

MINI PROJECT

(2021 - 2022)

A Chat App

(App Development)

SYNOPSIS

Department of Computer Engineering & Application

Institute of Engineering & Technology



TEAM MEMBERS

Deepak Awasthi

(181500202)

Maneesh Kumar

(181500363)

Anoop Kumar

(181500104)

Mohit Kumar Jalan

(181500390)

SUPERVISED BY:

Mr. Neeraj Khanna

(Asst. Professor)

CONTENTS

1.Name / Title of the project

2.The problem statement

3. Reason for selecting the Topic

4.Objectives of the Project

5.Literature Survey / Feasibility Study

6. Future Scope

7.Methodology. (including a summary of the project)

8.Hardware & Software to be used

9.What contribution would the project make and where?

10. Scope for extension into a major project

11. Conclusion

Name / Title of the Project

A flutter based chat android application

The 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.

We are seeing the forthcoming problems of privacy in social chatting apps like Whatsapp. These tech giants are using the data of the users for their business purposes. This project also aims to build the indigenous social chatting application which can be used by the people of India.

Reason for selecting the topic

Communication over a network is one field where this tool finds wide ranging application. Chat application establishes a connection between 2 or more systems connected over an intranet or ad-hoc. This tool can be used for large scale communication and conferencing in an organization or campus of vast size, thus increasing the standard of cooperation. In addition it converts the complex concept of sockets to a user friendly environment. This software can have further potentials, such as file transfer and voice chatting options that can be worked upon later.

Teleconferencing or Chatting, is a method of using technology to bring people and ideas “together” despite geographical barriers. The technology has been available for years but the acceptance was quite recent. Our project is an example of a chat app.

We have selected this topic to build indigenous application which provides a solution to establish the communication between people.

Objective of the project

The main objective of this project is to build a user friendly application which can be used by users to communicate with each other. We are developing this application to provide a peer to peer connection based facility to the users. With this application, we aim to provide an amazing experience to the users. This application provides users the ability to sign in, sign out, search for users, and send messages. We are using firebase for realtime messaging whenever a user sends a message to the other user.

The users will be able to chat with each other, most likely only from user to user, no group chatting will be developed, unless there is time to do so.

Literature Survey / Feasibility Study

Chatting system is a two-way communication that is used by the users for the purpose of exchanging text messages and files between the system's users. It is more common to say as a peer-to-peer system which supports two way communications. The user of the system is defined as client-server. Chatting system is a distributed programming which consists of two distributed components, chat server and chat client. Chat client supports all communication including requesting chat server location information from a location server and displaying received chat messages. Chat server will conduct chat sessions and manage all chat clients. Basically the chat client starts the chat session by requesting the communication parameter (server name and port number). There are two types of communication between client-servers which are control messages (used to join and leave chat sessions, create chat room and switch to chat room) and chat message (supports only public chat messages).

Future Scope

For the scope of the project, the project will be tested as the program is being developed. A database for the users registered will be developed and tested, a menu will be developed and tested, a client/server interface will be developed and tested, and GUI's will be developed and tested, for the users' benefits. When the chat application is near completion, more testing will be done in order to make it less buggy or more user friendly.

With the knowledge We have gained by developing this application, we are confident that in the future I can make the application more effective by adding this service.

- Extending this application by providing Authorisation service.
- Creating Database and maintaining users.
- Increasing the effectiveness of the application by providing Voice Chat.
- Extending it to Web Support.
- Creating the more user friendly UI.

Methodology (Including a Summary of the Project)

The user interacts with the tool using a GUI.

1. The GUI operates in two forms, the List form & the chat form.
2. The List form contains the names of all the systems connected to a network.
3. The chat form makes the actual communication possible in the form of text.

The chat application works in two forms.

1. List form: In this form, all the names of the systems connected to a network are enlisted. These names can later be used for communication with the help of mouse event, or in simple language: a click or a double click.
2. Chat form This form is called only when an element is selected from the List form. In this form, a connection is created between the host system and the selected system with the help of a socket.

Hardware & Software to be used

Software Used:

Software can be defined as programs which run on our computer .It acts as petrol in the vehicle. It provides the relationship between the human and a computer. It is very important to run software to function the computer. Various software are needed in this project for its development. Which are as follows--

- VS Code Editor for coding purpose
- Android Studio for compilation of the code
- Software Development Kit(SDK)

Hardware Used:

In hardware requirement we require all those components which will provide us the platform for the development of the project. The minimum hardware required for the development of this project is as follows--

- A Laptop or a PC for app development.
- Android device for testing/debugging.

Testing Technologies to be used

The objective of our test plan is to find and report as many bugs as possible to improve the integrity of our program. Although exhaustive testing is not possible, we will exercise a broad range of tests to achieve our goal. We will also test the user friendliness of our app .The application will be used as an important tool, but we would like to ensure that it could be run on a variety of platforms with little impact on performance or usability.

System testing is the process of executing software in a controlled manner, in order to answer the questions "Does the software behave as specified?" System testing is often used in association with the terms verification and validation .Verification is the checking of items, including software, for conformance and consistency with an associated specification. Software testing is just one kind of verification, which also uses techniques such as reviews, analysis, inspections and walkthroughs. Validation is the process of checking that what has been specified is what the user actually wanted. Testing of a developed system is an important implementation activity. System testing and debugging computer programs and testing information processing procedures.

What contribution would the Project make and where?

This project will help the users to make communication between them. People will be able to share their thoughts and emotions with each other. The target audience for this project is everyone who wants to communicate. This project will also help us to reduce the privacy issues that we have seen these days.

Scope for extension into a major project

There is always a room for improvements in any software package, however good and efficient it may be done. But the most important thing should be flexible to accept further modification. Right now we are just dealing with text communication.

In future this software may be extended to include features such as:

1. File transfer: This will enable the user to send files of different formats to others via the chat application.
2. Voice chat: This will enhance the application to a higher level where communication will be possible via voice calling as in telephone.
3. Video chat: This will further enhance the feature of calling into video communication.

Conclusion

Chat application is built using flutter which is implemented with dart programming language. It includes text chatting with many features like searching users, signin and signout, chatting. This application can be used on any android phone and can be downloaded from google play store. This application is very useful for users to connect and have conversation with each other.

Reference/Bibliography

- www.google.com
- www.wikipedia.org
- www.stackoverflow.com
- www.flutter.dev