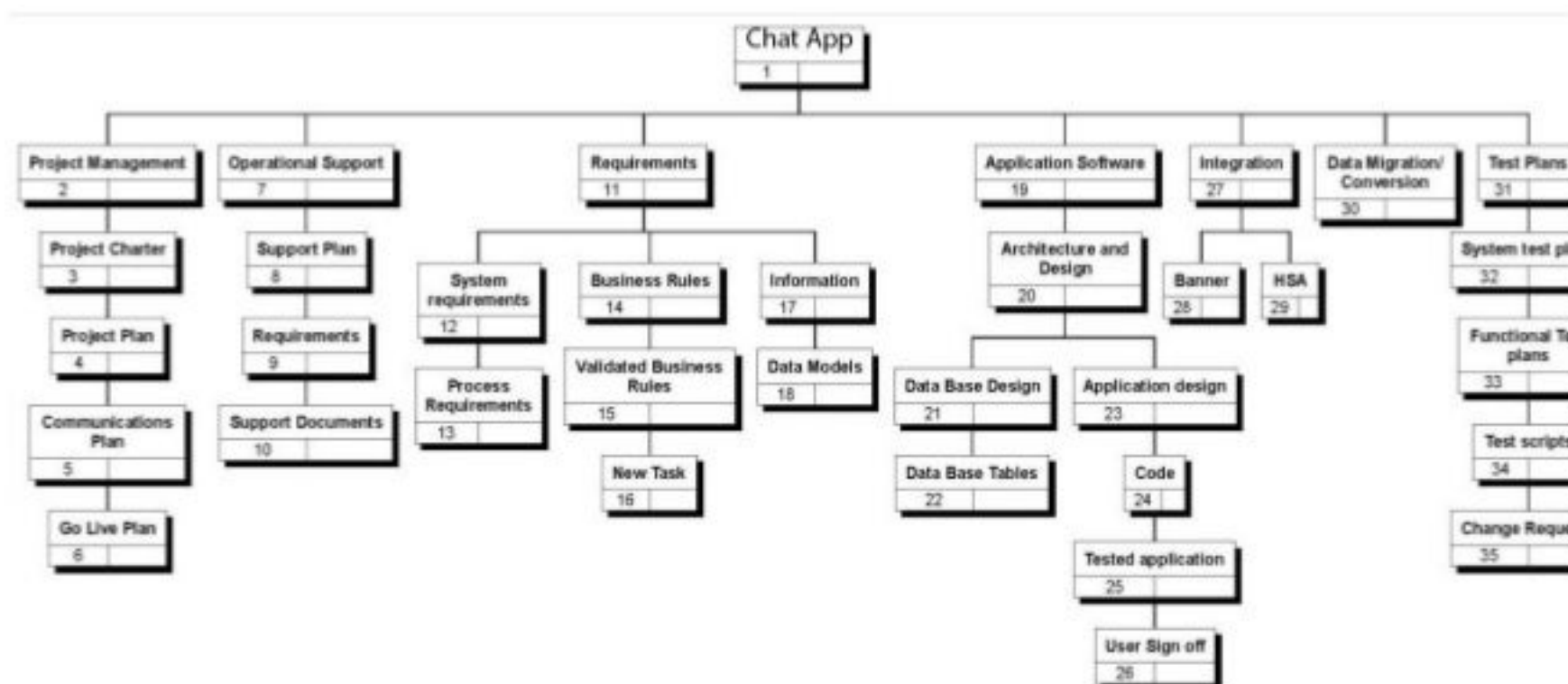
This project is to create a chat application with a server and users to enable the users to chat with each others.

To develop an instant messaging solution to enable users to seamlessly communicate with each other.

The project should be very easy to use enabling even a novice person to use it.

1.2 Project Scheduling

This document provides a scalable scheduling tool and associated schedule development, analysis, and monitoring methods that can be used by Implementing Agencies (IA) to prepare, monitor, and report project schedules. Our Project is not that complex so we will not use very complex scheduling method.



PROJECT SCHEDULE



1.3 Business Requirement Documentation

1.3.1 AMENDMENT HISTORY

Version	Prepared By	Date	Description
1.0	Mourin Mondol	11.04.2017	First Version

1.3.2 Overview

This Requirements Document will provide the requirements for a Chat Application. Both functional and non requirements will be documented. functional requirements will be documented.

1.3.3 Stakeholders

Stakeholder name	Organization	Role
Mourin Mondol	Team Shadow	President
Rajon	Team Shadow	Treasurer
Rajon	Team Shadow	Secretary

1.3.4 Business Process Affected

The following business process are in scope:

New Members

Review

Contacts

1.3.5 Applications

Chat Applications are in scope.

1.3.6 Assumptions

n/a

1.3.7 Risks

n/a

1.3.8 Related Documents

n/a

1.3.9 Functional Requirements

Requirement ID	Statement	Must/Want
FR001	This app must have Privacy for user	Must
FR002	This App Should have Friend List	Must
FR003	Users shall be able to clear chat history	Must
FR004	User shall be able to add friend	Must
FR005	User shall be able to block or remove friend	Must
FR006	User shall be able to Contacts with Maintenance team	Want

1.3.10 Non-Functional Requirements

ID	Statement	Must/Want
NFR001	Chat App should be secure from hackers	Must
NF002	All data must be backed up	Must
NF003	Chat Application will be ready to launch within 60 days	Want

1.4 Organization Of Document

Chapter 1: This Chapter include Initiation of this project where we will analyze Problem, Project Schedule & Business Requirement Documentation

Chapter 2: This Chapter is all about SRS where we Design our Project. Which include Use Case, Activity , ERD and DFD.

Chapter 3: Here, we analyze Possible Risk during the development phase of our project.

Chapter 4: In this Chapter we discuss about Tools & Techniques we will follow through development phase. And Our Test Plan. Here we gonna dp Master test plan.

Chapter 5: This Chapter is a Manual or step by step guide for user about all the features and installation of our project.

2 Software Requirement Specification

2.0.1 Purpose

However , the purpose of this project is to develop a java chat application. The objective of this process is as follows;

1. To develop an instant messaging solution to enable users to seamlessly communicate with each other.
2. The project should be very easy to use enabling even a novice person to use it.

2.1 Project Scope & Features

1. Broadcasting Chat Server Application is going to be a text communication software, it will be able to communicate between two computers using point to point communication.

2. The limitation of Live Chat is it does not support audio conversations. To overcome this limitation we are concurrently working on developing better technologies.
3. Companies would like to have a communication software wherein they can communicate instantly within their organization.
4. The fact that the software uses an internal network setup within the organization makes it very secure from outside attacks.

2.2 PROJECT SUMMARY

2.2.1 Project Background

The previous work of this already exists. The similar application can be found on the project either Android market. This project will focus on providing high quality usability experiences to users mainly following Googles user interface guideline. Experiments The application will be tested on a test group to improve the usability quality based on the user's feedback.

2.3 Functional and Non Functional Requirements

2.3.1 Functional Requirements

1. User Registration
User must be able to register for the application through a valid phone number. On installing the application, user must be prompted to register their phone number. If user skips this step, application should close. The users phone number will be the unique identifier of his/her account on Chat Application.
2. Adding New Contacts
The application should detect all contacts from the users phone book. If any of the contacts have user accounts with Chat Application, those contacts must automatically be added to the users contact list on Chat

Application. If any of the contacts have not yet registered on Chat Application, user should be provided with an invite option that sends those contacts a regular text message asking them to join Chat Application along with a link to the Chat Application on Google Playstore.

3. Send Message

User should be able to send instant message to any contact on his/her Chat Application contact list. User should be notified when message is successfully delivered to the recipient by displaying a tick sign next to the message sent.

4. Broadcast Message

User should be able to create groups of contacts. User should be able to broadcast messages to these groups.

5. Message Status

User must be able to get information on whether the message sent has been read by the intended recipient. If recipient reads the message, 2 ticks must appear next to the message read.

2.3.2 Non Functional Requirements

1. Privacy

Messages shared between users should be encrypted to maintain privacy.

2. Robustness

In case users device crashes, a backup of their chat history must be stored on remote database servers to enable recoverability.

3. Performance

Application must be lightweight and must send messages instantly.

2.4 Use Case Table








Level 0	Level 1	Level 2	Actor
Chat Application	Authentication System	Registrar Login Logout	  User Admin
	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

2.5 Use Case Diagram

2.6 Authentication System

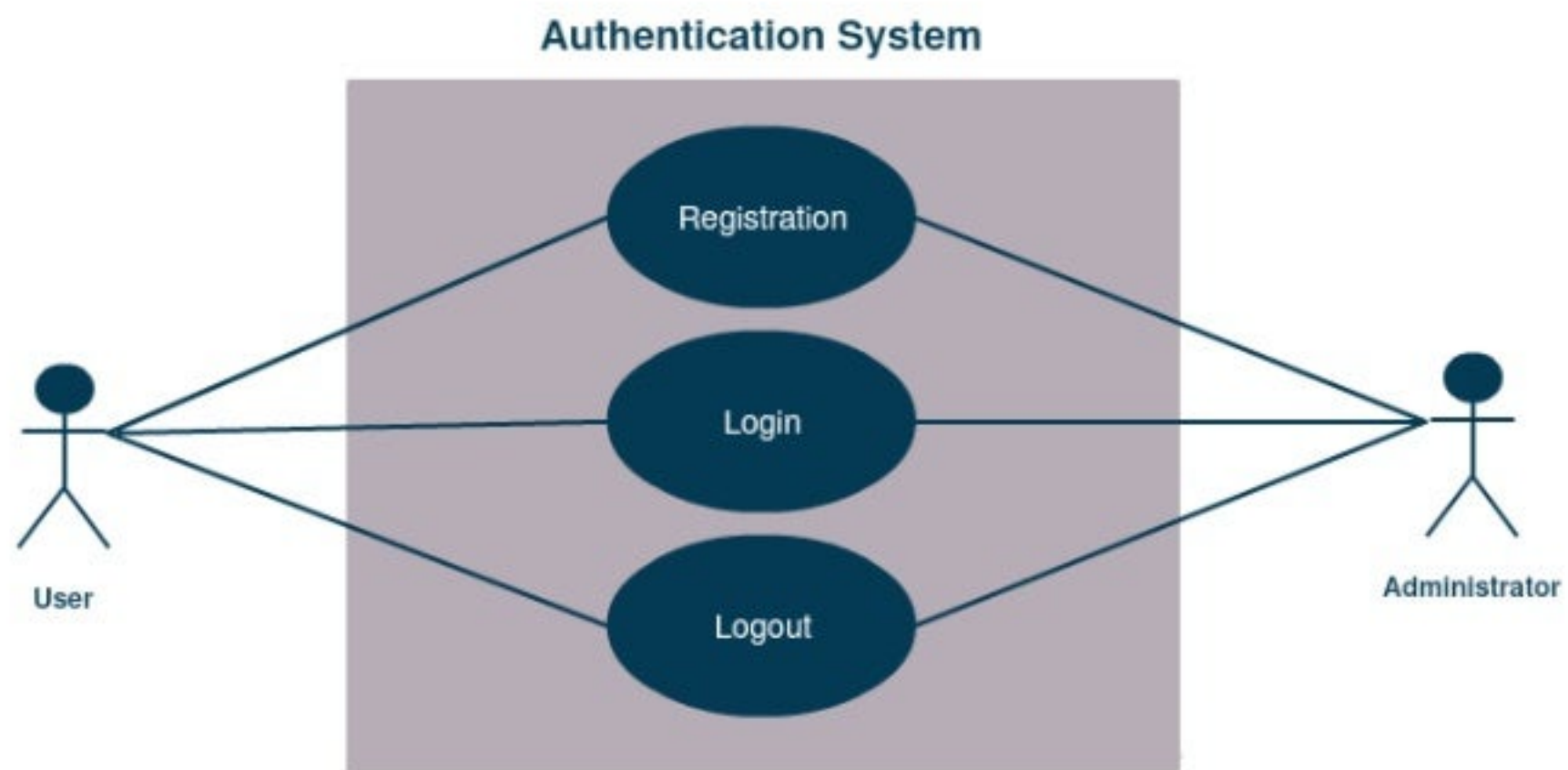


Figure 2: Use Case Diagram of Authentication System

2.6.1 Contacts Form

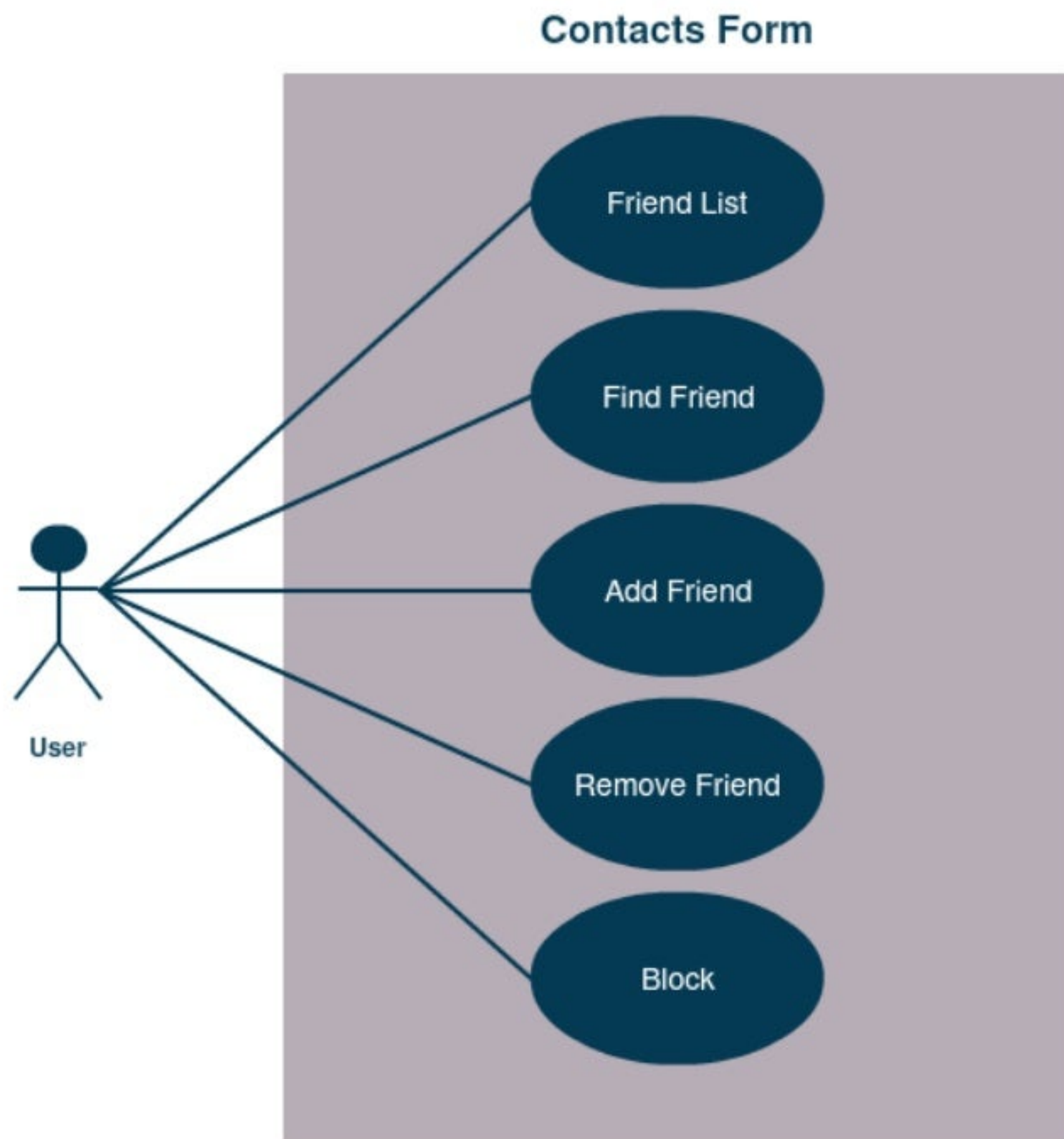


Figure 3: Use Case Diagram of Contacts Form

2.6.2 Chat Form

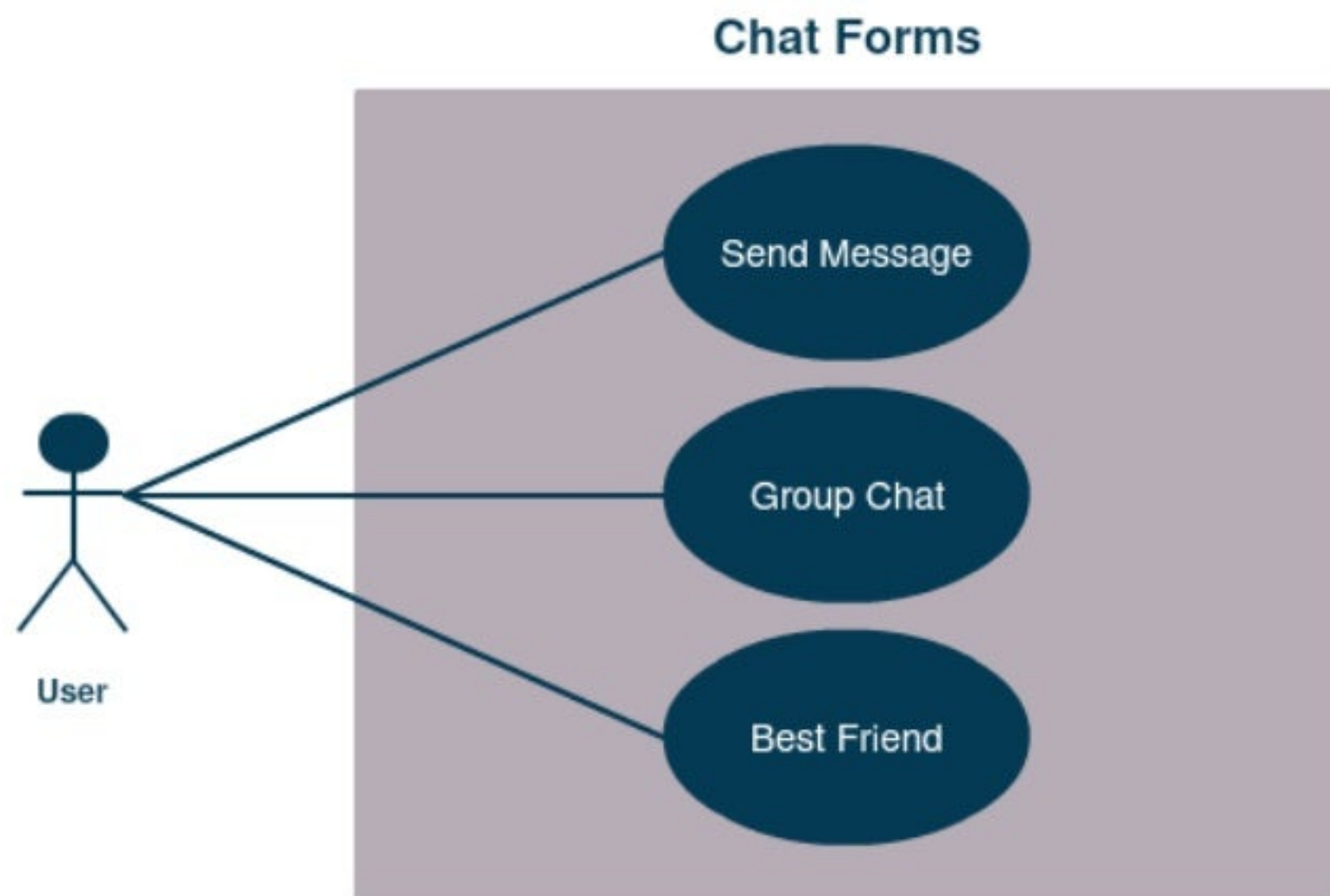


Figure 4: Use Case Diagram of Chat Form

2.6.3 Maintenance

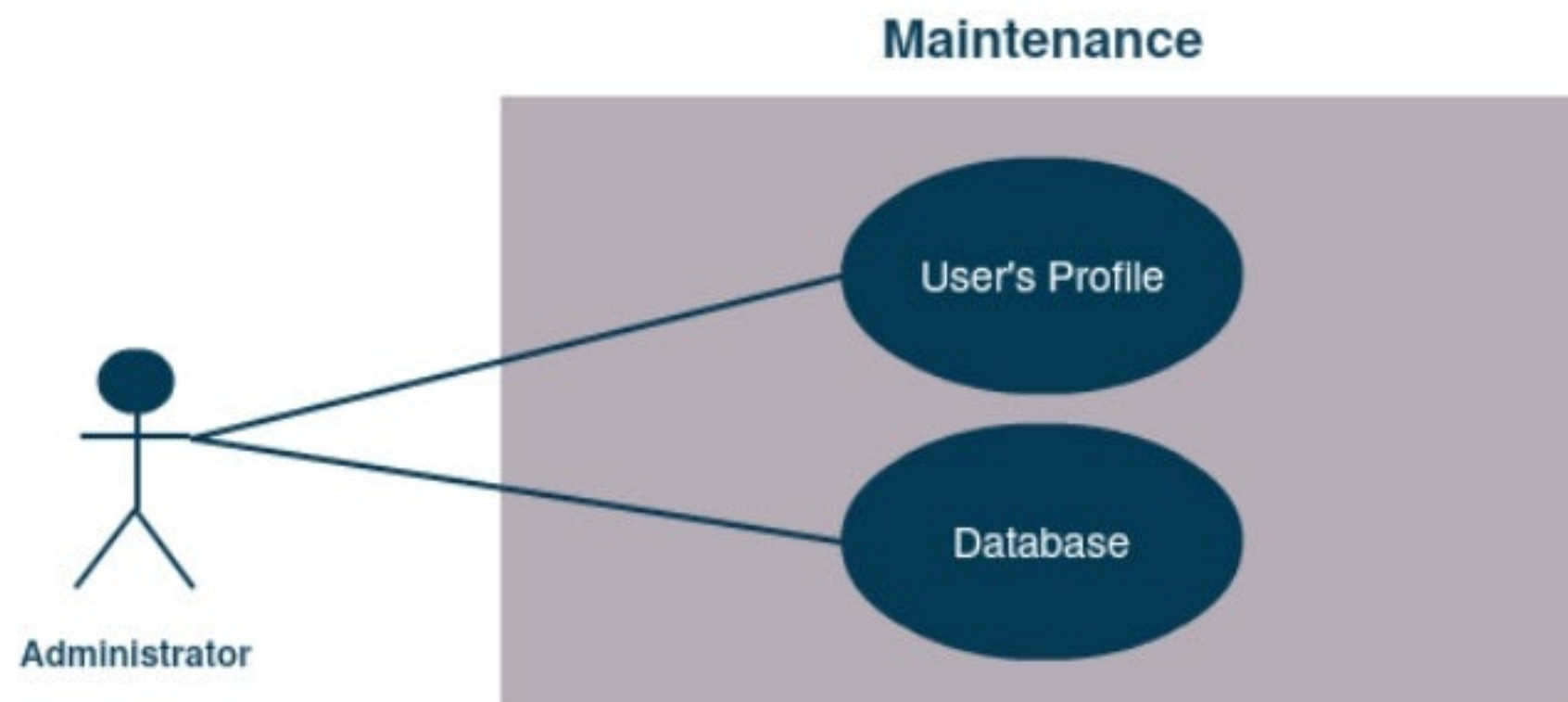


Figure 5: Use Case Diagram of Maintenance

2.6.4 Monitor



Figure 6: Use Case Diagram of Monitor

2.7 Activity Diagram

2.7.1 Authentication System, Maintenance, Monitor

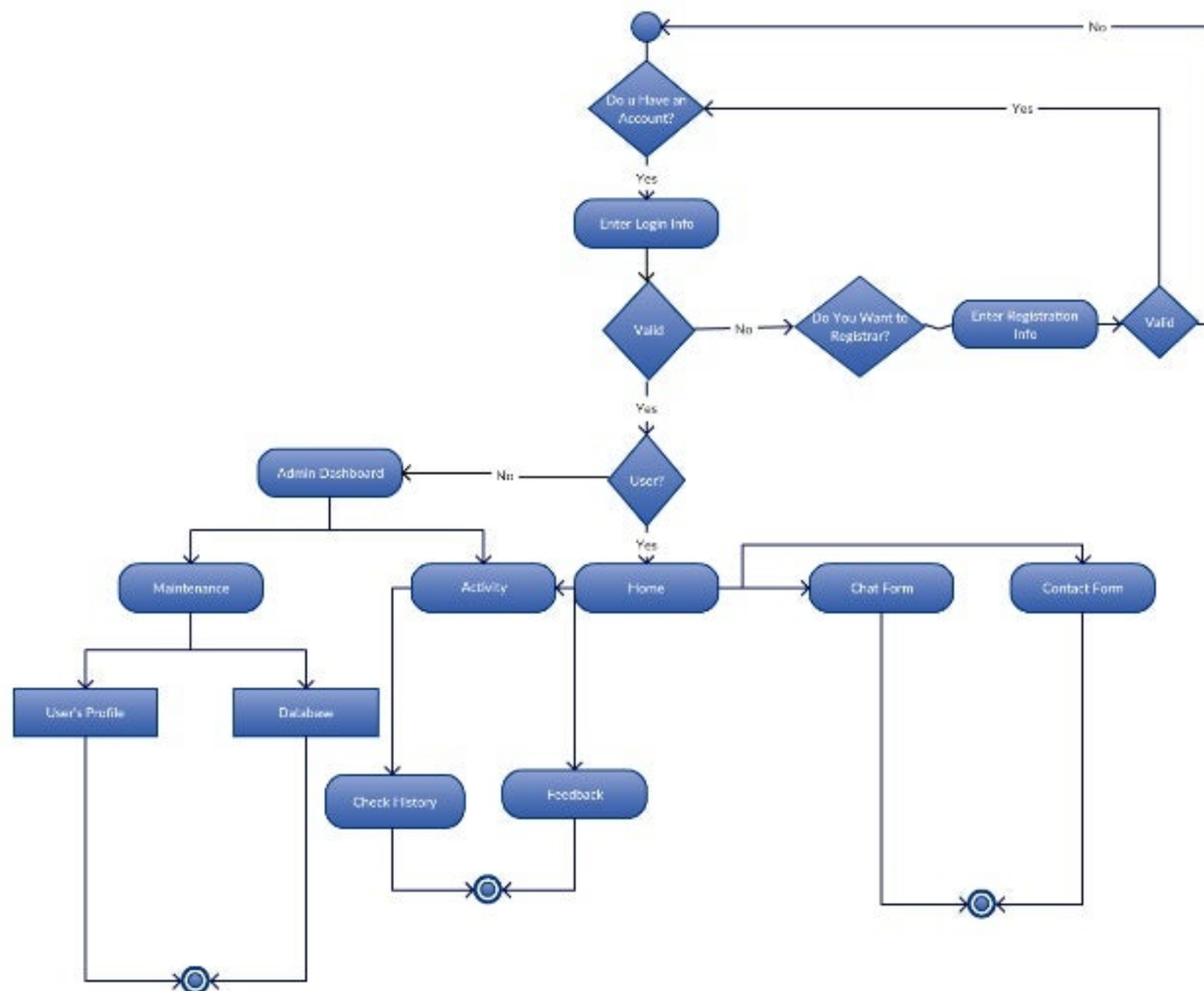


Figure 7: Activity Diagram of Authentication System, Maintenance, Monitor

2.7.2 Contacts Form, Chat Form

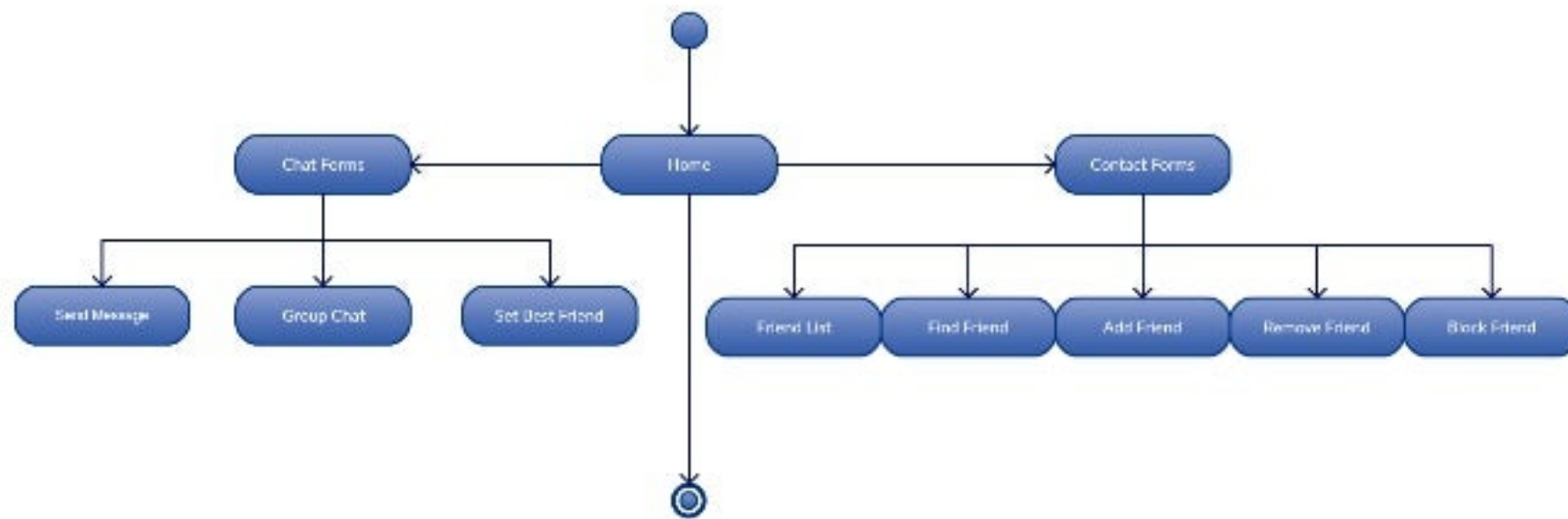


Figure 8: Activity Diagram of Contacts Form, Chat Form

2.8 Entity Relationship Diagram

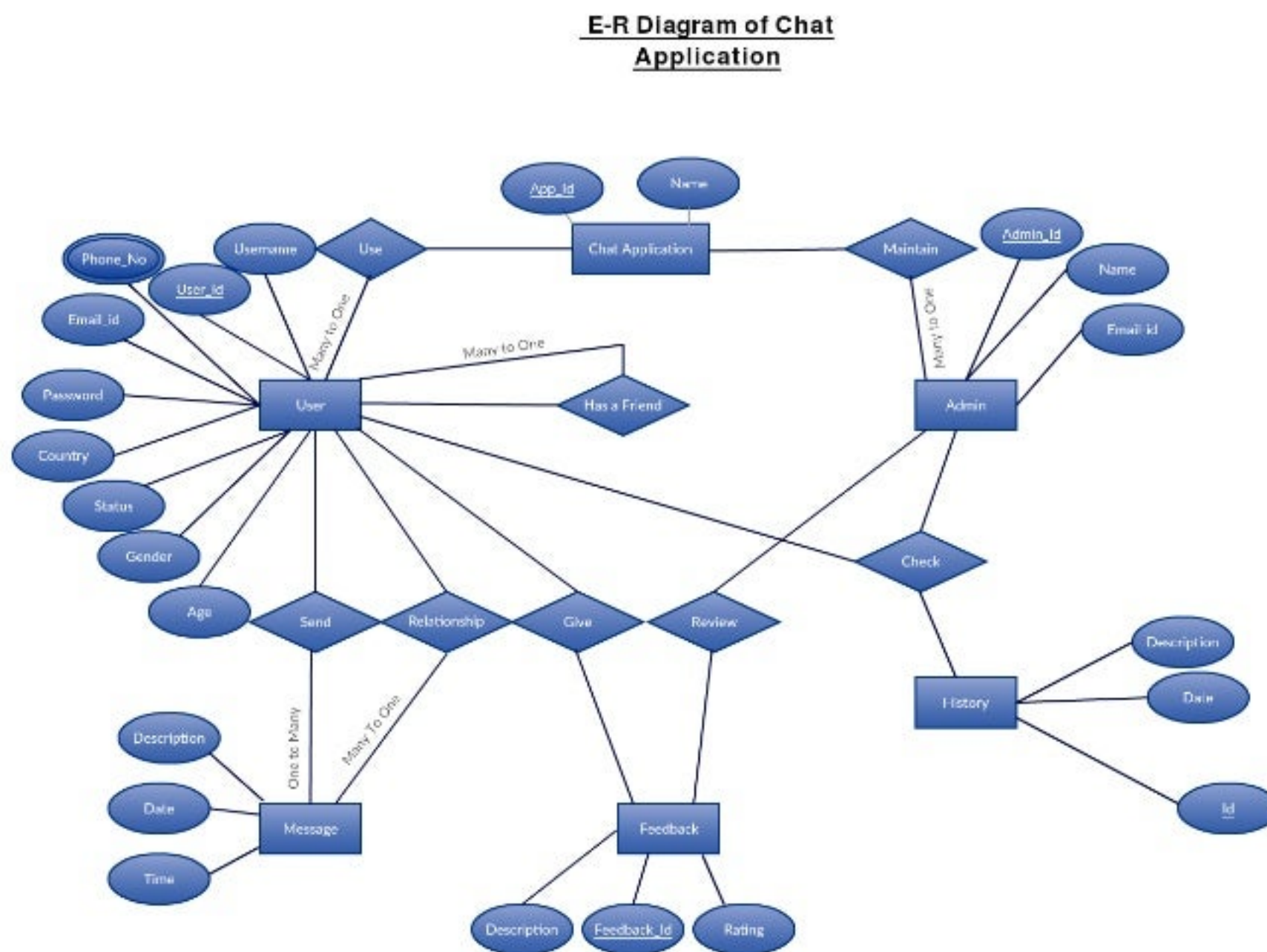


Figure 9: Entity Relationship Diagram of Chat Application

2.9 Data Flow Diagram



Figure 10: Data Flow Diagram of Chat Application

2.10 METHODOLOGY

2.10.1 Project Summary

The user interacts with the tool using GUI. The GUI Operates in two forms, Contacts Forms and Chat forms. The contacts forms contains list of all friend and the Chat form will be used to chat with friends.

2.11 Project Deliverable's

1. An android app
2. Documentation
3. Readme File

2.12 Hardware Interface

- Android Phone
- 128 MB minimum RAM Required
- Internet or LAN Connections
- Processor with Speed of 500 MHz

2.13 Constraints and Limitations

2.13.1 Constraints and Limitations

The system must be connected with internet. User only can use or install this app on android devices. This app doesnt have video and audio calling system . We may add it in later version.

3 Project Risk Management

3.1 Identification

Risk identification involves determining which risks or threats are likely to affect the project. It involves the identification of risks or threats that may lead to project outputs being delayed or reduced, outlays being advanced or increased and/or output quality (fitness for purpose) being reduced or compromised. For most large/complex projects, a number of high level risks should have been identified during the project initiation stage these should be used as the basis for a more thorough analysis of the risks facing the project. One of the most difficult things is ensuring that all major risks are identified. A useful way of identifying relevant risks is defining causal categories under which risks might be identified. For example, corporate risks, business risks, project risks and infrastructure risks. These can be broken down even further into categories such as environmental, economic, political, human, etc. Another way is to categorise in terms of risks external to the project and those that are internal. See the Project Management Risk Identification Tool for some useful prompts in identifying project risks. The Australian Standard for Risk Management AS/NZS 4360: 2004 Appendix D refers to generic sources of risk. The wording or articulation of each risk should follow a simple two-step approach: 1. Consider what might be a trigger event or threat (eg. poor quality materials causes costs to rise) several triggers may reveal the same inherent risk; then 2. Identify the risk - use a newspaper headline style statement short, sharp and snappy (eg. budget blow out) then describe the nature of the risk and the impact on the project if the risk is not mitigated or managed (eg. project delayed or abandoned, expenditure to date wasted, outcomes not realised, government embarrassed etc). Use the Risk Register (see Appendix A) to document the results. For large or complex projects it can be beneficial to use an outside facilitator to conduct a number of meetings or brainstorming sessions involving (as a minimum) the Project Manager, Project Team members, Steering Committee members and external key stakeholders. Preparation may include an environmental scan, seeking views of key stakeholders etc. For a small project, the Project Manager may develop the Risk Register perhaps with input from the Project Sponsor/Senior Manager and colleagues, or a small group of key stakeholders. It is very easy to identify a range of risks that are outside the project and are actually risks to the business area during output delivery,

transition or once operational mode has been established. These are not project risks and should not be included in the Project Risk Register, but referred to the relevant Business Owner. It may be appropriate to submit an Issues Paper to the Steering Committee recommending formal acceptance by the relevant Business Owner for ongoing monitoring and management of specific risks. See the Project Management Fact Sheet: Developing a Risk Management Plan and the Risk Identification Tool for more information on how to undertake risk identification.

In this section specify:

1. Risk identification process that we followed are Brainstorm, facilitated session, scan by Project Manager etc.

3.2 Analysis and evaluation

After identifying risks we should analyze them by determining how they might affect the success of your project. Risks should be analyzed and evaluated in terms of Probability of occurrence and seriousness of impact if they do occur. Firstly, assess the likelihood of the risk occurring and give this a rating of scale from 1-5. The likelihood of harm occurring might be categorized as:

Probability of occurrence

Certain	5	The risk is almost certain to occur (greater than 80% chance)
Likely	4	The risk is more likely to occur than not (between 51% and 80% chance)
Possible	3	The risk is fairly likely to occur (between 21% and 50% chance)
Unlikely	2	The risk is unlikely but not impossible to occur (between 6% and 20% chance)
Rare	1	The risk is unlikely to occur (less than 5% chance)

Seriousness of impact

Catastrophic	5
Major	4
Moderate	3
Minor	2
Negligible	1

3.3 Risk Registrar

Risk ID	Risk Description	Impact	Probability	Risk Score
1.	Inadequate funding to complete the project	4	5	20
2.	Team not staffed in time	4	5	20
3.	Steering Committee unavailable	5	4	20
4.	Team not experienced	3	5	15
5.	Available resources	2	2	4
6.	Too many conflicting requirements	4	2	8
7.	Competition with others	4	2	8

3.4 Risk Matrix

Probability/Impact	Negligible(1)	Minor(2)	Moderate(3)	Major(4)	Catastrophic(5)
Certain (5)			4	1,2	
Likely (4)					3
Possible (3)					
Unlikely (2)		5		6,7	
Rare (1))					

	15 - 25	Extreme Risk
	8 - 12	High Risk
	4 - 6	Moderate Risk
	1 - 3	Low Risk

4 Implementation and Testing

4.1 Tools & Technology

Our technical team master a comprehensive set of tools and technologies during project development. A topic-oriented structure is provided below.

Product planning and innovation:

Quality planning:

Software-QFD

Product innovation:

Brainstorming, Mind-Map, TRIZ/ARIZ, Innovation algorithms

Software analysis, architecture and design:

Brainstorming

Mind-Map

Design patterns

UML tools and techniques

Rational Rose, Together, NetBeans, ArgoUML, MS Visio, Star UML Requirements matrix, VOCT, IDEF

Database modeling tools:

Embarcadero ER Studio, MySQL Workbench, DbVisualizer, Oracle SQL Developer, Toad

Project management:

Project planning and management:

MS Project, ScrumDesk

Effort estimation:

Top-down, PERT

Risk identification, evaluation and minimization:

Software-FMEA

Reporting and monitoring:

ISO 9001:2008, ArtSoft eQuality

Software development methodologies:

Agile, Scrum, Kamban, Scrum-ban, RUP, DSDM, etc.

Implementation:

Programming languages:

Java, PHP

Technologies, libraries and frameworks:

Java: JEE/J2EE, Java 2D, JSP, Apache Wicket, JMS, Swing, Spring, Struts, Hibernate, JPA, JSF, EJB, Java Security, Velocity, JMF, PAM, i18n, Apache Commons, GWT, JXL, JAccess, SiteMesh, Oracle Portal

PHP: CodeIgniter, CakePHP, Zend, Yii, Kohana, WordPress, Joomla, Drupal, MODX, Magento, Prestashop, IPBoard, Smarty

Mobile: PhoneGap, iPhone SDK, Android SDK, JQuery Mobile, Flash Lite, J2ME, Symbian, XMPP, SMS, WAP

Web technologies: JSON, XHTML, HTML5, XML, XSL, XSL-FO, XSLT, CSS, XPath, XQuery, SAX, DOM, StAX, Xerces, Flash, Flex, Oauth, Omniauth, TinyMCE, Plupload, Retina.js, Flexpaper Adaptive UI, JW Player, Highcharts, Modemizr, BjQS

Content Management Systems:

Stellent

Messaging Middleware:

ActiveMQ, IBM MQ Series, Fiorano, MQSonic, TIBCO rendezvous

IDE:

Intelij IDE, Android Studio.

Version Controlling:

SVN, CVS, Rational ClearCase, Git/GitHub, Rational Synergy, MS Visual Source Safe

Build tools:

Ant, Maven

Continuous integration tools:

Bamboo

Networking protocols and data security:

TCP/IP, HTTP/HTTPS, SMS, SMPP, MMS, MD5, POP3, SMTP, FTP, TFTP, etc.

Databases:

Oracle, MS SQL Server, MySQL, Derby, PostgreSQL, Lucene/SOLR, LDAP (Oracle Internet Directory, OpenLDAP, MS Active Directory), H2, Find-Link, MongoDB, Exaled CloudView, etc.

Application and web servers:

Apache Tomcat, JBoss AS, Jetty, IBM WebShere, Oracle Application Server, WebLogic, Windows Server IIS, Nginx, NetWeaver

Web and graphic design:

Adobe Photoshop, Illustrator, Flash, DreamWeaver

Testing:

Installation testing, Functional testing, Load testing, Performance profiling, Data integrity testing, Sanity testing, Regression testing, Automated testing, etc.

Testing tools and frameworks:

Ranorex, Selenium, JMeter, JBehave, Testing Anywhere, WebUI Test Studio, TestComplete, EasyMock, Mockito, jMock, Microsoft Web Application Stress Tool, WebUI test Tool, TCMS, Deep-freez, ProjectLocker, QADB, Mercury Quality Center, Share-net

Unit testing:

JUnit, DBUnit, utPLSQL, NUnit, PHPUnit

Issue management:

JIRA, Rational ClearQuest, Rally, Trac, ActiveCollab, Bugzilla, Bugzero, Remedy, Rational Change, TestLink, TestTrack, etc.

4.2 Test Plan

4.2.1 Test Plan Identifier

ChatApplication-MTP1.0

4.2.2 References

List Of Document That Support this document:

1. IEEE 829 Test Plan FORMAT

4.2.3 Introduction

Chat Application will be the interpreter to bring people and ideas together. We have been designing our Chat Application with well- equipped technology. This project is now at development phase, so readers can read the Software Requirement Specification document for details. This document presents the Master Test Plan of IIT Website. As we know, master test plan is a living and breathing document that summarizes the overall effort required to test a software product. Master test plan will actually contain the details of individual tests to be run during the testing cycle like unit test, system test, beta test etc. However, our document will categorize and describe each test case. It will also outline pass-fail criteria and indicate the planned run day or week. This is a quick-reference tracking document for what has to be tested, the priority of test items, what is left to test etc. We followed IEEE-829 format to develop our test plan. We strictly follow the instructions provided by our respective course teacher. This is our first test plan documentation, so we also read some sample test plan to gather knowledge about test plan documentation. The estimated time line for this project is a semester. The testing activities are to be done in parallel with the development process.

4.2.4 Test Items

Higher Level Test Items::

Items to be tested:

1. Chat Application Released version 1.0 and supporting infrastructure
2. Application running on different client's device

Items Not To be Tested:

1. SRS of Chat Application
2. User Manual of Chat Application
3. Already Exist Chat Application
4. Manual process related to the application
5. Any Legacy System

Lower Level Test Items:

Items to be tested:

1. User Profile
2. Chatting
3. Group Chatting
4. Add Friend
5. Remove Friend
6. Block Friend
7. Unblock Friend
8. Find Friend
9. Registrar

10. Log In

11. Log Out

Items not to be tested:

1. User

2. Admin

Some more modules were included and changed during development phase, which are not fully recognized or documented yet. So, test items of those modules will be included in the next version of the test plan.

4.2.5 Software Risk Issues

There is several risk issues recognized which can have direct impact on the Chat Application and need to be handled carefully.

1. Database security and safety

2. Backup of files

3. Reliability of Hosting Service

4. Lack of test tools

5. Lack of training

6. Lack of User Involvement

7. Lack of Schedule

8. Lack of Budget

9. Rapid Change in Taste

4.2.6 Features To Be Tested

The feature and attributes to be focused on during testing of the application.

Features	Priority	Description
Create Account	1	To make user able to registrar in order to use Chat Application.
Log In	1	Log in as Authenticate user
Log Out	1	Log out from the system
Add Profile	3	Create profile for user
Edit Profile	3	Change any information of profile
Delete Account	3	Deleting Account
Find Friend	2	Searching for friend / user
Add Friend	2	Connecting Friends
Remove Friend	3	Disconnecting Friends
Block Friend	3	To get rid of unbearable friends
Personal Chat	1	Messaging Friend
Group Chat	2	Group Messaging
Add Friends In Group Chat	3	To add user in Group Messaging
Remove Friend From Group Chat	3	To Remove Someone From Group
Clear Chat History	3	To Remove Messages
Clear Search History	3	To Clear Search History
Upload Profile Picture	4	To add photos in the profile
Delete Profile Picture	4	To Remove Profile Picture
Change Password	4	To Change Password by user
Appropriate error message processing	3	It's important for both user & admin
Database	2	Technical features should be tightly in control as accessing database is frequently needed operation.
Ensure Email is sent to expected receiver	2	To ensure privacy
Authentication	2	Without authentication confidentiality integrity are not guaranteed.
Ensure Message is Sent in Minimal Time	2	To Ensure Policy & Privacy

4.2.7 Features Not To Be Tested

We will try to test every features. But If we cant manage Schedule. Then we may skip those Features and attribute with low priority below:

Features	Description
Network Security	Testing network security is out of our scope
Change User status	Will done automatically by System
View Friend List	It will be available at Contacts Form

4.2.8 Approach

Testing Levels

The testing approach for Chat Application project is Master Test Plan or MTP. Which includes unit testing, integration testing and acceptance testing. In this project testing is done by developer, tester and user. Unit testing will be done by developers. Developer must provide unit testing data to tester. Integration testing will be done by tester. After all major and critical defects are solved it will go through acceptance test which will done by end user.

Test Tools

- o Selenium Web Browser Automation
- o Microsoft Visual Studio 2012 Load Testing
- o CIUnit Unit testing for CodeIgniter
- o Firebug Web development tool that facilitates debugging
- o FreeMind - free mind mapping software
- o JUnit Unit testing for Javascript
- o Multi-Mechanize Performance and Load Testing
- o Capybara Acceptance test framework

Meetings

The test team will meet once in every weeks to evaluate the progress and identify all problems and conduct a solution. Test team will also meet with

development team to merge their ideas about testing and quality of our website. Additional meetings can be called as required for emergency situation.

Measures and Metrics

The following information will be collected by the Development team during the Unit testing process. This information will be provided to the test team at program turnover as well as be provided to the project team on a biweekly basis.

- o Defects by module and severity
- o Defect origin
- o Time spent on defect resolution.

The following information will be collected by the test team during all testing phases. This information will be provided on a biweekly basis to the test manager and to the project team.

- o Defects by module and severity
- o Defect origin
- o Time spent on defect resolution
- o Number of times a program submitted to test team as ready for test.

Item Pass Fail Criteria

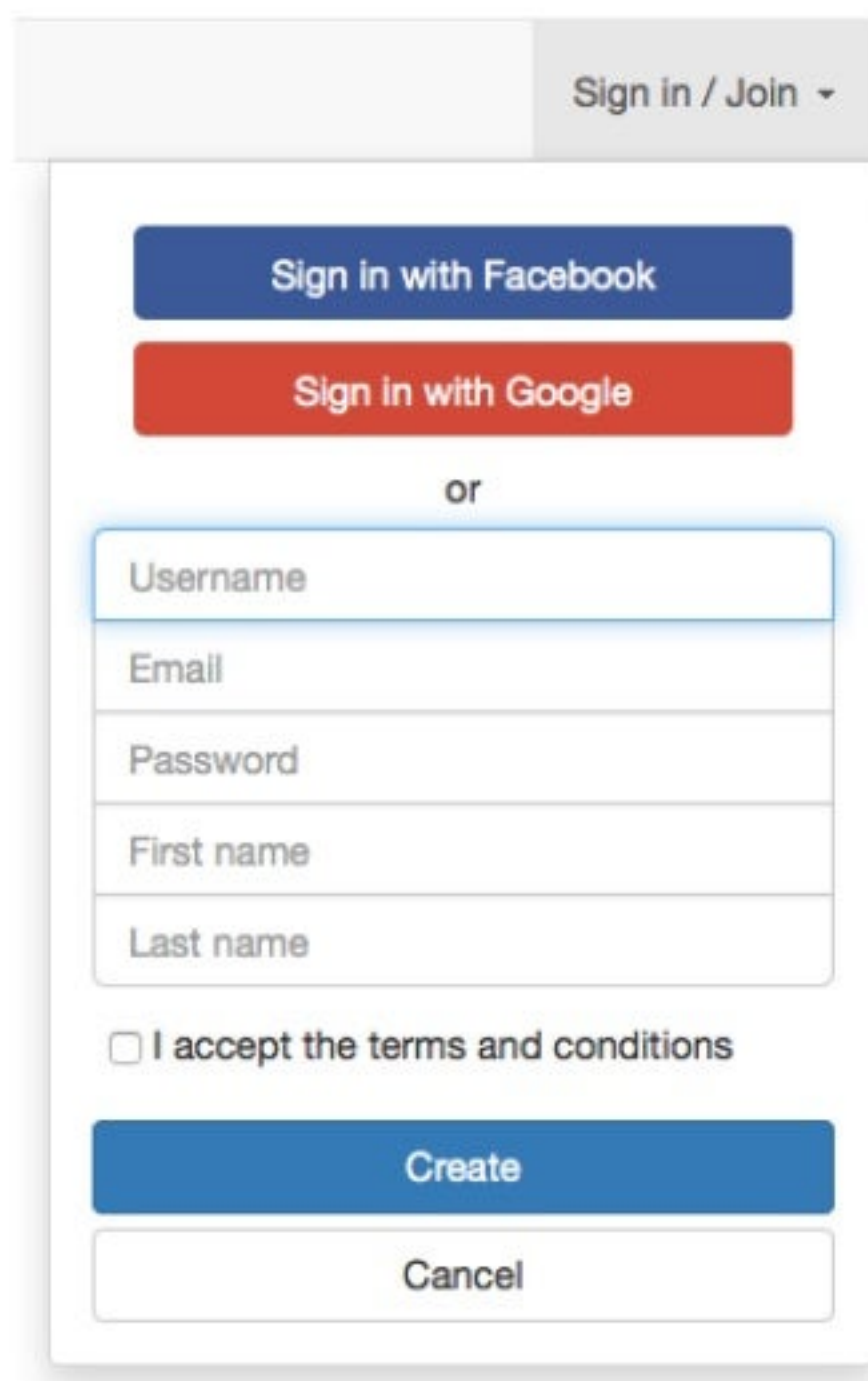
The test process will be completed when the project leader will be satisfied with the result of the test. For this, at least 90% of test cases must pass; all functionalities must be covered in those test cases and most of all, high and medium severity defects must be detected and fixed. Minor defects can be ignored, but with the assurance that it does not lead to severe defect. The project leader will decide whether the detected defects and criticality will cause the release of Chat Application of version 1.0 to delay.

5 User Manual

5.1 Processes

5.2 Registration for new Member

Open Chat Application & Click on Sign Up. Then This window will pop up. Then You have to submit valid info to Successfully register.



The image shows a registration form for a new member. At the top, there is a header bar with a light gray background and a darker gray section on the right containing the text "Sign in / Join" with a downward arrow. Below the header, the form is white with a light gray border. It features two large buttons: a blue one labeled "Sign in with Facebook" and a red one labeled "Sign in with Google". Below these is the word "or" in a small, gray font. The form then contains five input fields stacked vertically: "Username", "Email", "Password", "First name", and "Last name". Below the input fields is a checkbox labeled "I accept the terms and conditions". At the bottom of the form are two buttons: a blue "Create" button and a white "Cancel" button with a gray border.

Sign in / Join ▾

Sign in with Facebook

Sign in with Google

or

Username

Email

Password

First name

Last name

☐ I accept the terms and conditions


Create

Cancel

5.3 Login Features

Open Chat App then click on Log In Button. Then Submit Valid Info to access your account.


Login


CHAT APPLICATION

Email

Password

Sign In

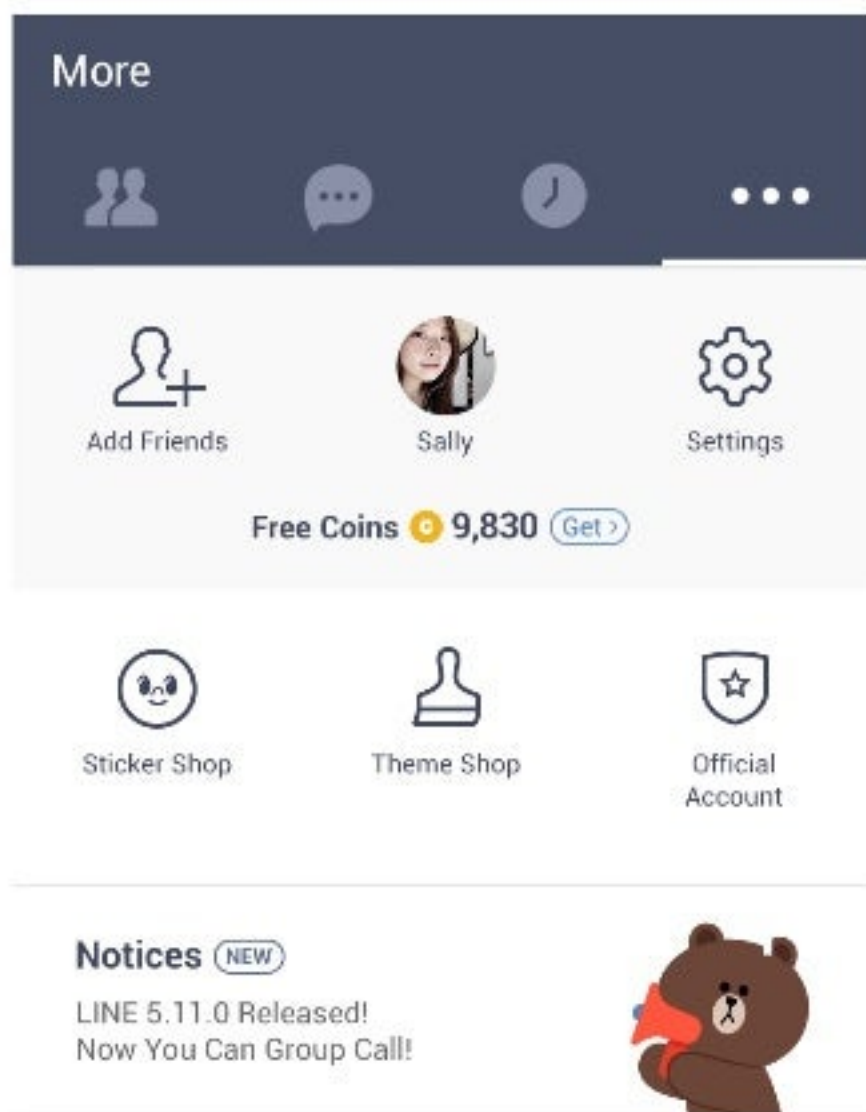
 Create New Account

5.4 Private Chatting



5.5 Adding Friend

Open chat app then click on more options then click on add friend. There you will be able to search for friend.



5.6 Chat Forms

After Login you will automatically redirected to Chat Forms

CHAT FORM

Adam Sandler

05/01/2015 04:05 PM

How can I find best college for MBA?

Craig Saunders

06/01/2015 01:22 AM

I can tell you

John Snow

15 hours ago

Which specialization?

Adam Sandler


55 mins ago


HR or Marketing


Peter Hawkins

2 mins ago

Search on Google, its easy!

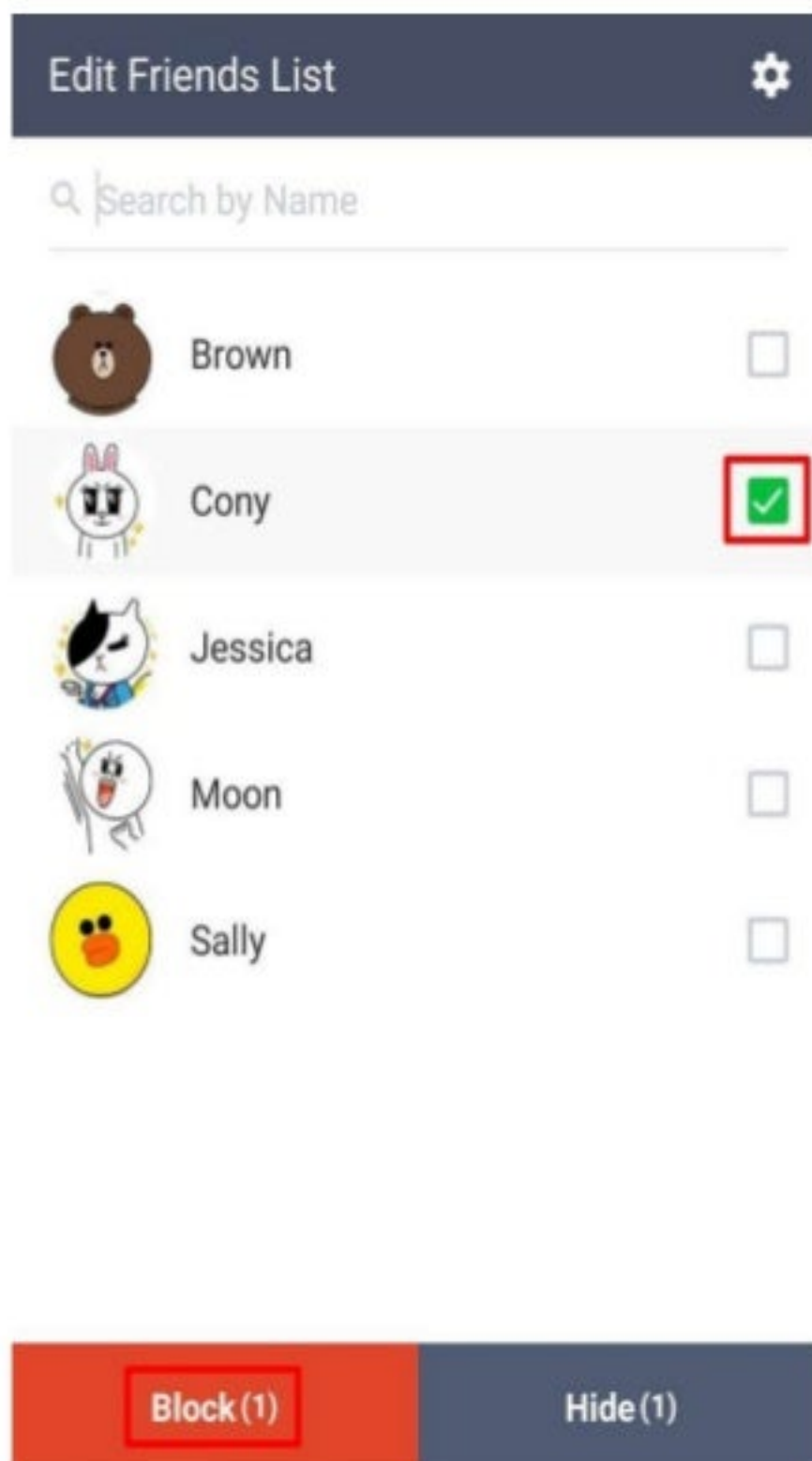

Rooms


Chat

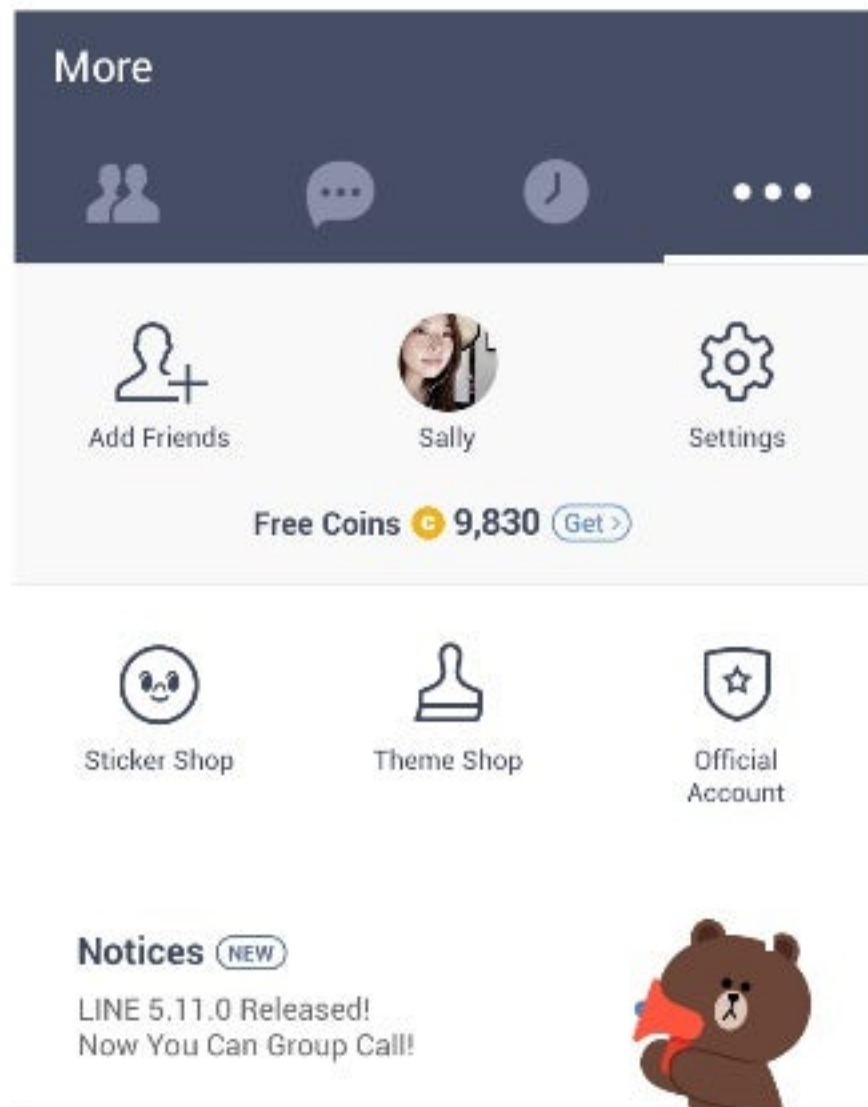

Logout

5.7 Block Friend

Go to setting Edit Friend List then You will see Block Button underneath the layout



5.8 Settings



5.9 Conclusion

There is always a room for improvements in any apps. Right now we are just dealing with text communication. There are several android apps which serve similar purpose as this project, but these apps were rather difficult to use and provide confusing interfaces. A positive first impression is essential in human relationship as well as in human computer interaction. This project hopes to develop a chat service Android app with high quality user interface. In future we may be extended to include features such as:

1. File Transfer
2. Voice Message
3. Video Message
4. Audio Call
5. Video Call
6. Group Call

5.10 Troubleshooting

Problem	Cause	Solution
Cannot Registrar	1. The Required Information field was not filled out entirely. 2. User name Invalid or Already Exists. 3. Password too short.	Enter all information in the Required Information field. Select a user name that is unique, something besides your name. Choose a password at least
Can't Add Friend	Maybe your device Getting wrong reference	Restart or reinstall chat app

5.11 Frequently asked question

How do I backup, restore or transfer my Chat Application data?

You can back up your ChatApp data using Google Drive or a local backup. Local backups will be automatically created every day at 2am and they will be saved as a file in your phone.

Why can't I connect to Chat App?

Restart your phone, or turn it off and on.

Why are my incoming messages delayed?

Make sure your phone has Internet connection

Make sure background data is not restricted

How do I reinstall?

To uninstall ChatApp, go to your phone's Settings app then Apps then ChatApp then Uninstall.

Installing ChatApp

Please follow this link. It will navigate you to Google Play where you can tap Install to start downloading the app.

Open ChatApp and continue to the next screen by agreeing to our Terms of Service.

Verify your phone number.

If a backup of your chat history was found and you would like to restore it, choose Restore. Learn more about restoring here.

Lastly, type in your name. You can also change this later in ChatApp by going to Menu Button then Settings, and tapping on your profile name.

How do I fix the Task Manager error?

There are two main problems caused by 3rd party task managers (also called task killers):

They can temporarily disable ChatApp. This causes ChatApp to disconnect and reconnect to our server, which drains the battery of your phone and uses unnecessary amounts of data.

If they close ChatApp, our server has no way of knowing that the connection has been closed. As a result, message delivery might be delayed.

When I travel abroad, will I be charged for data roaming?

ChatApp Messenger uses the same Internet data plan as web browsing and email on your phone. If using your cellular data while roaming will nor-

mally result in additional charges, you may be charged extra by your mobile provider for using ChatApp while roaming. Contact your wireless carrier for details about international roaming countries, SIMs, rates, and policies. If you do not have an international data plan, we suggest you turn off data roaming to avoid data roaming charges.

Where can I find my contacts?

Open ChatApp and go to the Contacts tab. How do I change my profile photo, name, about and status?

Profile photo

Go to ChatApp then Menu Button then Settings.

Tap your profile photo then Camera icon.

You can choose a photo from your gallery, take a new photo with your camera or remove your current photo.

Name

Go to ChatApp then Menu Button then Settings.

Tap your profile photo and then tap your name.

Note: This name will only appear for contacts who do not already have your contact info saved in their phone's address book.

About

Go to ChatApp then Menu Button then Settings.

Tap your profile photo and then tap your about.

You can create a custom about or select a pre-filled about.

Note: Your about cannot be empty.

Status

Go to ChatApp then Status screen.

Tap the status icon.

You can take a new photo or record a new video, or choose an existing one from the picker, then tap the send button.

How do I save my chat history?

To export a copy of the history of an individual chat or group, use the Email chat feature:

Open the chat for the individual or group.

Tap on the Menu Button.

Tap on More.

Tap on Email chat.

Choose whether to Attach Media or not.

5.12 Technical Support

For technical support Contact with following correspondent of our technical team:

puskuuuu@gmail.com

mourins@gmail.com

6 References

1. <http://www.fit.vutbr.cz/study/courses/ITS/public/ieee829.html>
2. <https://techwhirl.com/user-guide-template/>
3. <https://www.onetonline.org/search/t2/examples/43231507?s=management%20software>
4. <http://www.projectinsight.net/project-management-basics/project-management-schedule>
5. <https://techwhirl.com/business-requirements-document-brd-template/>
6. https://web.cs.dal.ca/hawkey/3130/srs_template-ieee.doc
<https://bia.ca/risk-management-the-what-why-and-how/>