

# A REAL TIME CHAT AND COMMUNICATION

## 1. INTRODUCTION



### OVERVIEW:

A chat application makes it easy to communicate with people anywhere in the world by sending and receiving messages in real time. With a web or mobile chat app, users are

able to receive the same engaging and lively interactions through custom messaging features, just as they would in person. This also keeps users conversing on your platform instead of looking elsewhere for a messaging solution. Whether it's private chat, group chat, or large-scale chat, adding personalized chat features to your app can help ensure that your users have a memorable experience.

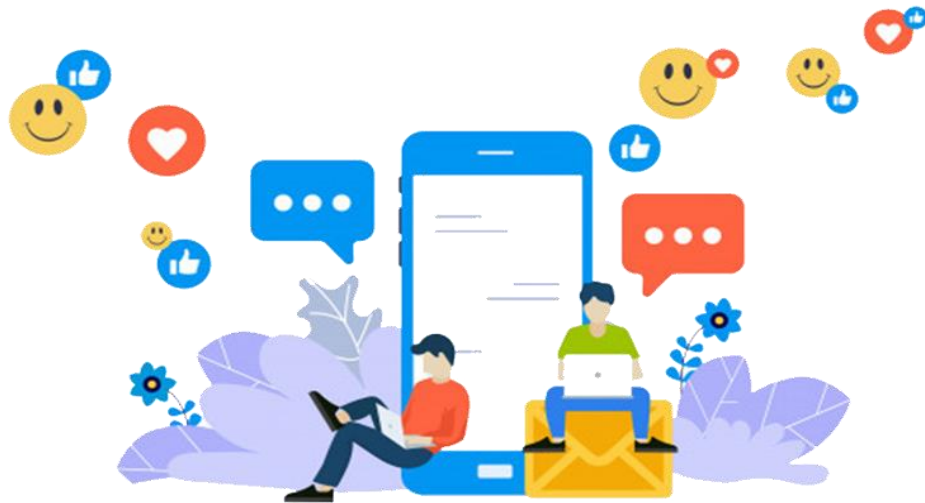
Real-time chat can be any direct text-based or video-based (using webcams) one-to-one chat or one-to-many group chats by means of tools like instant messengers (IMs), talkers, Internet Relay Chat (IRC) and multi-user dungeons (MUDs).

The first real-time chat system was known as Talkomatic, developed by David R. Woolley and Doug Brown in 1973. It provided quite a few channels, each of which was able to support as many as

five people, with messages from all users showing up on the screens character-by-character as they were typed. CompuServe CB Simulator, launched in 1980, was the first dedicated real-time chat service made available to the public.



## PURPOSE:



More people are embracing virtual experience as a way to connect with one another. From gamer group chat messaging in a live chat to e-learning and team communication using chat rooms and file sharing among co-workers,

online chat applications have grown largely in popularity because of their ability to retain the feel of a real-time conversation, virtually.

However, when thinking ahead to how you want to build your web app, a vital thing to consider is your customer's experience.

Real-time chat applications **allow users to communicate with each other in real time through text, voice, or video**. This type of app allows for more immediate messaging than other types of communication such as email or IM.

## 2. PROBLEM DEFINITION & DESIGN THINKING

### EMPATHY MAP

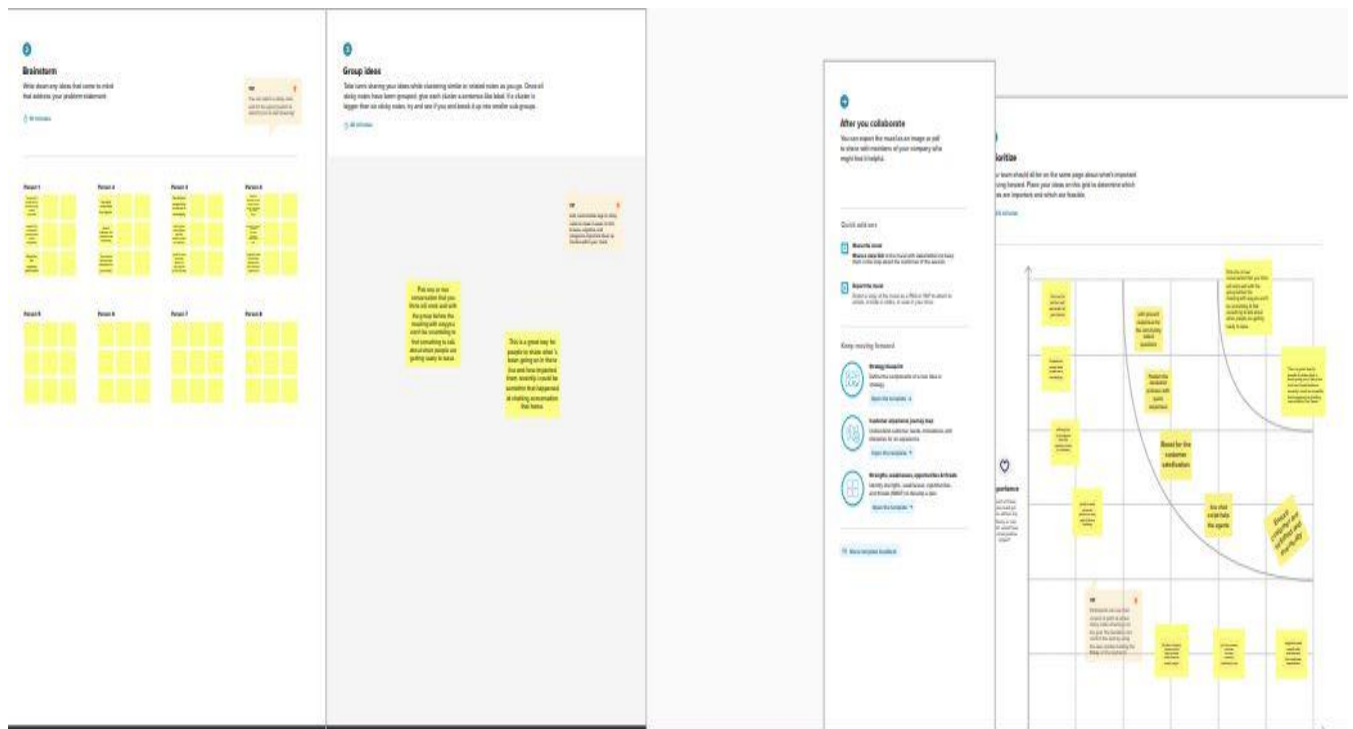


## Reflect on the topic

Working silently and individually, have each person create a few sticky notes in all four quadrants below for about five minutes. With the remaining time, discuss notes in each quadrant.

What went well? <small>What should we keep doing? What should we celebrate? What did we make progress?</small>	What went poorly? <small>Where did we have problems? What was frustrating or not helpful? What could we learn?</small>
<div>without a anything else on the screen I couldn't see the direction of the chat you don't know</div> <div>How often let please remember the chatting the voice record / perceptions</div> <div>There are thing you may not about chatting with conversation</div>	<div>Delays in the chat days board functionality or the days board is unresponsive</div> <div>Messages are duplicated due to disconnections</div> <div>chat are regularly unassigned even though I have chat routing configured</div>
<div>It is hard to have a video call go without some ones screen freezing in an position</div> <div>If all your people are working from home organize a rapid fire home office hunt.</div> <div>pick a word of the day such as can fit the word into the conversation holding</div>	<div>we received your message and we're working on it.</div> <div>we need more information to complete your order.</div> <div>Routine conversation to the right team could be a good live chat when agents.</div>
What ideas do you have? <small>What ideas do you have for how to work together? Where do you have opportunities to improve? What has triggered your idea?</small>	What should we take action? <small>What are you willing to do about the issue? What specific change should we attempt? What should we learn from this meeting?</small>

# IDEATION & BRAINSTORMING MAP



### **3.RESULTS**



3:55

0.02 KB/S 5G LTE-B   91%

 ChatConnect

Register

Login

3:43

VoLTE   92%



Register



karthikmurugesan14323@gmail.com

• • • • • • • •

Register



3:55

3.00 KB/S VoLTE H+   91%



Login


karthikmurugesan14323@gmail.com

.....

Login



3:56

0.00 KB/S VoLTE H   90%

Better than Flutter?

Nope

Testing?

Yeah got the message

I am not able to see your profile image

????

It's not a production level chat application



Ohh

Then bugs are fine

Type Your Message



## 4.ADVANTAGES & DISADVANTAGES

### ADVANTAGES



Messaging has become a part of our everyday lives in part due to its convenience for real-time chat communication and simple-to-use functionality. For instance, an iOS or text message on an iPhone or Android device from a friend, an email from a co-worker on Microsoft or Gmail, a team chat in a Slack or Microsoft Teams workspace, or even instant messaging through social media. These messaging and real-time chat applications play an important role in how the world interacts today, due to their immediacy and vast capabilities.

- ✓ Building trust. Effective communication fosters trust with others.
- ✓ Preventing or resolving problems.
- ✓ Providing clarity and direction.
- ✓ Creates better relationships.
- ✓ Increases engagement.
- ✓ Improves productivity.
- ✓ Promotes team building.
- ✓ appreciate different perspectives.
- ✓ understand the difference between appropriate and inappropriate behaviour.
- ✓ become more effective non-verbal communicators.

It is widely interactive text based communication process that takes places over the Internet. An advantage is; **it makes getting to know a person easier.**

Meeting new people from around the world!

## **DISADVANTAGES**





- Misunderstandings
- Impersonal
- Expectation to Read and Respond
- General Distraction
- Texting and Driving
- Socially Disruptive
- Group Texts

## **SOCIAL EFFECT:**

Internet addiction can be a significant threat to one's health and social well-being in that it enforces antisocial behavior. The addiction can lead to the inability to communicate in the real world by depriving the addict of the daily practices involved with interpersonal communication. The act of using facial expressions or certain gestures to relay intended emotion or emphasize meaning decline as the addict substitutes keystrokes resembling smiley faces, or avatars. Socially, subjects become more inclined to develop personality disorders in which they identify more with their Internet representation than their real-life persona. Ultimately, an addiction to the Internet can cripple one's ability to maintain a healthy social life.

- You can't be sure other people are being honest or that they are who they say they are.
- If you are feeling vulnerable, people online might try to take advantage of you.
- Building relationships online can result in your spending less time with friends and family.

## **5. APPLICATIONS**

**Real-time chat and communication applications have become an essential tool for personal and business communication. Here are some applications of real-time chat and communication:**

**Instant messaging:** Instant messaging allows users to communicate in real-time via text, voice, or video. This is useful for personal communication between friends and family, as well as business communication between colleagues.

**Customer service:** Real-time chat is increasingly being used as a tool for customer service. Customers can use chat to ask questions or report issues, and

customer service representatives can provide support in real-time.

**Collaboration:** Real-time chat and communication applications are essential for collaboration in teams, especially in remote work settings. Team members can communicate in real-time, share files, and collaborate on projects.

**Education:** Real-time chat and communication applications are also useful in education settings. Teachers can use chat to communicate with students, answer questions, and provide feedback.

**Gaming:** Real-time chat is an essential part of online gaming. Gamers can communicate with each other in real-time, plan strategies, and discuss game-related issues.

**Social networking:** Real-time chat is also used in social networking applications, allowing users to communicate with friends and followers in real-time.

**Healthcare:** Real-time chat and communication applications are becoming increasingly popular in healthcare settings. Doctors and nurses can use chat to communicate with each other and with patients, providing real-time advice and support.

Overall, real-time chat and communication applications have a wide range of applications, from personal communication to business, education, gaming, and healthcare.

## 6. CONCLUSION :

- The main objective of the project is to develop a Secure Chat Application. I had taken a wide range of literature review in order to achieve all the tasks, where I came to know about some of the products that are existing in the market. I made a detailed research in that path to cover the loop holes that existing systems are facing and to eradicate them in our application. In the process of research I came to know about the latest technologies and different algorithms.
- The product has been successfully developed in terms of extendability, portability, and maintainability and tested in order to meet all requirements that are
  - Authentication
  - Integrity

- The chat app provides a better and more flexible chat system. Developed with the latest technology in the way of providing a reliable system. The main advantage of the system is instant messaging, real-world communication, added security, group chat, etc.
- It enables you to send and receive messages. Chatting apps make it easier, simpler, and faster to connect with everyone and it is also easy to use. There are many types of chatting apps and everyone has its own format, design, and functions.
- Web or mobile chat app, users are able to receive the same engaging and lively interactions through custom messaging features, just as they would in person.

## 7. FUTURE SCOPE:



- With the knowledge I have gained by developing this application, I am confident that in the future I can make the application more effectively by adding this services.
- Creating Database and maintaining users.
- Increasing the effectiveness of the application by providing Voice Chat.
- Extending it to Web Support.



- Their messaging app offers common chat app features such as **real-time messaging, group chats, file sharing, message reactions, the ability to search conversations, and play games.**

### **OTHER ENHANCEMENTS WILL BE INVOLVED:**

1. A place of safety
2. Video call
3. large size
4. improve font style

- A chat application **makes it easy to communicate with people anywhere in the world by sending and receiving messages in real time.** With a web or mobile chat app, users are able to receive the same engaging and lively interactions through custom messaging features, just as they would in person.

## **SOME ADDITIONAL CHAT APP FEATURES TO BE CONSIDERED:**

- Location sharing
- Profiles Customization
- Scheduling messages for birthdays and holidays in advance
- Stickers (let users create their own stickers)
- Sharing content via statuses, pages and stories
- Chatting with emoji adds more fun

## **EMPHASIS ON SECURITY AND PRIVACY:**

- End-to-end encryption for personal conversations and calls; ideally, it's not only available but turned on by default.
- For brand-user communication, encryption in transit is the golden standard ensuring the highest level of security.
- A messenger genuinely concerned with user privacy also won't store user messages on its servers.

## REAL-TIME CONVERSATIONS:

Designed for instant peer-to-peer communication and perfected with then the conversations in mind, messaging apps are, unsurprisingly, a popular choice for customer service platforms. Users appreciate the ability to talk to a customer support representative in real-time mode — and to skip the usual hour-long session of elevator music and waiting on hold. Meanwhile, brands can use business messages and chatbots to provide better customer service, cut costs thanks to automation, and stay in touch with their audience.

This puts messaging apps at a unique advantage because at their core — they are a communication tool, indispensable to many users. So, when looking to streamline their lives, users might choose between different messaging apps: however, few will give up messaging altogether.

## 8. APPENDIX:

```
package  
com.project.pradyotprakash.flashchat.  
view.register
```

```
import androidx.compose.foundation.layout.*  
import  
androidx.compose.material.CircularProgressIn  
dicator  
import androidx.compose.runtime.Composable  
import androidx.compose.runtime.getValue  
import  
androidx.compose.runtime.livedata.observeAsS  
tate  
import androidx.compose.ui.Alignment  
import androidx.compose.ui.Modifier  
import androidx.compose.ui.graphics.Color  
import  
androidx.compose.ui.text.input.KeyboardType  
import  
androidx.compose.ui.text.input.PasswordVisua  
lTransformation  
import  
androidx.compose.ui.text.input.VisualTransfo  
rmation  
import androidx.compose.ui.unit.dp  
import  
androidx.lifecycle.viewmodel.compose.viewMod  
el  
import  
com.project.pradyotprakash.flashchat.view.Ap  
pbar  
import  
com.project.pradyotprakash.flashchat.view.Bu
```

```

ttons
import
com.project.pradyotprakash.flashchat.view.TextFormField
/**
 * The Register view which will be helpful
for the user to register themselves into
 * our database and go to the home screen to
see and send messages.
 */
@Composable
fun RegisterView(
    home: () -> Unit,
    back: () -> Unit,
    registerViewModel: RegisterViewModel =
viewModel()
) {
    val email: String by
registerViewModel.email.observeAsState("")
    val password: String by
registerViewModel.password.observeAsState("")
    )
    val loading: Boolean by
registerViewModel.loading.observeAsState(initial = false)
    Box(
        contentAlignment = Alignment.Center,
        modifier = Modifier.fillMaxSize()
    ) {
        if (loading) {
            CircularProgressIndicator()
        }
        Column(
            modifier =
Modifier.fillMaxSize(),
            horizontalAlignment =
Alignment.CenterHorizontally,
            verticalArrangement =

```

```

Arrangement.Top
    ) {
        AppBar(
            title = "Register",
            action = back
        )
        TextFormField(
            value = email,
            onChange = {
registerViewModel.updateEmail(it) },
            label = "Email",
            keyboardType =
KeyboardType.Email,
            visualTransformation =
VisualTransformation.None
        )
        TextFormField(
            value = password,
            onChange = {
registerViewModel.updatePassword(it) },
            label = "Password",
            keyboardType =
KeyboardType.Password,
            visualTransformation =
PasswordVisualTransformation()
        )
        Spacer(modifier =
Modifier.height(20.dp))
        Buttons(
            title = "Register",
            onClick = {
registerViewModel.registerUser(home = home)
},
            backgroundColor = Color.Blue
        )
    }
}

```

