ROCK

SCISSOR
S

PAPER

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1. Introduction of RSP

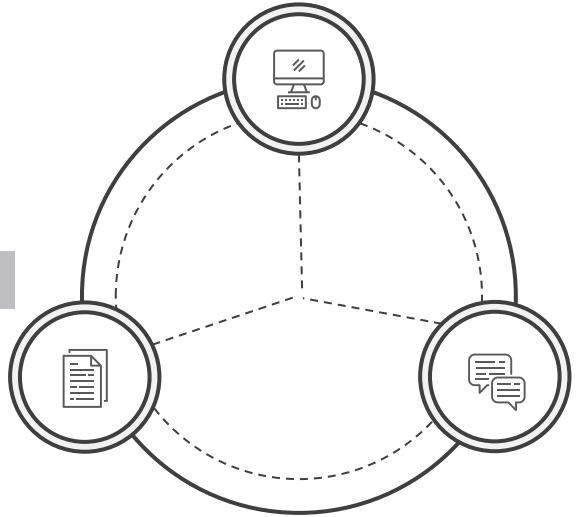
Purpose of Development

Game introduction

Introduction

The online game

that users can play rock paper scissors.



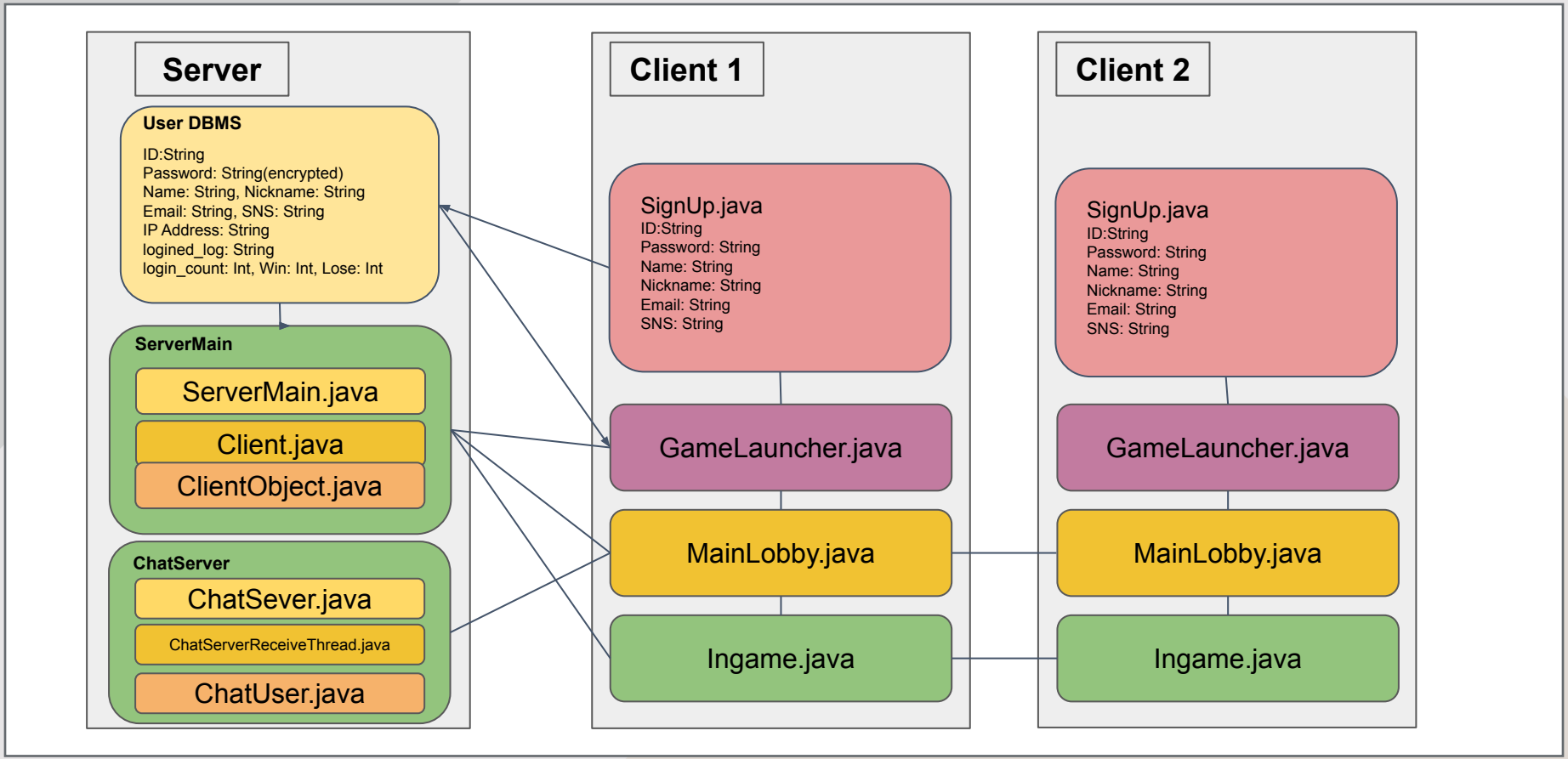
Function

1. A chat room where users can communicate through the waiting room
2. Provide user information through the user list.
3. Top user ranking information provided
4. Invite user to play the game
5. UI for interactive communication

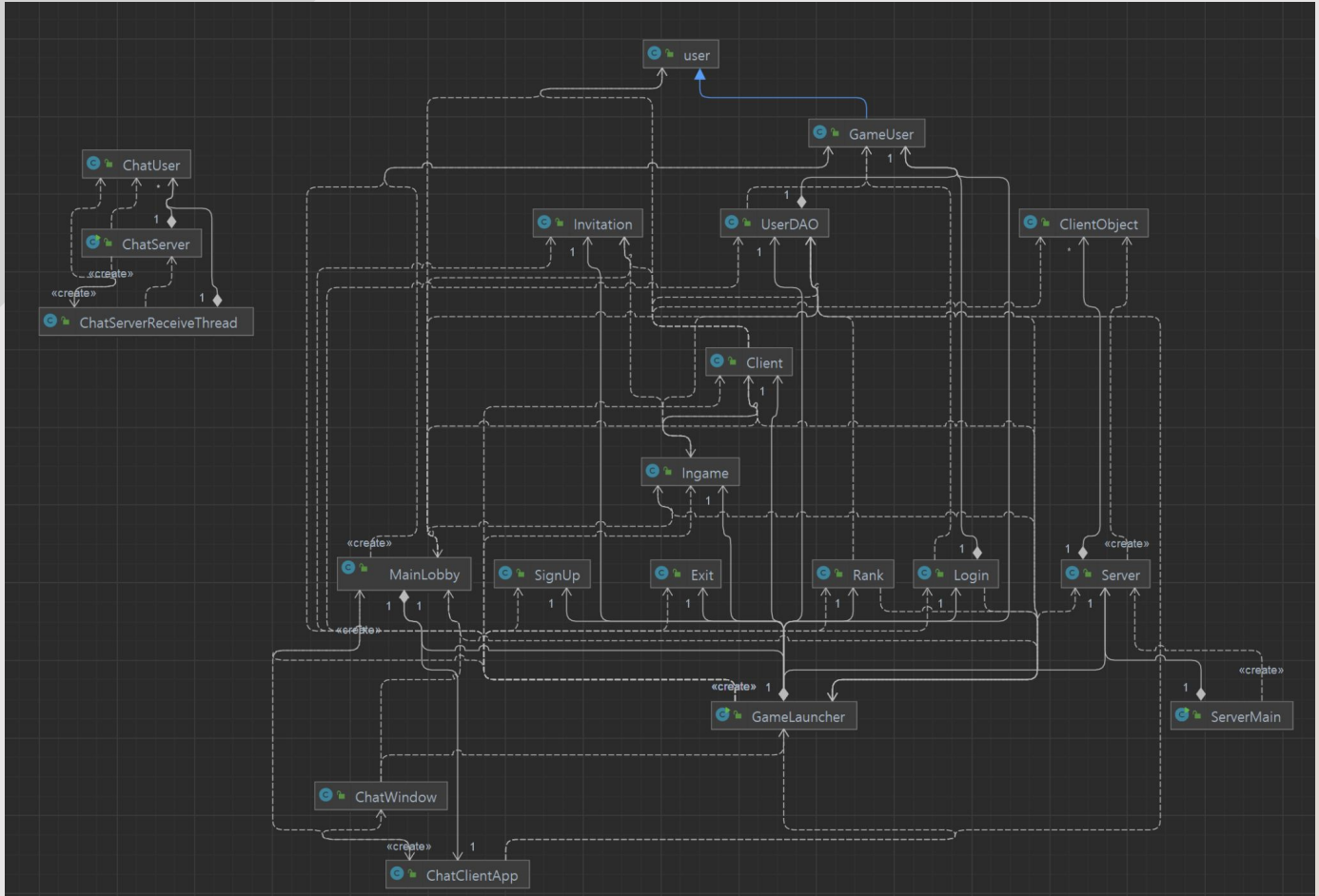
Effectiveness

1. Users who are accessing can freely communicate and enjoy game
2. Provide a chatting system for users to communicate through real-time chat

Architecture Design



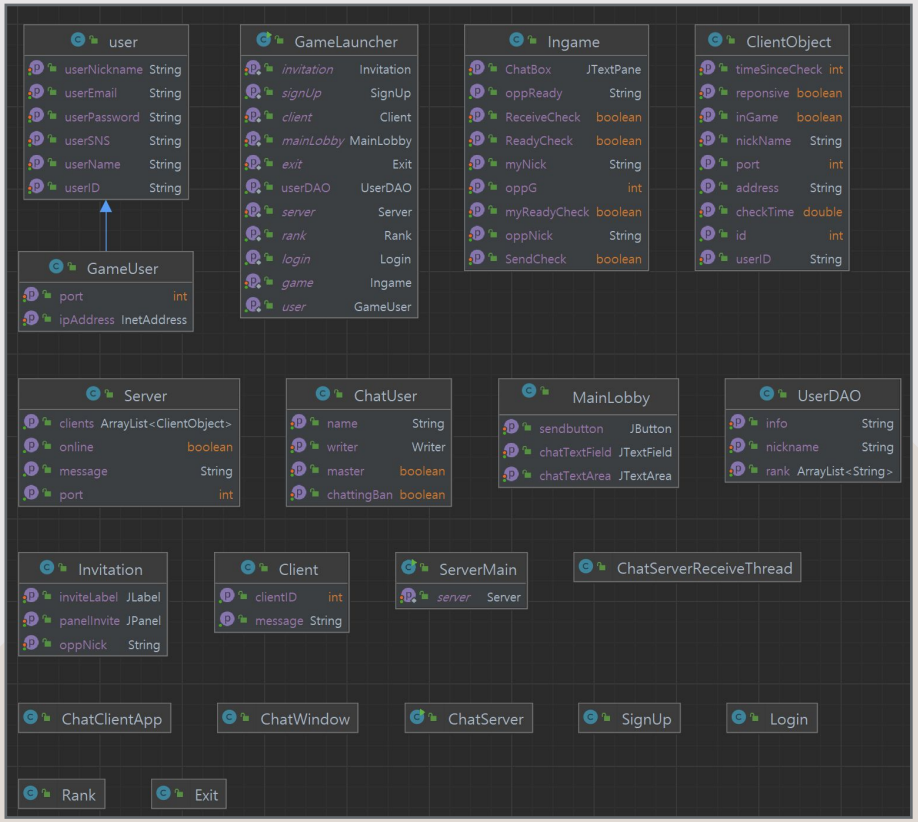
Class Dependency



Fields

Ingame
OPPINFO JLabel
oppNick String
SCISSOR JButton
ROBBYButton JButton
ROCK JButton
MYINFO JLabel
GameBottom JPanel
ReadyCheck boolean
PAPER JButton
oppG int
ChatBox JTextPane
TextPanel JPanel
oppReady String
panelIngame JPanel
GameTop JPanel
SENDButton JButton
ChoosePanel JPanel
TypingBox JTextField
EXITButton JButton
ReceiveCheck boolean
myValue int
OPPBOTTON JButton
myReadyCheck boolean
myNick String
READYButton JButton
SendCheck boolean
MYBOTTON JButton
imgIcons ImageIcon[]
SignUp
password String
textField2 JTextField
NickName String
EmailField JTextField
IDField JTextField
SNS String
OKButton JButton
id String
CpasswordField JPasswordField
textField1 JTextField
name String
NameField JTextField
password2 String
panelSignUp JPanel
passwordField JPasswordField
BACKButton JButton
email String
user
userID String
userPassword String
userNickname String
userName String
userSNS String
userEmail String
GameUser
lastLog String
ipAddress InetAddress
sock Socket
port int
MainLobby
CCA ChatClientApp
scrollPane JScrollPane
chatTextArea JTextArea
sendbutton JButton
model DefaultListModel<GameUser>
ChatRoom JLabel
Rankbutton JButton
panelLobby JPanel
chatTextField JTextField
Exit JButton
userList JList<GameUser>
Login
ID_INPUT JTextField
ID_Str String
user GameUser
Password JLabel
SignUpbutton JButton
panelLogin JPanel
SignUpText JLabel
LoginButton JButton
PW_INPUT JPasswordField
PW_Str String
ID JLabel
ChatClientApp
SERVER_IP String
SERVER_PORT int
ServerMain
server Server
GameLauncher
server Server
invitation Invitation
game Ingame
login Login
rank Rank
client Client
signUp SignUp
user GameUser
exit Exit
database UserDAO
mainLobby MainLobby
ChatWindow
frame Frame
pannel Panel
socket Socket
name String
totalUser String
textField JTextField
textArea JTextArea
br BufferedReader
textPane JTextPane
buttonSend JButton
pw PrintWriter
ClientObject
reponsive boolean
port int
id int
timeSinceCheck int
nickName String
checkTime double
inGame boolean
address String
userID String
UserDAO
rank ArrayList<String>
conn Connection
pstmt PreparedStatement
info String
user GameUser
nickname String
rs ResultSet
Server
clientID int
clients ArrayList<ClientObject>
port int
online boolean
socket DatagramSocket
lastMessage String
Client
online boolean
clientID int
lastMessage String
socket DatagramSocket
port int
serverAddress InetAddress
ChatServerReceiveThread
nickname String
socket Socket
listWriters List<ChatUser>
br BufferedReader
pw PrintWriter
Invitation
panelInvite JPanel
inviteLabel JLabel
거절Button JButton
oppNick String
승락Button JButton
ChatUser
chattingBan boolean
name String
master boolean
writer Writer
Exit
NoButton JButton
yesButton JButton
ExitSentence JLabel
Exit JPanel
ChatServer
listWriters List<ChatUser>
PORT int
Rank
rankPanel JPanel
textArea1 JTextArea

Method and Properties



2. Details of implementation

Login

The Login

Client

It receives an ID and password from the user.

It gets ID and nickname from the server.

Users can sign up for membership through Sign Up.

Server

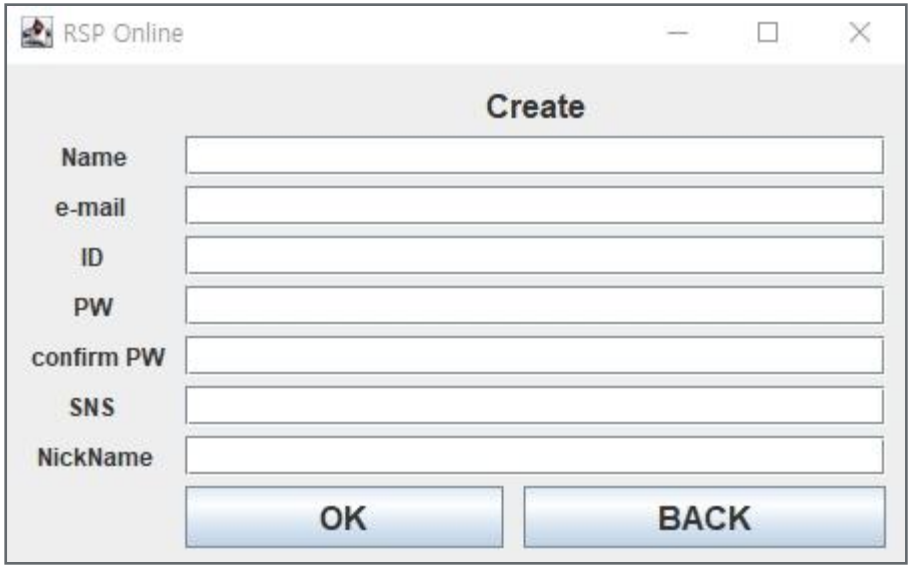
The server manages users' information through DBMS.

Login proceeds by comparing ID and PASSWORD.

It helps to register new members.

Authentication

The SignUp



Authentication

ID, password, Name, Nickname, Email, and SNS are input from the user.

The received information is stored and managed through DBMS.

The password is double checked.
The password is encrypted through SHA2()
and stored in the DB.

Authentication

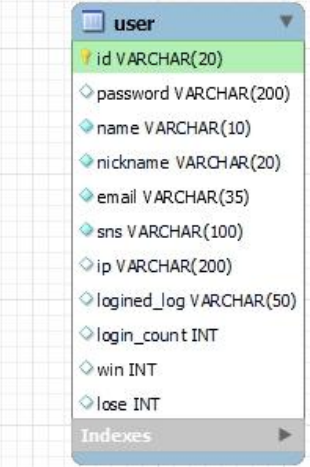
DBMS

USER INPUT

DEFAULT

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

id	password	name	nickname	email	sns	ip	logined_log	login_count	win	lose
99	6781a9e05f5e327a138f3d09ce0211ce4f166d9...	donghak	donghak	donghak@naver.com	donghak@naver.com	DESKTOP-CT3N77A/220.116.200.107	2021-12-15 11:45	246	13	13
sanghyun	3a5648a0b57cc32e1439811e3fbf936643f766c...	sanghyun	sanghyun	sanghyun	sanghyun@naver.com	DESKTOP-UQ3SSAA/14.32.6.28	2021-12-15 12:41	75	12	12
siwoo	ee26b0dd4af7e749aa1a8ee3c10ae9923f61898...	siwoo	SIWOO	siwoo5530@gmail.com	siwoo@SNS	DESKTOP-UE1KB7H/192.168.0.176	2021-12-15 12:40	239	33	29
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL



The connection information ip and logged log are null,

and login_count, win, and loss are processed as default value as 0.

The ID was designated as the default key.

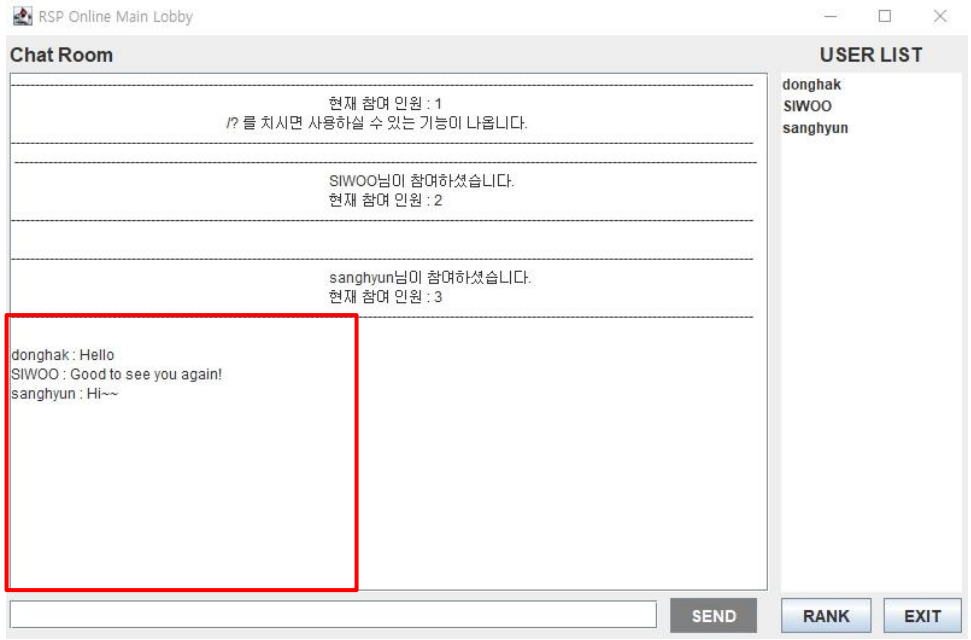
The password was encrypted through SHA2().

The record managed by Win or lose.

User access records are managed through IP and logged_log.

Waiting Room

Lobby Chatting



It provides a chatroom where users can communicate with each other.

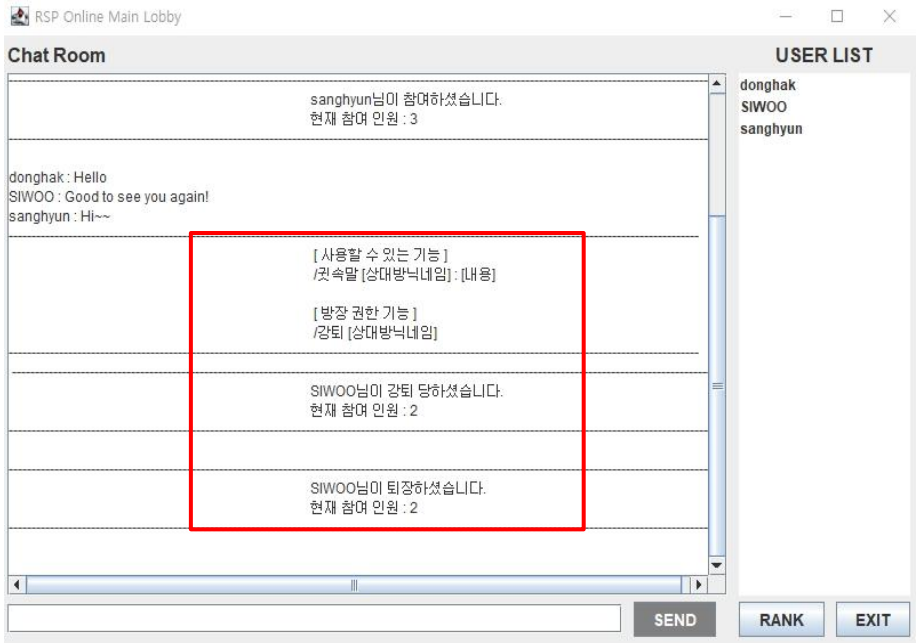
Notice of the number of participants and participation information when the user enters and exits.

User can check the waiting user on the user list.

Ranking, user information, invitation, and exit functions are provided.

Waiting Room

Room Manager



The first person to join will be the room manager.

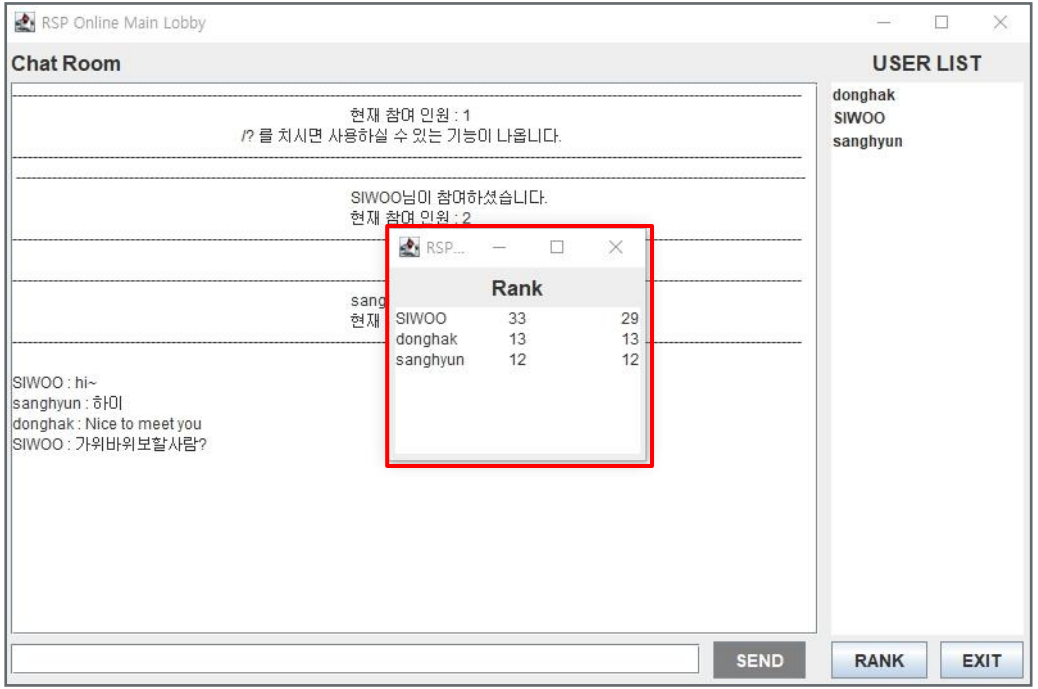
The room manager can do a special function.

Check the functions that can be used through “/?”.

Whispering and getting kicked out.

Waiting Room

Ranking



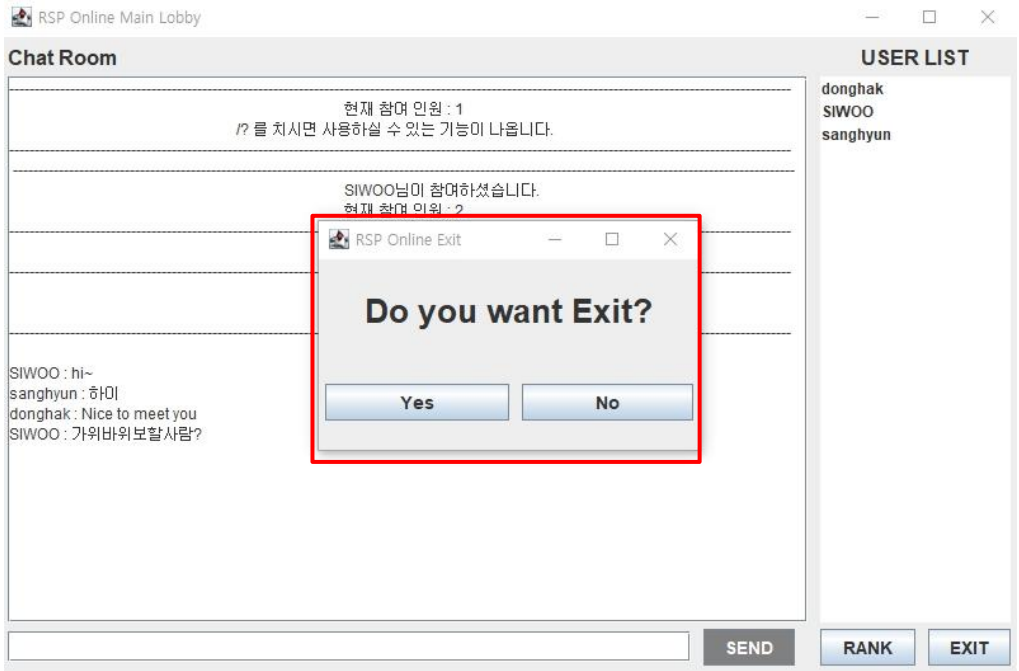
Press the RANK button to show the ranking of the game.

Based on the number of wins, the top 5 players will be revealed.

Nicknames, the number of wins, and the number of losses.

Waiting Room

EXIT



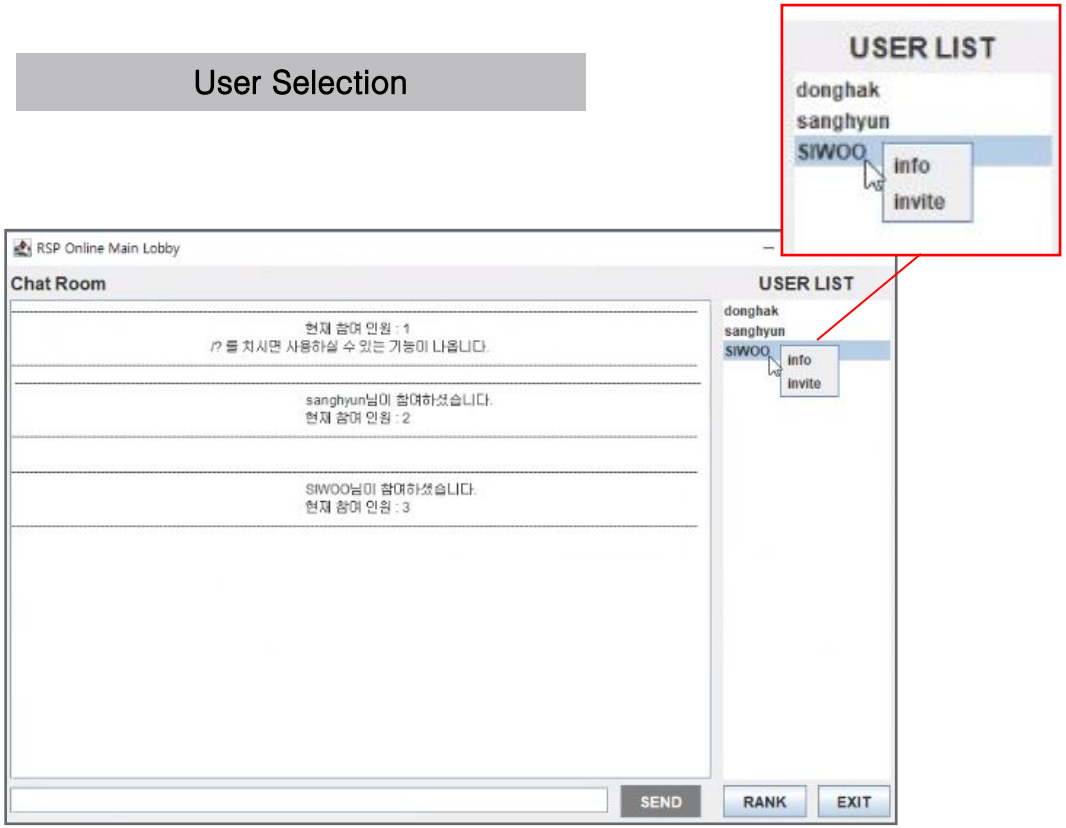
You can end it by using EXIT button.

Show the dialog to provide the Yes or No function for ending.

When the user presses Yes,
the program ends and user excluded from the user list.

Waiting Room

User Selection



If user press the right mouse in the user list, info and invite appear.

If user press Info, user can check the user's information.

If user press Invite, send an invitation to the other user.

Waiting Room

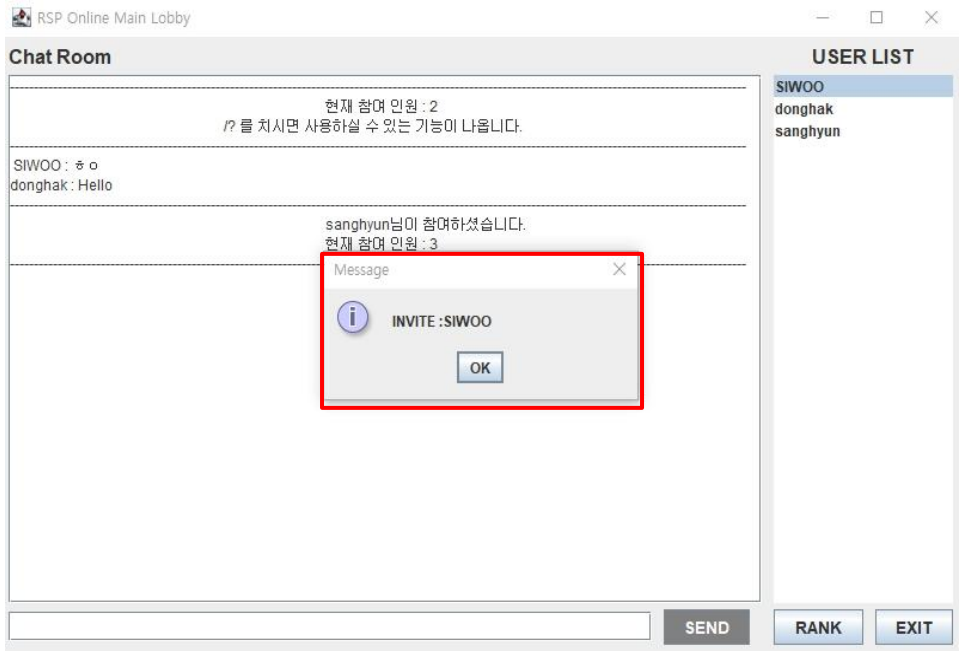
Info

If you press Info, the dialog window is output.

Provide the user's nickname, number of wins, and number of losses.

Waiting Room

Invite



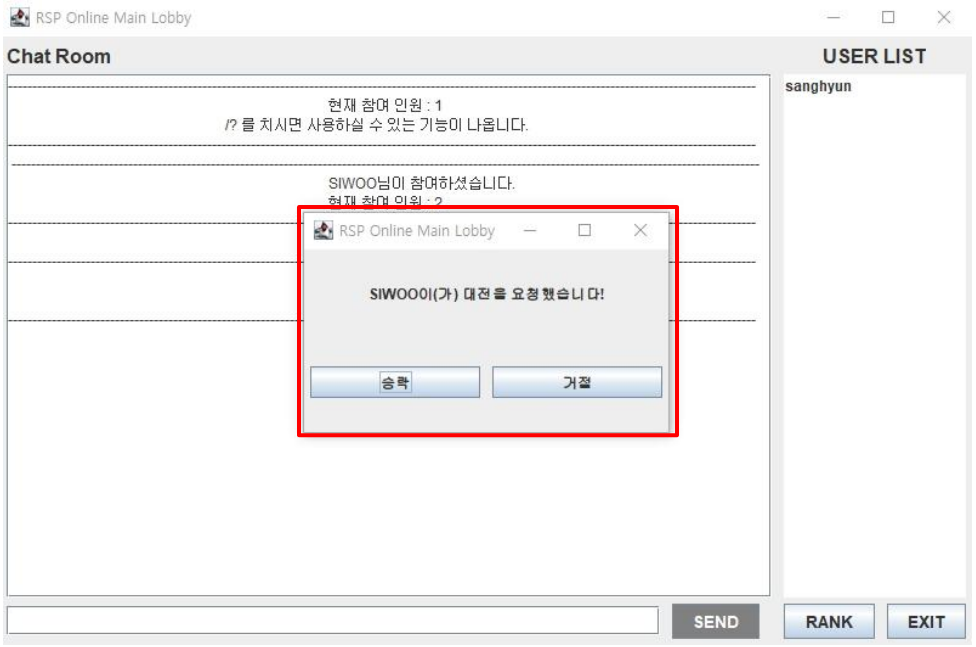
If you press Invite, send an invitation to that user.

INVITE: Show the invited user name

Game invite requests were synchronized in the form of requests and response.

Waiting Room

Invited user



The person who receives the invitation receives the sender's nickname and invitation message.

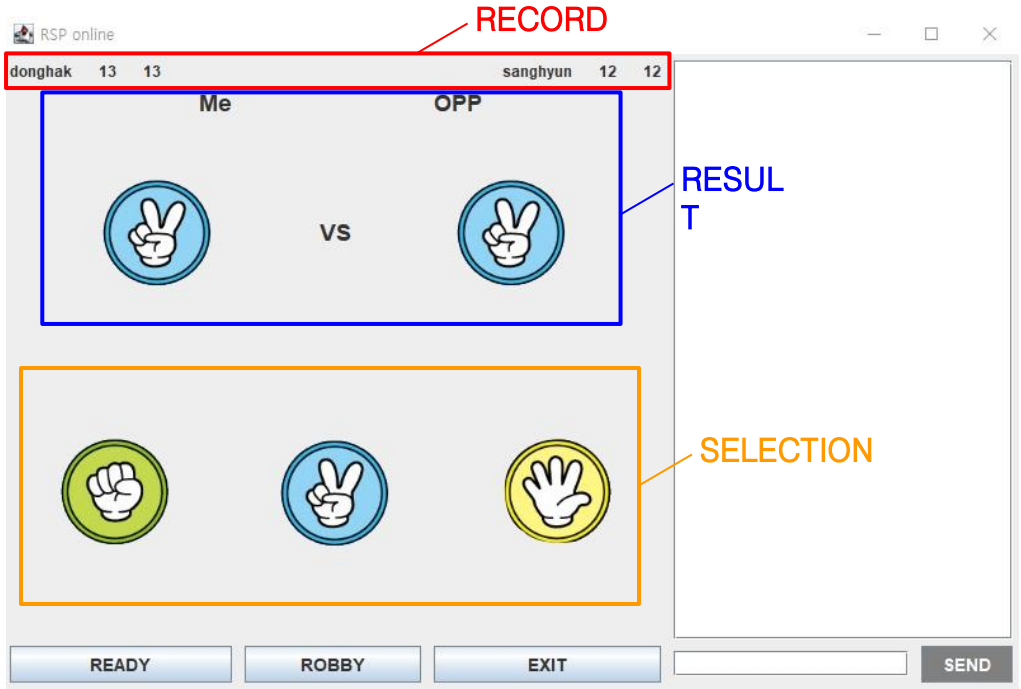
Invited users may "YES" or “NO”.

If user press the "YES" button, a 1:1 game room will be created with the user.

The two users disappear from the user list and enter the game room.

Game Room

1:1 Game Room



The game room has 1:1 chat function.

READY, LOBBY, EXIT button.

Two users need to press ready to start.

At the top,mark my record and other user record.

In the middle, output the result value.

In the bottom, selection part.

Game Room

Ready

Opponent Ready

If opponent presses the READY button, send the dialog to the player.

And also show it to the chatroom.

Game Room

Ready

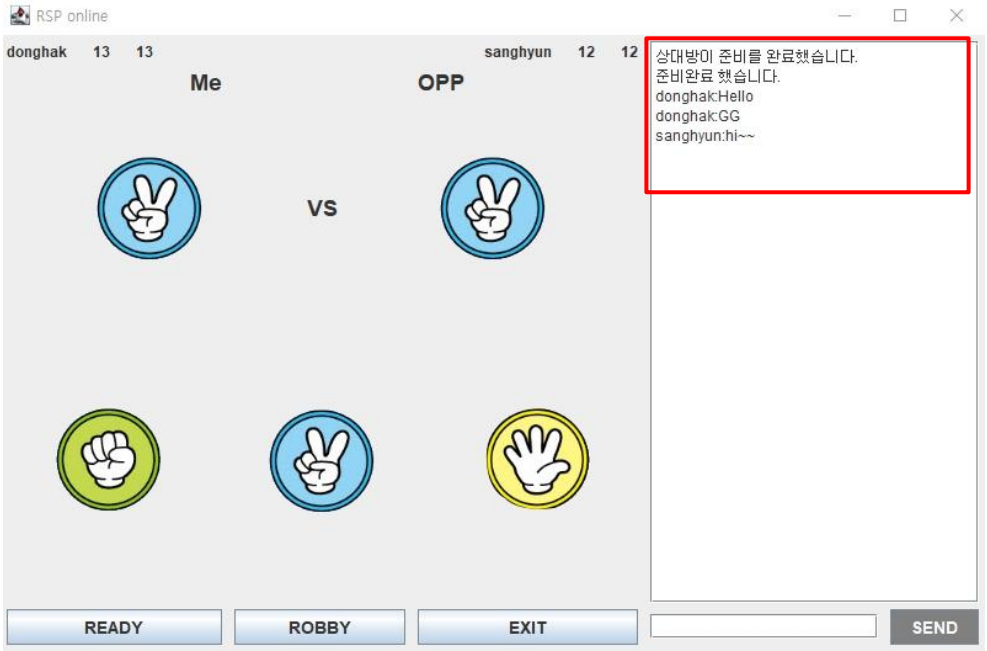
READY button

Press the “READY” then show info to the chatroom.

Both of players must be ready to start the game.

Game Room

In Game

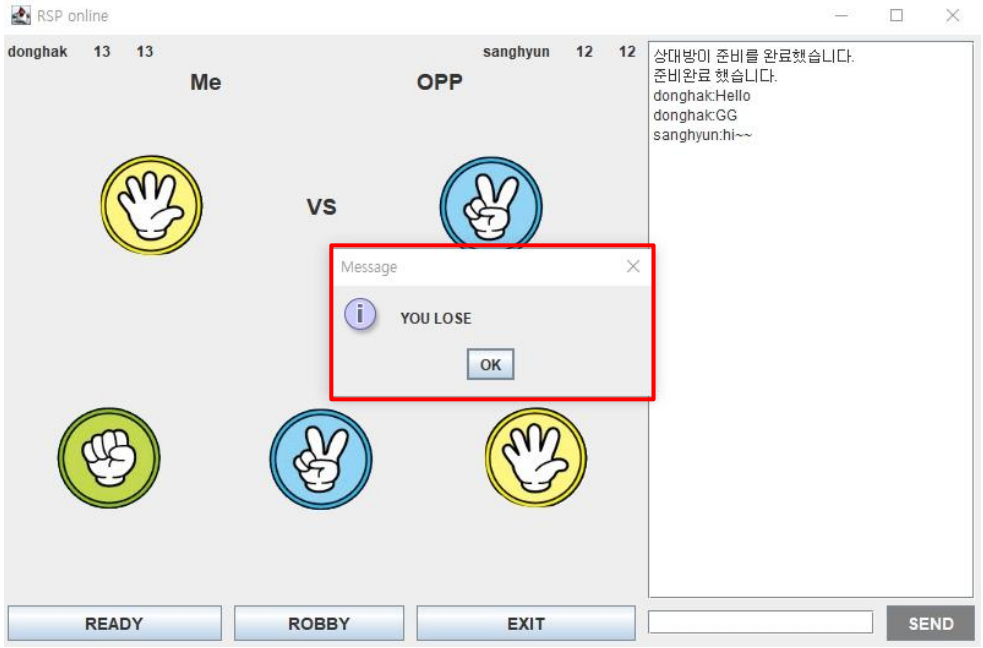


1:1 Chat in the Game Room.

Two users who participated in the game will be provided with a chatroom where they can communicate.

Game Room

LOSE



Game Result

If both users choose rock-paper-scissors, the appropriate result will be known as a message to each other.

After press the OK button update the record.

The records of users at the top are updated immediately.

Game Room

In Game

REPEAT

After the game, It goes back to my initial state.

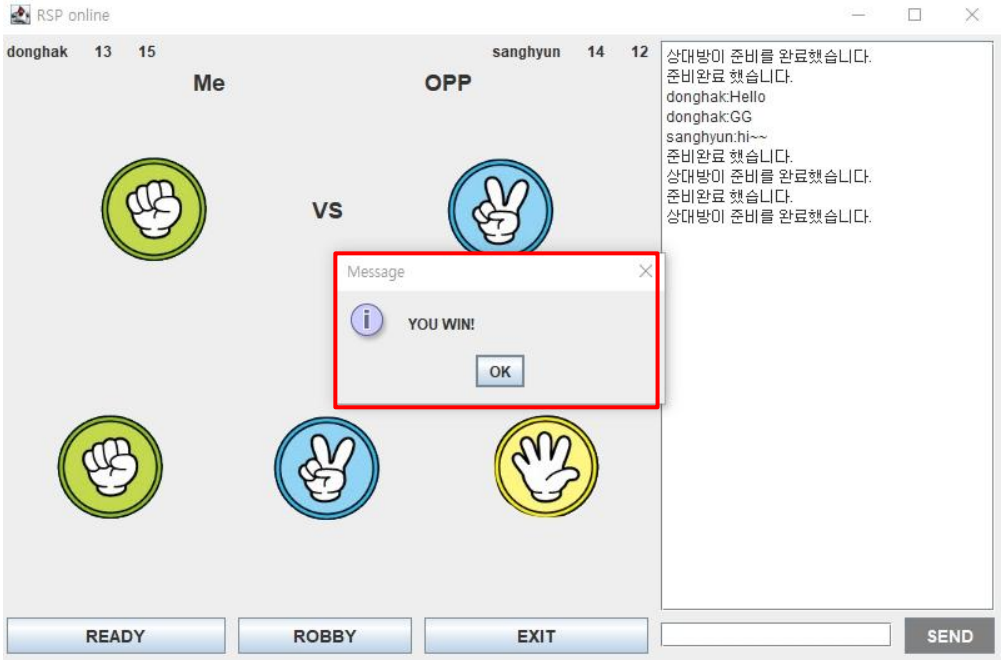
User choose between READY, ROBBY, and EXIT buttons.

If user press Ready, user can restart again.

When both users are ready again, the game starts again.

Game Room

WIN



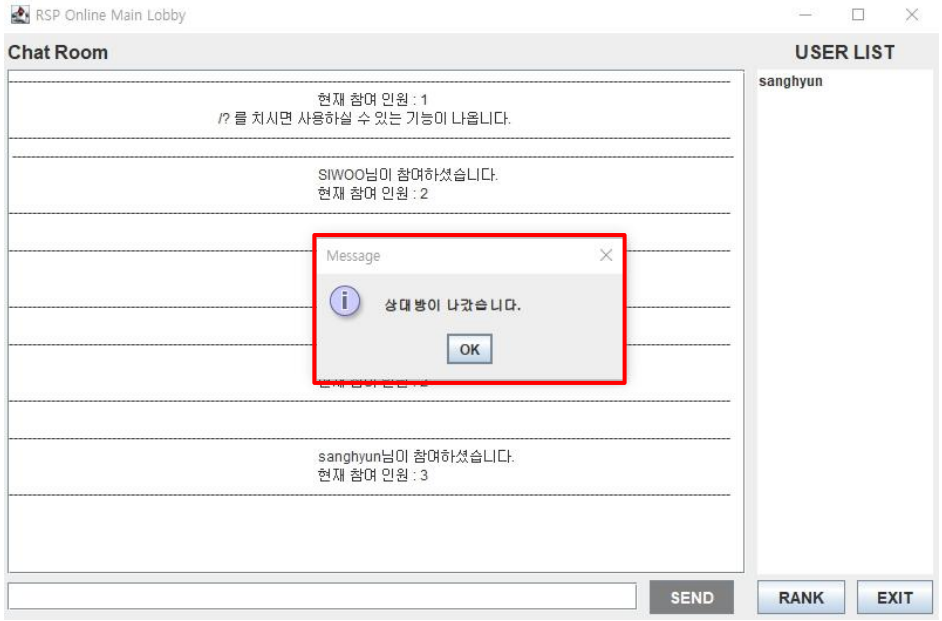
RESTART

Winning the game.

It shows the results of win, loss, and draw according to game logic.

Main Lobby

Back to Lobby



Opponent Left

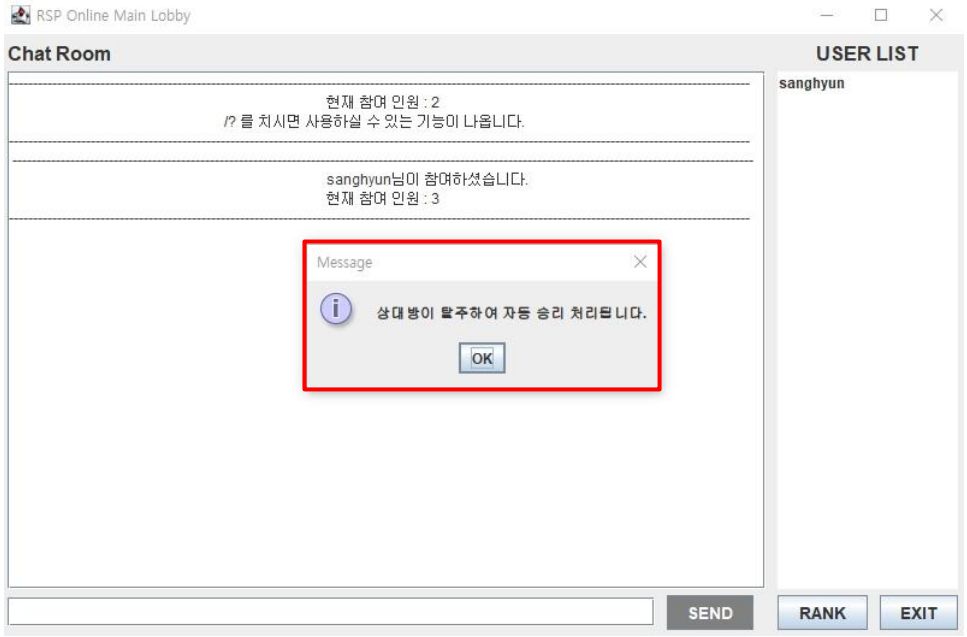
If even one user leaves the game room, everyone will be taken to the waiting room.

Back to Main Lobby.

Add name to USER LIST and Update
Other users can invite you to game again.

Main Lobby

Run away



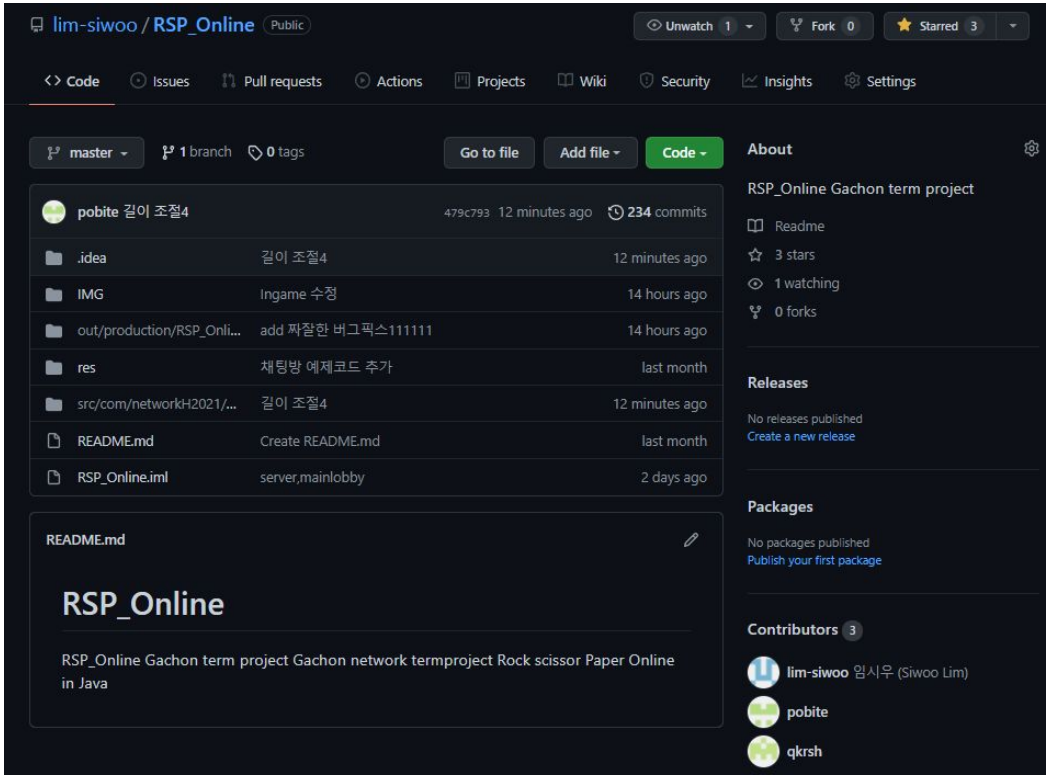
Leave During the game

If all users are ready and leave, the user who left will be defeated.

The remaining users are treated as a victory.

3. Link URL

Repository



https://github.com/lim-siwoo/RSP_Online

YOUTUBE

Members

LEE DONG HAK

DBMS
Game GUI
Game function
Game Networking

LIM SIWOO

SocketServer
Multi-thread(Server,Client)
Client GUI function
Chatroom(All,1:1)

PARK SANG HYUN

Game GUI
Game function
Game Networking

THANK YOU