



香港中文大學
The Chinese University of Hong Kong

Fun Club

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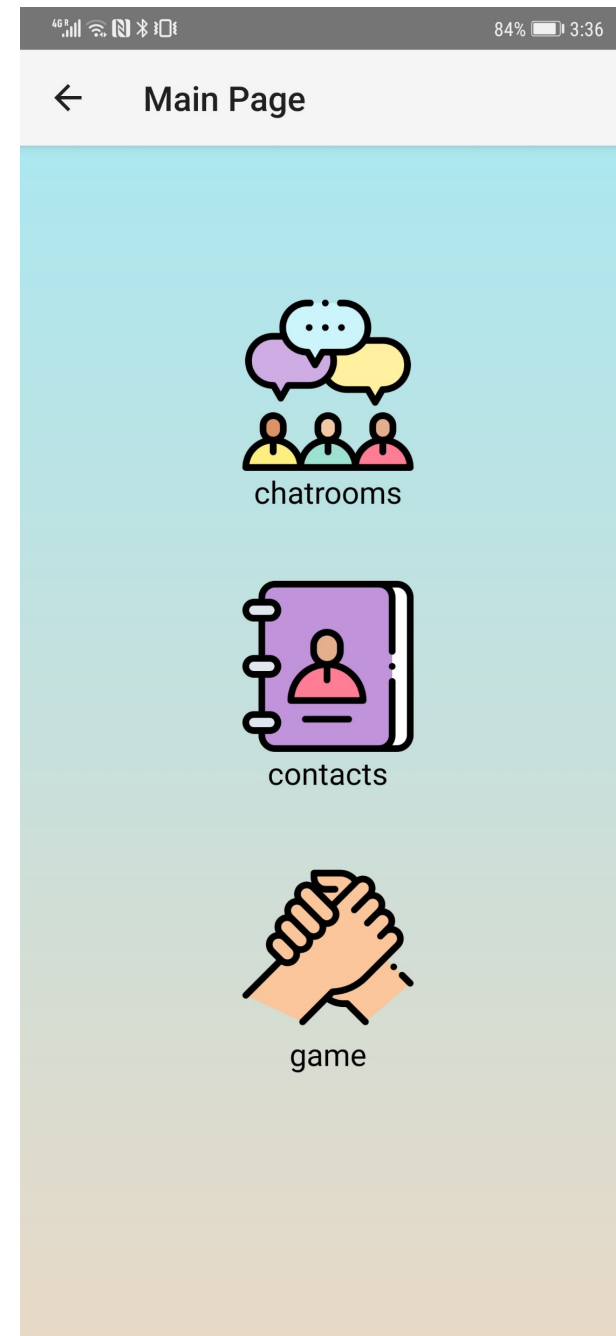
Introduction

- Software name: Fun Club
- Programming language: Android & Python
- Function: Provide social chat and entertainment



Features

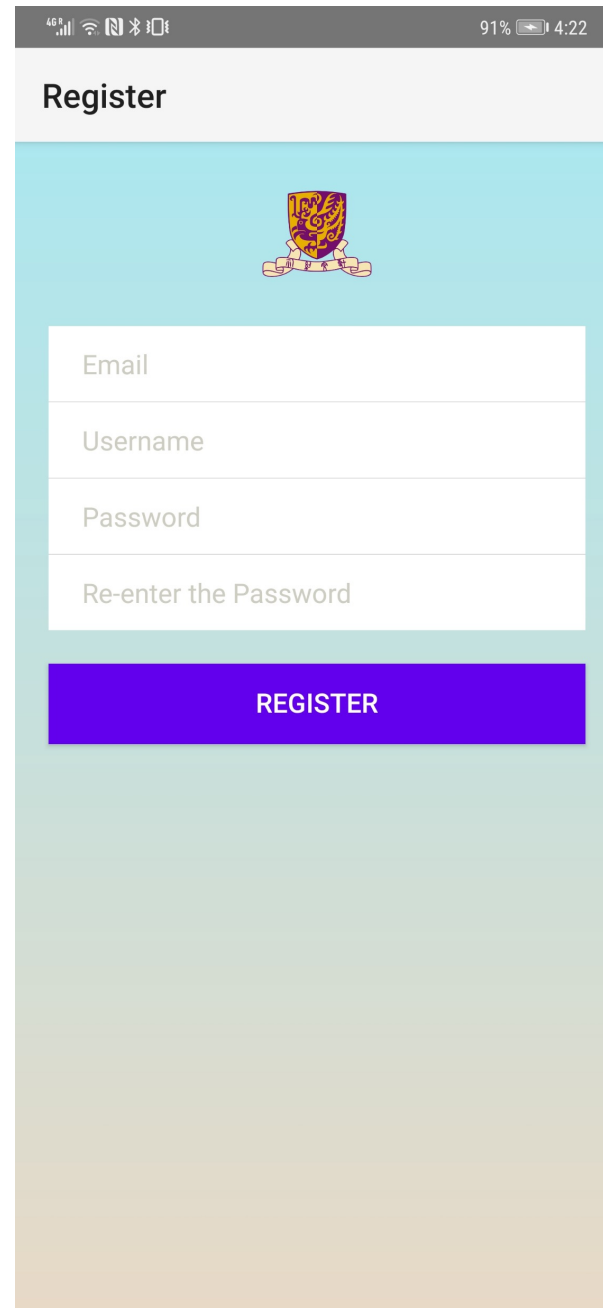
- Register
- Log In
- Chatrooms
- Contacts
- Send new friend request
- Accept new friend request
- Private chat
- Game





1. Register

- Email
- Username
- Password
- Re-enter password
- Format check

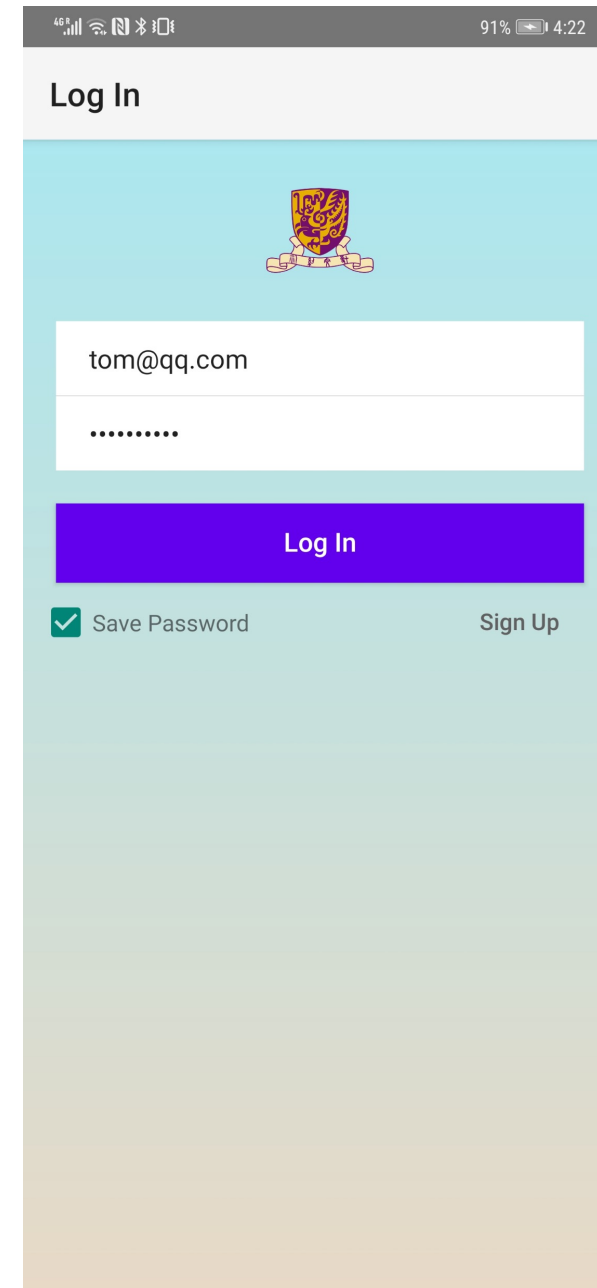


The image shows a mobile application interface for a registration process. At the top, there is a status bar with 4G LTE signal, Wi-Fi, and battery level at 91%. Below the status bar is a header with the word "Register". The main content area has a light blue background. In the center, there is a white registration form with the university's logo at the top. The form contains four input fields: "Email", "Username", "Password", and "Re-enter the Password". Below the form is a large purple button with the text "REGISTER" in white capital letters.



2. Log In

- Email
- Password
- Format check
- Save password

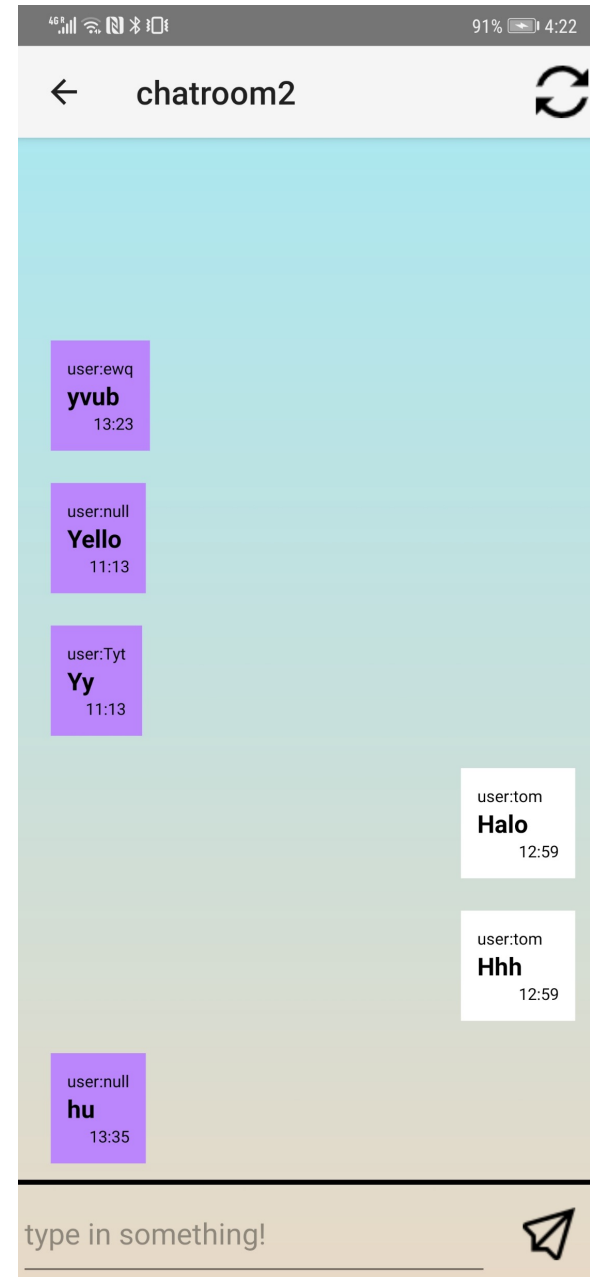


The image shows a mobile application interface for logging in. At the top, there is a status bar with network and battery icons. Below it, a header bar contains the text "Log In". The main area has a light blue background with the university's crest centered. Below the crest are two input fields: the first contains the email "tom@qq.com" and the second contains a masked password ".....". A large purple button labeled "Log In" is positioned below the password field. At the bottom, there is a checkbox labeled "Save Password" which is checked, and a link labeled "Sign Up" to the right.



3.Chatrooms

- Multi-person chat
- Real-time message
- Refresh





4. Contacts

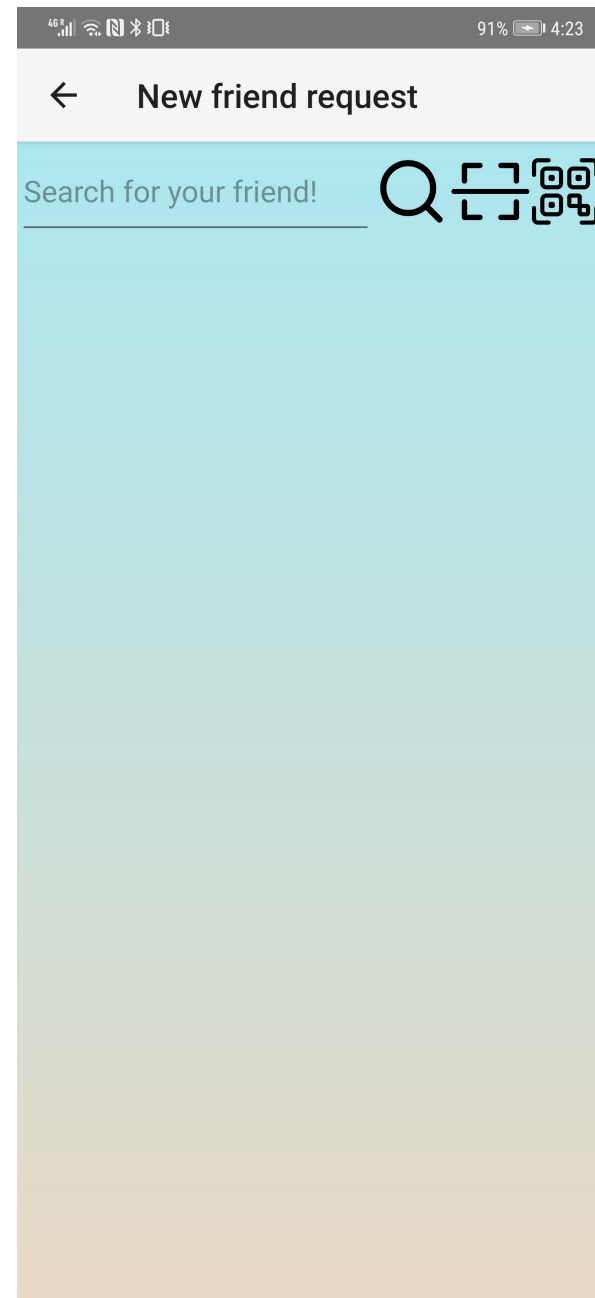
- Friend list
- Add new





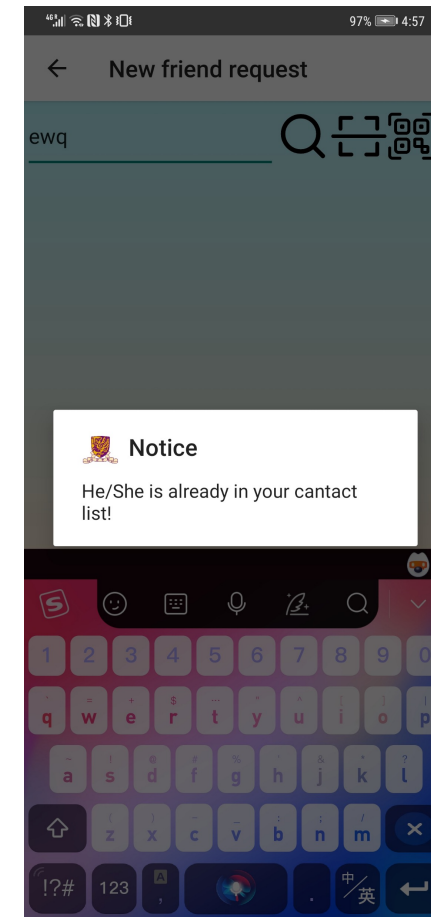
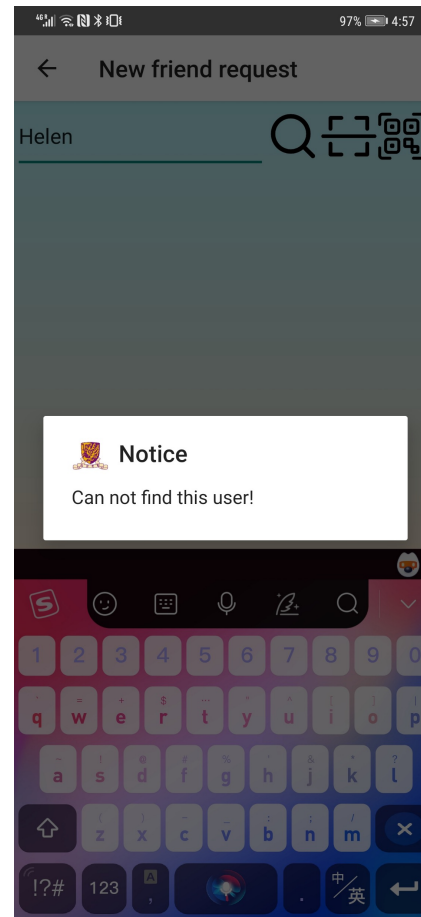
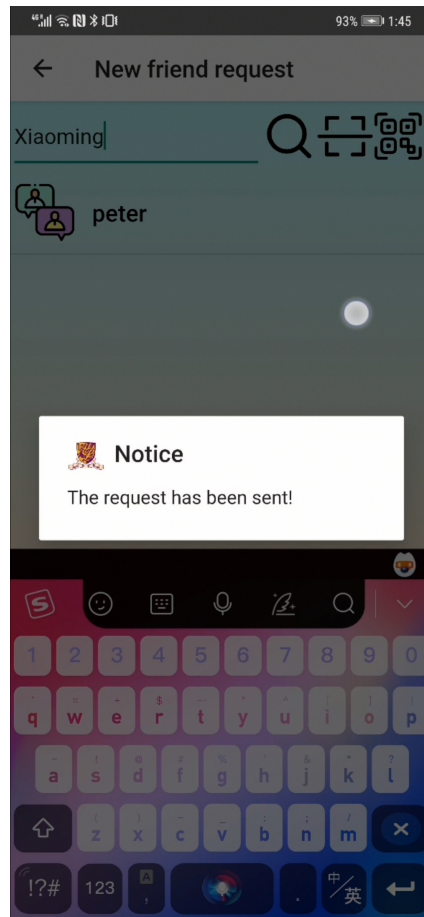
5. Send New Friend Request

- Search by username
- My QR code
- Search by QR code



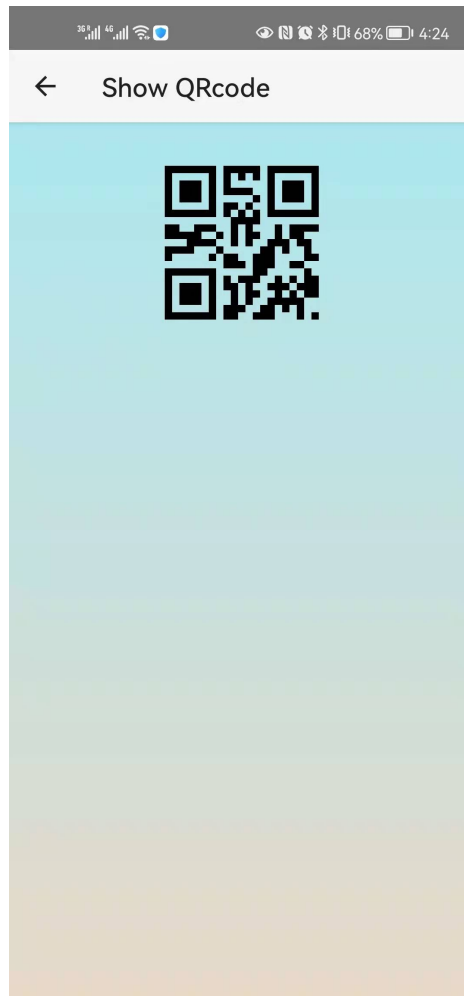


Search by username





My QR Code



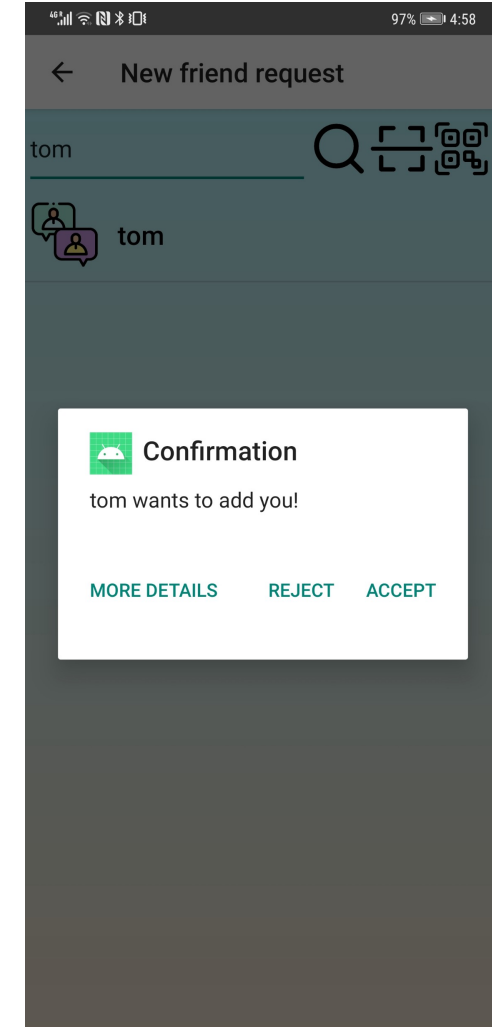
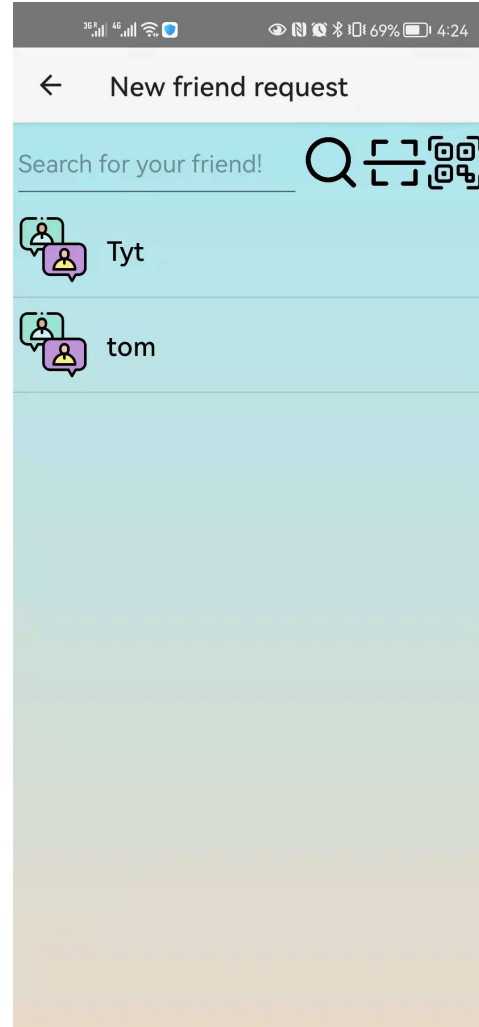
Search by QR Code





7. Accept New Friend Request

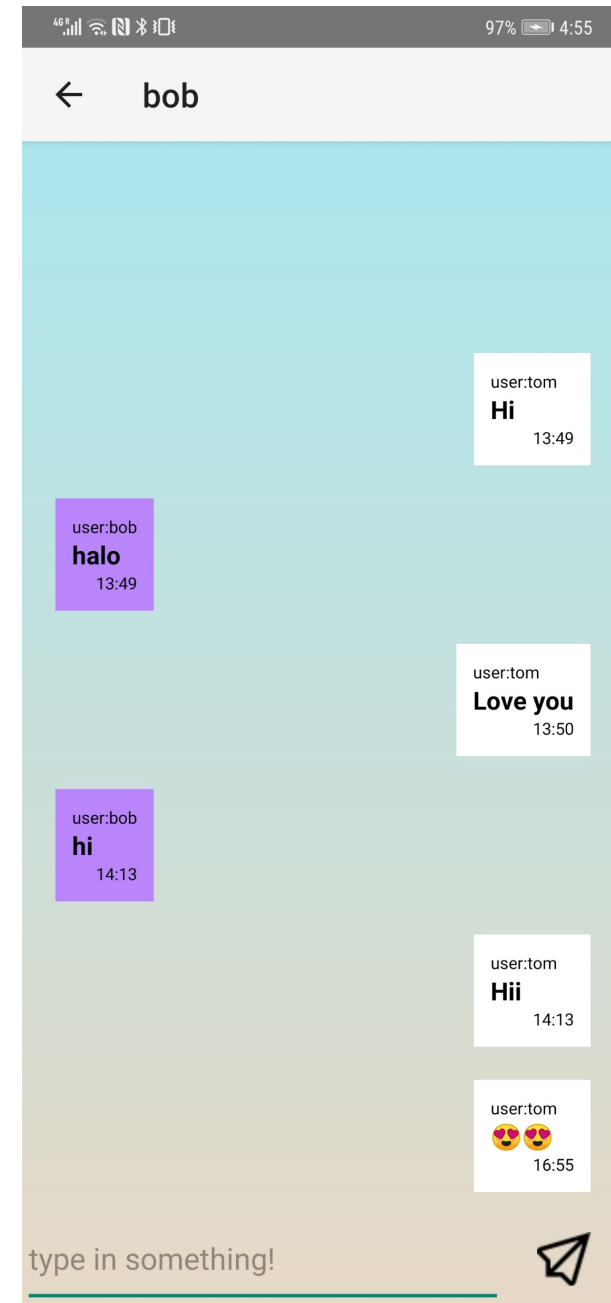
- Request list
- Reject
- Accept





8. Private Chat

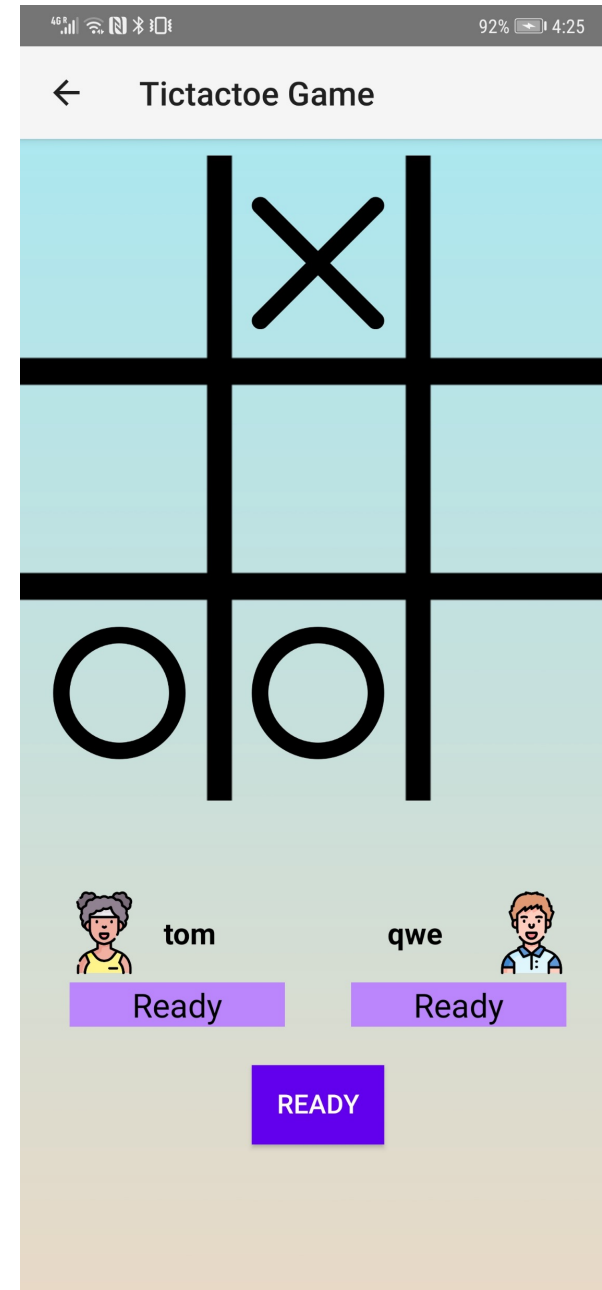
- Real-time message
- Emoji





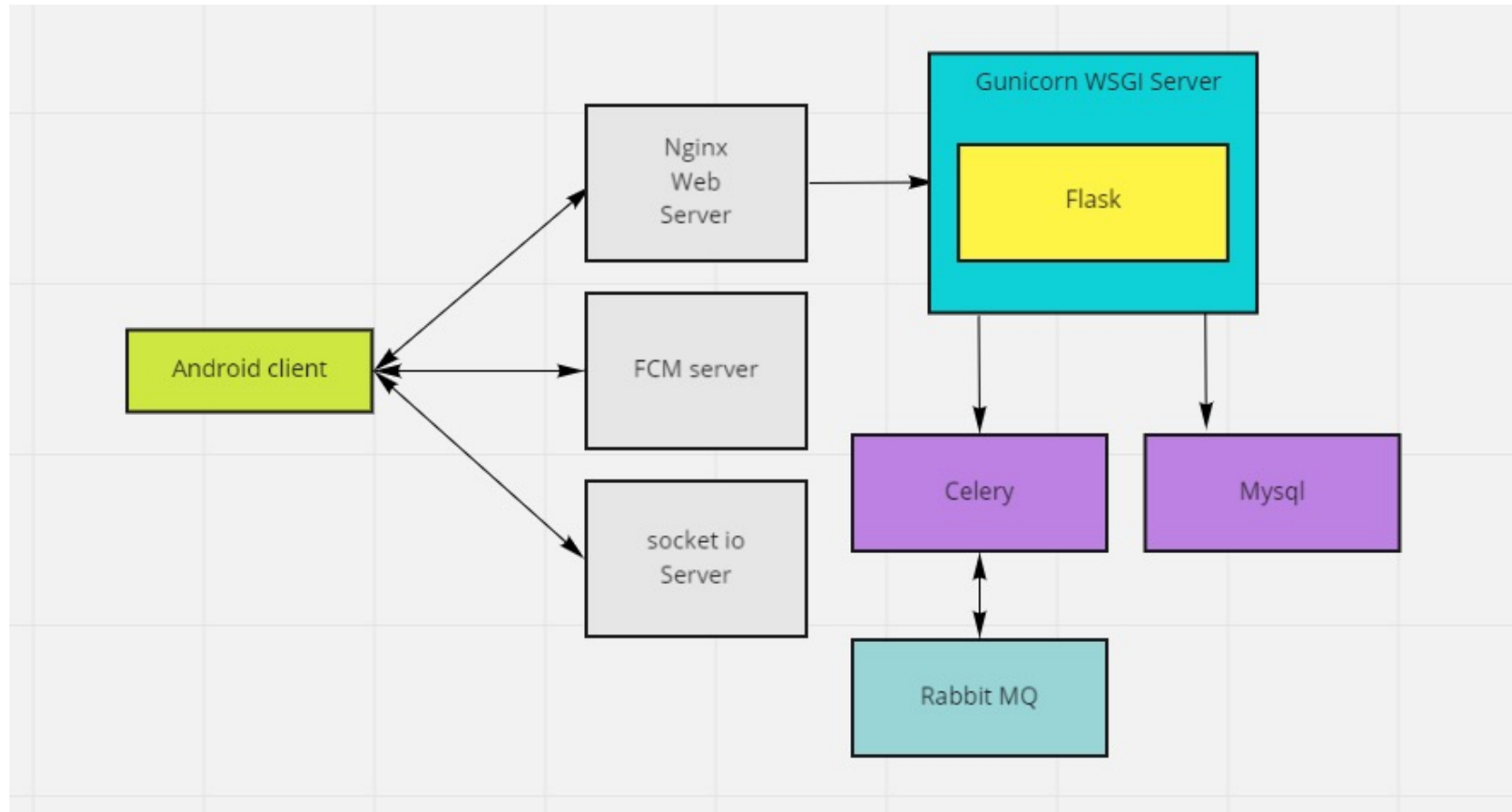
9. Game

- Tic-Tac-Toe
- Ready/Not ready
- Win/Lose/Draw
- Opponent left
- Quit/Play again





System Architecture





Future Work

- Add some functions.
 - Sending pictures, sending voices, voice calls, and video calls, etc.
- More complicated games.
 - Guessing, Gobang, Sokoban, etc.
- Homepage
 - Avatar, signature, circle of friends, likes, comments, etc.



Difficulties

The most difficult part is the game design. We need to control the game process, broadcast the user's click events to the players who participate in the game, update the UI of these players asynchronously, judge the winning conditions as well as react to special situations such as one player quit the game during game time.

Solutions

We use flask socket-io to help us broadcast messages and update the UI in real time. We use join room and leave room function to set up the game group. We also set up some flag values help us specify the execution order of the two players and create an array to keep track of the chessboard.



Reference

- **Andriod:**

- okhttp
- Google.zxing
- Code-scanner
- Google play service

- **Python:**

- Flask
- Flask-socket io
- Celery
- Firebase-messaging



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Thanks for watching!