



ROCK

SCISSOR  
S

PAPER

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# 1. Introduction of RSP

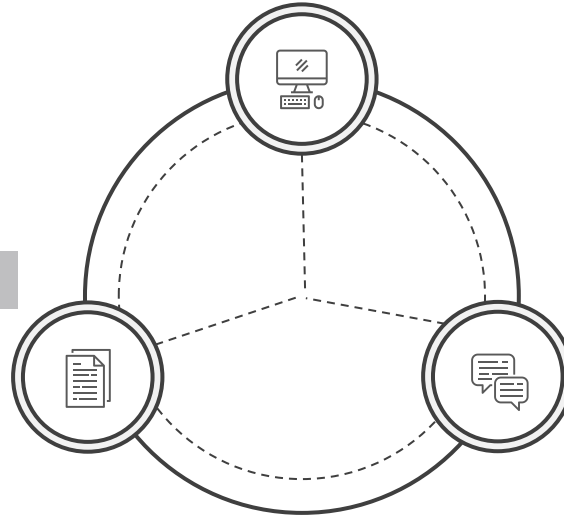
# Purpose of Development



# Game introduction

## Introduction

The online game  
that users can play rock paper scissors.



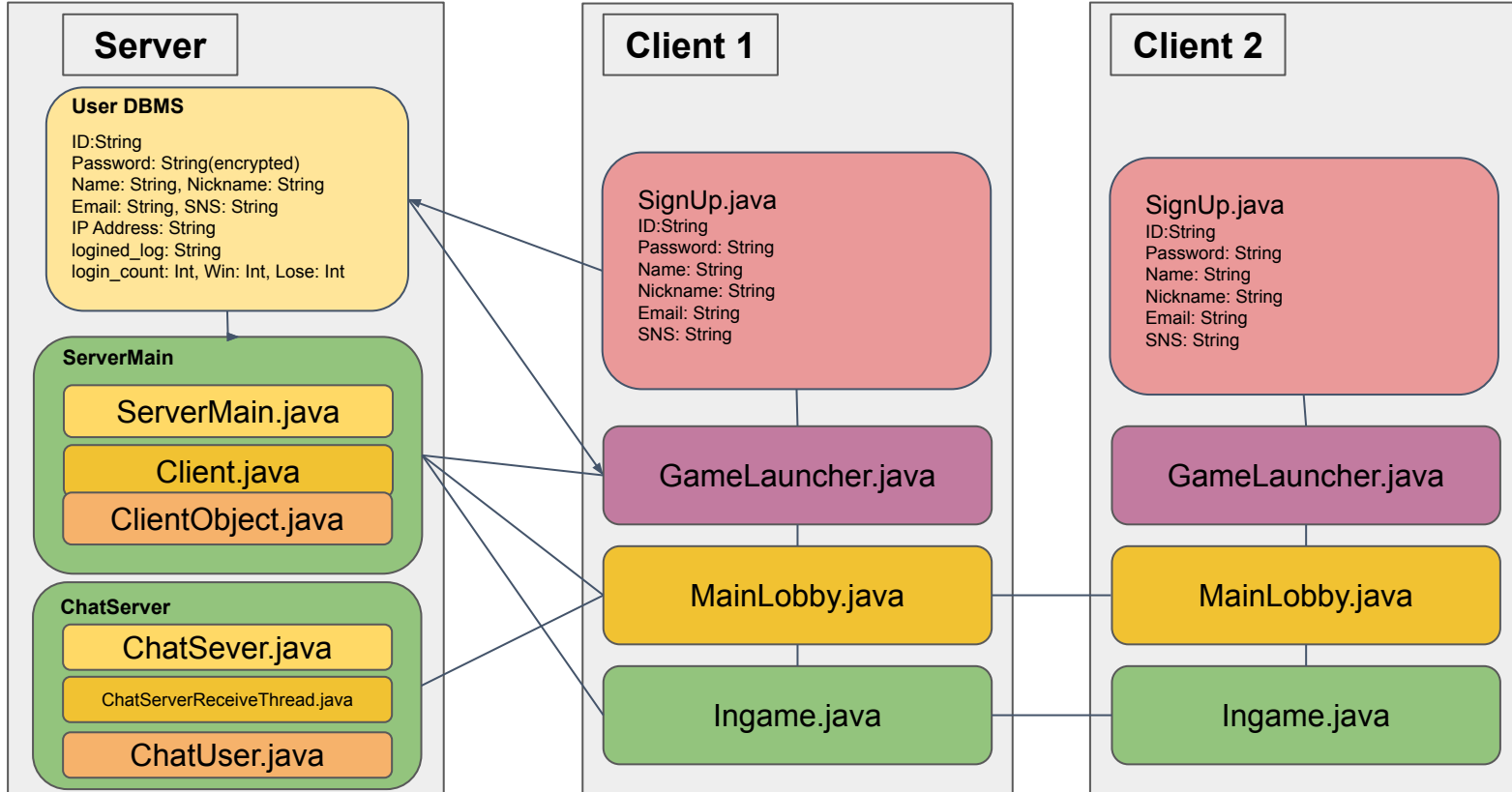
## Function

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

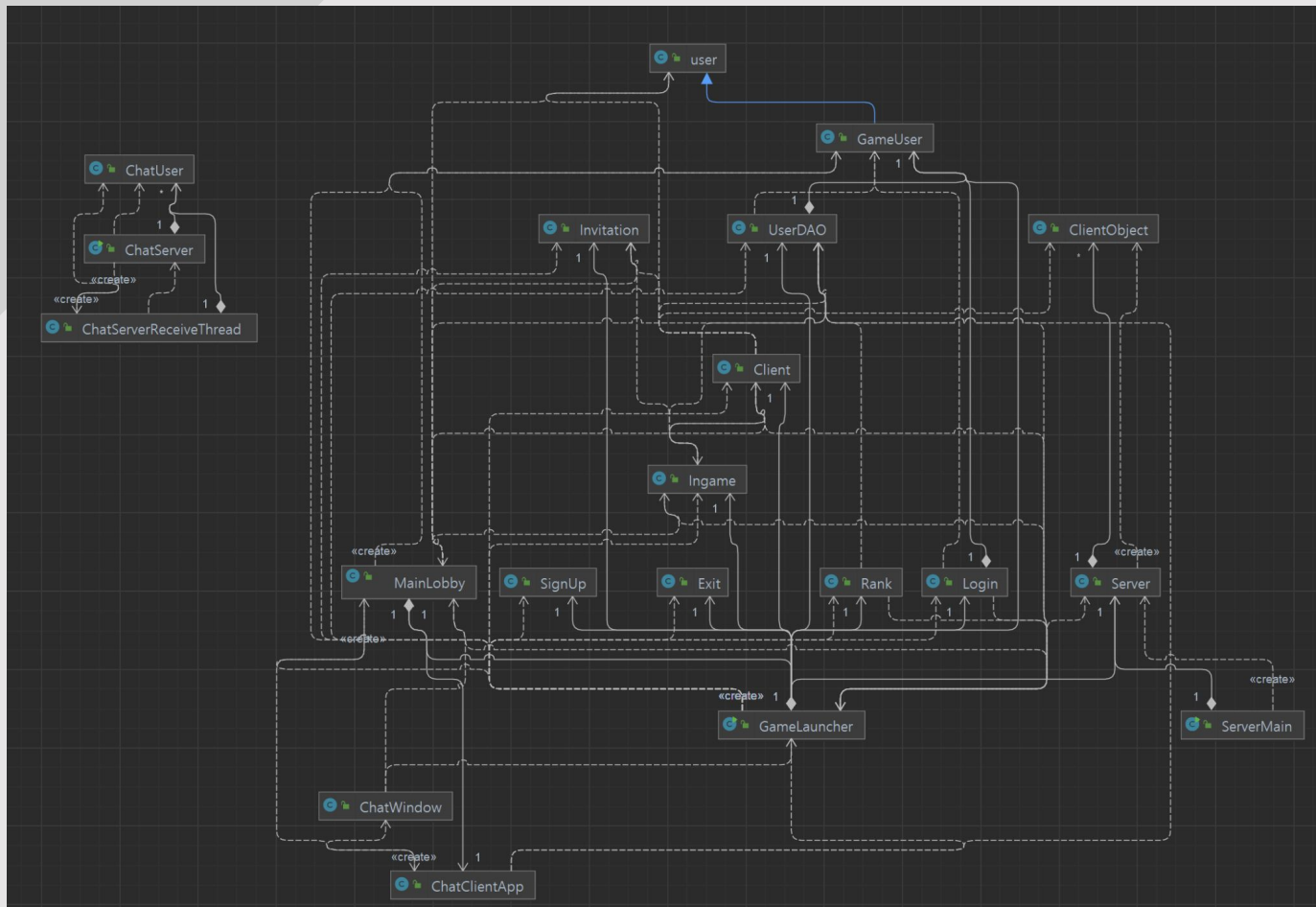
## Effectiveness

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	
1 OPPINFO	JLabel
1 oppNick	String
1 SCISSOR	JButton
1 ROBBYButton	JButton
1 ROCK	JButton
1 MYINFO	JLabel
1 GameBottom	JPanel
1 ReadyCheck	boolean
1 PAPER	JButton
1 oppG	int
1 ChatBox	JTextPane
1 TextPanel	JPanel
1 oppReady	String
1 panelIngame	JPanel
1 GameTop	JPanel
1 SENDButton	JButton
1 ChoosePanel	JPanel
1 TypingBox	JTextField
1 EXITButton	JButton
1 ReceiveCheck	boolean
1 myValue	int
1 OPPBOTTON	JButton
1 myReadyCheck	boolean
1 myNick	String
1 READYButton	JButton
1 SendCheck	boolean
1 MYBOTTON	JButton
1 imgIcons	ImageIcon[]

SignUp	
1 password	String
1 textField2	JTextField
1 NickName	String
1 EmailField	JTextField
1 IDField	JTextField
1 SNS	String
1 OKButton	JButton
1 id	String
1 CpasswordField	JPasswordField
1 textField1	JTextField
1 name	String
1 NameField	JTextField
1 password2	String
1 panelSignUp	JPanel
1 passwordField	JPasswordField
1 BACKButton	JButton
1 email	String

user	
1 userID	String
1 userPassword	String
1 userNickname	String
1 userName	String
1 userSNS	String
1 userEmail	String

GameUser	
1 lastLog	String
1 ipAddress	InetAddress
1 sock	Socket
1 port	int

MainLobby	
1 CCA	ChatClientApp
1 scrollPane	JScrollPane
1 chatTextArea	JTextArea
1 sendbutton	JButton
1 model	DefaultListModel<GameUser>
1 ChatRoom	JLabel
1 Rankbutton	JButton
1 panelLobby	JPanel
1 chatTextField	JTextField
1 Exit	JButton
1 userList	JList<GameUser>

ChatClientApp	
1 SERVER_IP	String
1 SERVER_PORT	int

ServerMain	
1 server	Server

Login	
1 ID_INPUT	JTextField
1 ID_Str	String
1 user	GameUser
1 Password	JLabel
1 SignUpbutton	JButton
1 panelLogin	JPanel
1 SignUpText	JLabel
1 LoginButton	JButton
1 PW_INPUT	JPasswordField
1 PW_Str	String
1 ID	JLabel

GameLauncher	
1 server	Server
1 invitation	Invitation
1 game	Ingame
1 login	Login
1 rank	Rank
1 client	Client
1 signUp	SignUp
1 user	GameUser
1 exit	Exit
1 database	UserDAO
1 mainLobby	MainLobby

ChatWindow	
1 frame	Frame
1 pannel	Panel
1 socket	Socket
1 name	String
1 totalUser	String
1 textField	JTextField
1 textArea	JTextArea
1 br	BufferedReader
1 textPane	JTextPane
1 buttonSend	JButton
1 pw	PrintWriter

ClientObject	
1 responsive	boolean
1 port	int
1 id	int
1 timeSinceCheck	int
1 nickname	String
1 checkTime	double
1 inGame	boolean
1 address	String
1 userID	String

UserDAO	
1 rank	ArrayList<String>
1 conn	Connection
1 pstmt	PreparedStatement
1 info	String
1 user	GameUser
1 nickname	String
1 rs	ResultSet

Server	
1 clientID	int
1 clients	ArrayList<ClientObject>
1 port	int
1 online	boolean
1 socket	DatagramSocket
1 lastMessage	String

Client	
1 online	boolean
1 clientID	int
1 lastMessage	String
1 socket	DatagramSocket
1 port	int
1 serverAddress	InetAddress

ChatServerReceiveThread	
1 nickname	String
1 socket	Socket
1 listWriters	List<ChatUser>
1 br	BufferedReader
1 pw	PrintWriter

Invitation	
1 pannelInvite	JPanel
1 inviteLabel	JLabel
1 거절Button	JButton
1 oppNick	String
1 승락Button	JButton

ChatUser	
1 chattingBan	boolean
1 name	String
1 master	boolean
1 writer	Writer

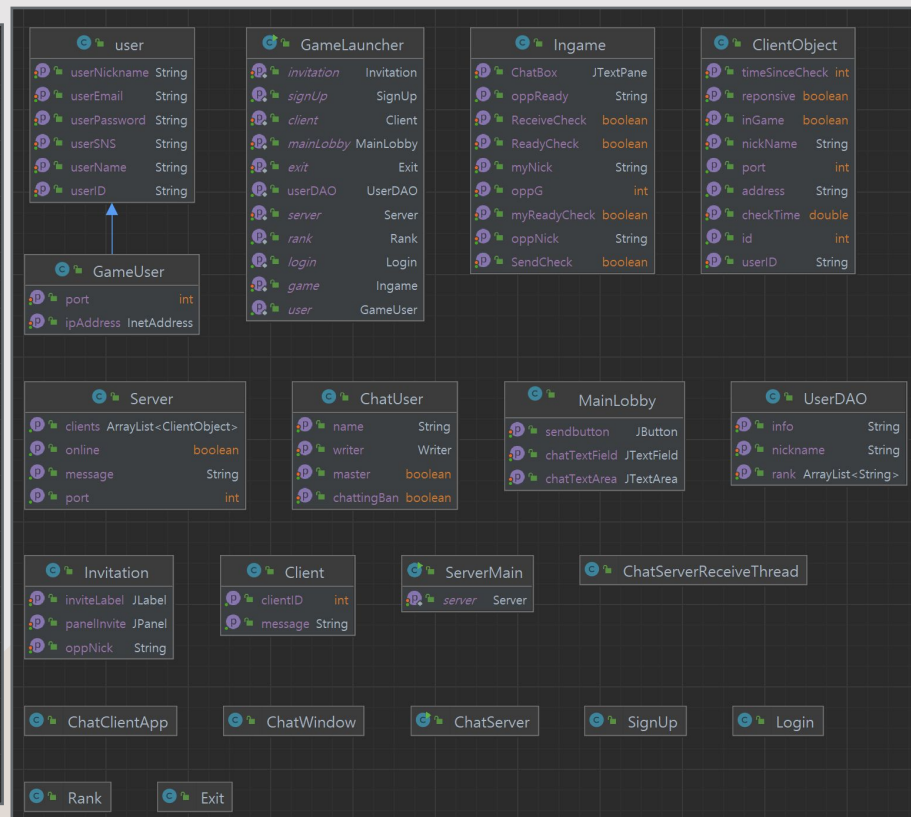
Exit	
1 NoButton	JButton
1 yesButton	JButton
1 ExitSentence	JLabel
1 Exit	JPanel

ChatServer	
1 listWriters	List<ChatUser>
1 PORT	int

Rank	
1 rankPanel	JPanel
1 textArea1	JTextArea



# Method and Properties





## 2. Details of implementation

# Login

## The Login

A screenshot of a web application window titled "RSP Online". The window has a title bar with standard minimize, maximize, and close buttons. The main content area has a light gray background. At the top, it says "Welcome to RSP Online" in bold black text. Below this, there are two input fields. The first is labeled "ID:" and the second is labeled "Password:". Both labels are in bold black text. Below the input fields, there are two buttons: "Sign Up" and "LOGIN". Both buttons are blue with white text and a slight 3D effect.

**Welcome to RSP Online**

**ID:**

**Password:**

**Sign Up** **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



The screenshot shows a window titled "RSP Online" with a "Create" button at the top. Below the button are six input fields for user registration: "Name", "e-mail", "ID", "PW", "confirm PW", and "SNS". Below these fields is a "NickName" field. At the bottom of the form are two buttons: "OK" and "BACK".

Create	
Name	<input type="text"/>
e-mail	<input type="text"/>
ID	<input type="text"/>
PW	<input type="text"/>
confirm PW	<input type="text"/>
SNS	<input type="text"/>
NickName	<input type="text"/>
<input type="button" value="OK"/> <input type="button" value="BACK"/>	

## 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	logged_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().

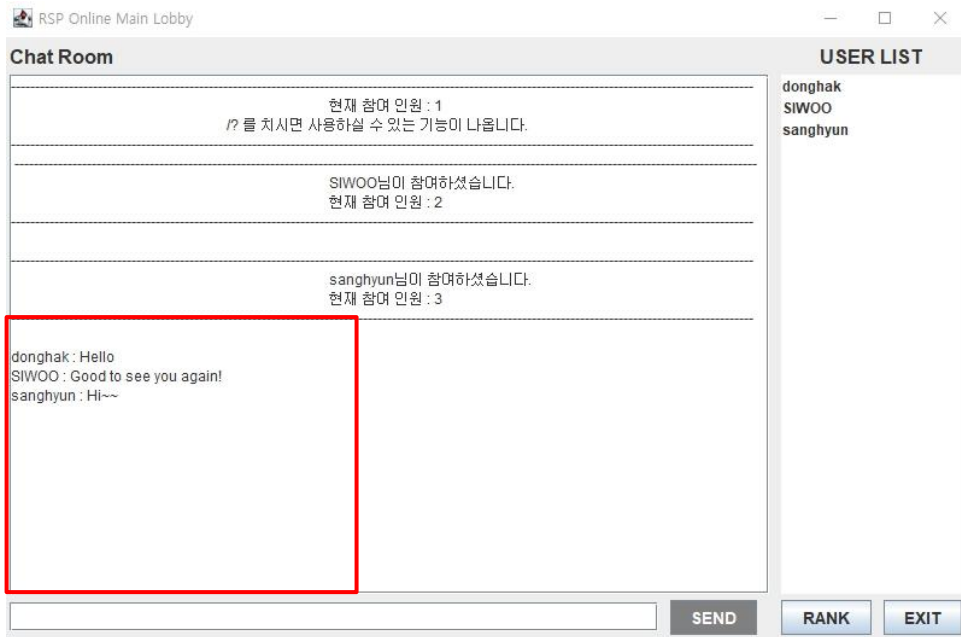
The record managed by Win or lose.

User access records are managed through IP and logged\_log.

user	
id	VARCHAR(20)
password	VARCHAR(200)
name	VARCHAR(10)
nickname	VARCHAR(20)
email	VARCHAR(35)
sns	VARCHAR(100)
ip	VARCHAR(200)
logged_log	VARCHAR(50)
login_count	INT
win	INT
lose	INT
Indexes	

# Waiting Room

## Lobby Chatting



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

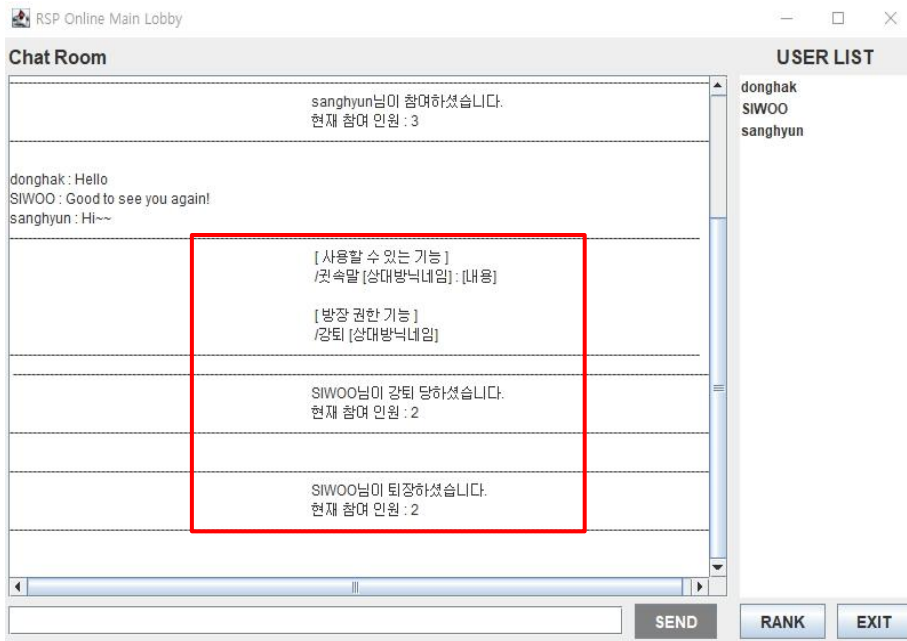
Notice of the number of participants and participation information when the user enters and exits.

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.

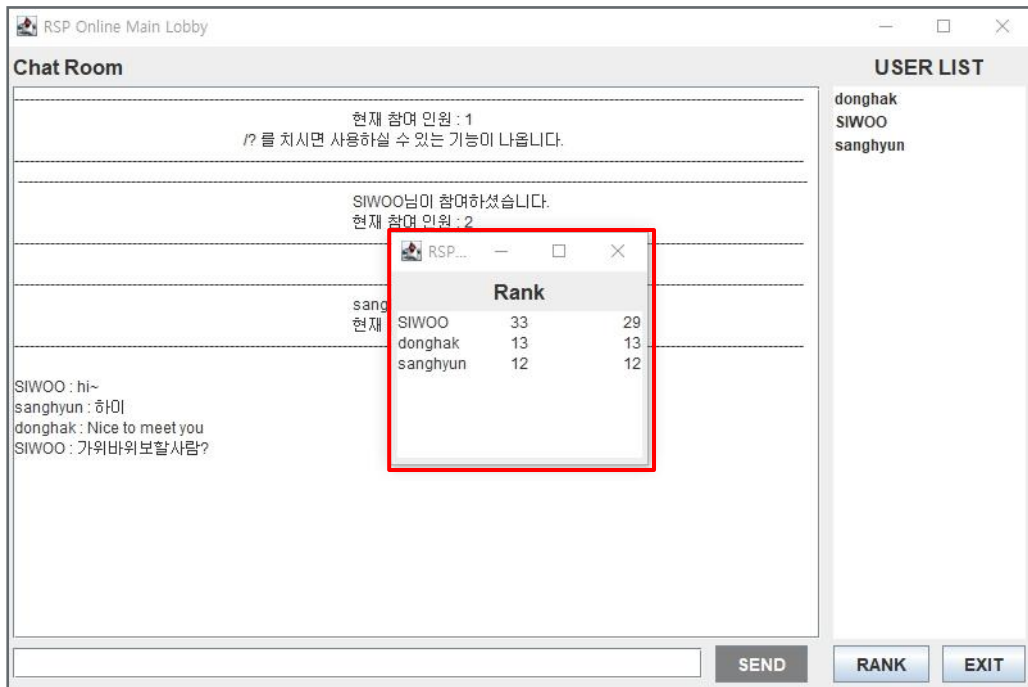
The room manager can do a special function.

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.

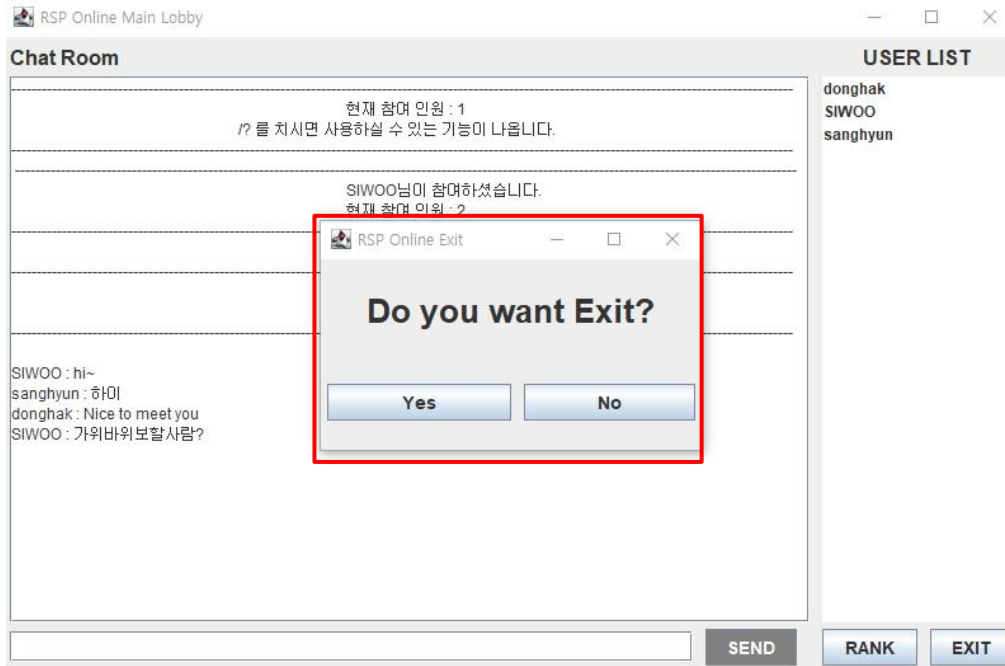
Based on the number of wins, the top 5 players will be revealed.

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



# Waiting Room

EXIT



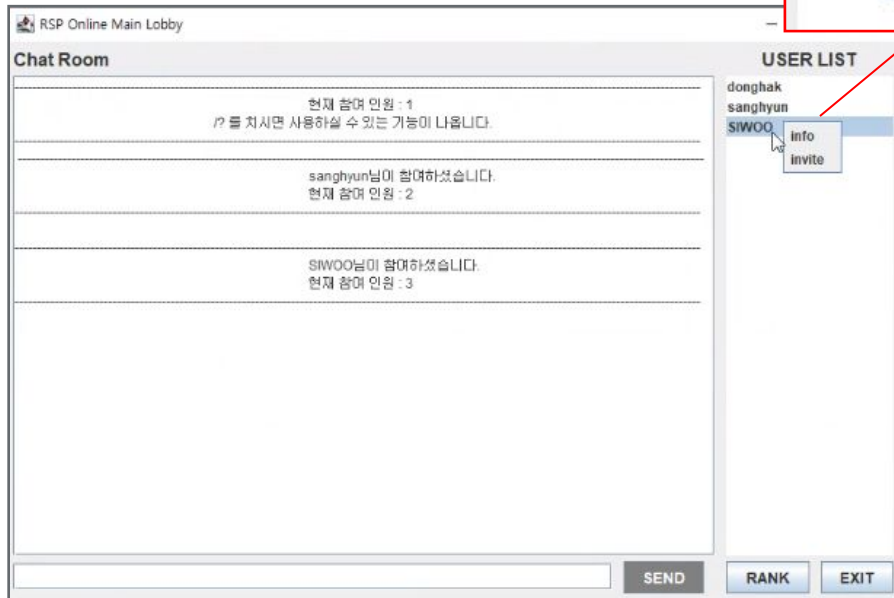
You can end it by using EXIT button.

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



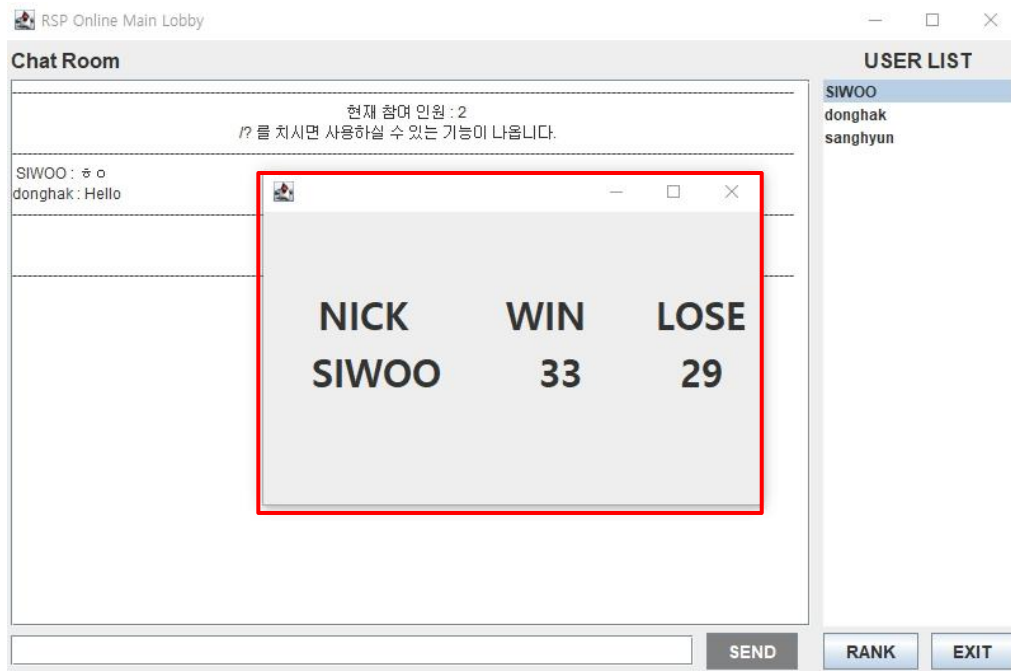
If user press the right mouse in the user list, info and invite appear.

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



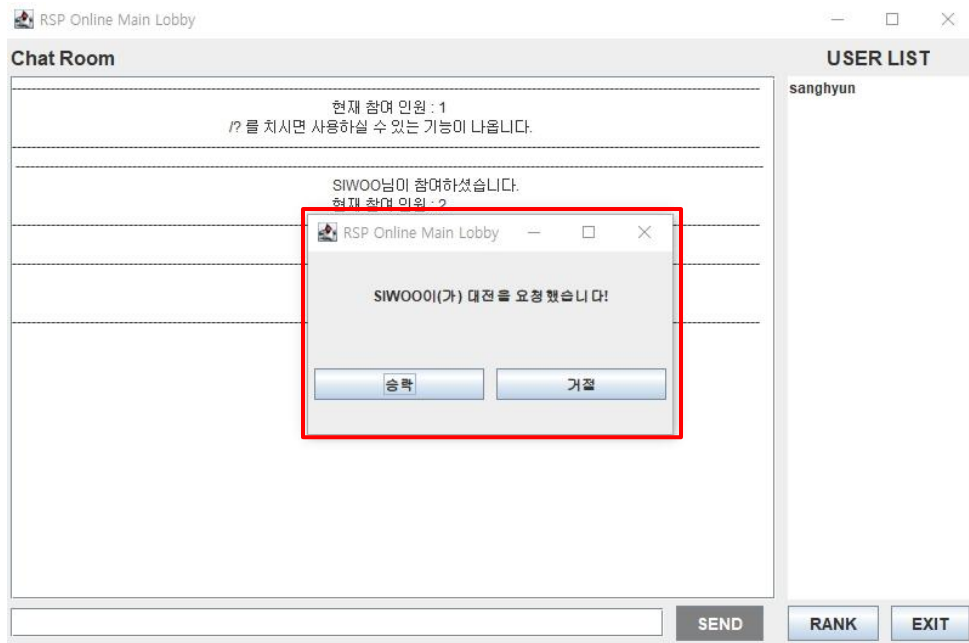
If you press Invite, send an invitation to that user.

INVITE: Show the invited user name

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

# Waiting Room

## Invited user



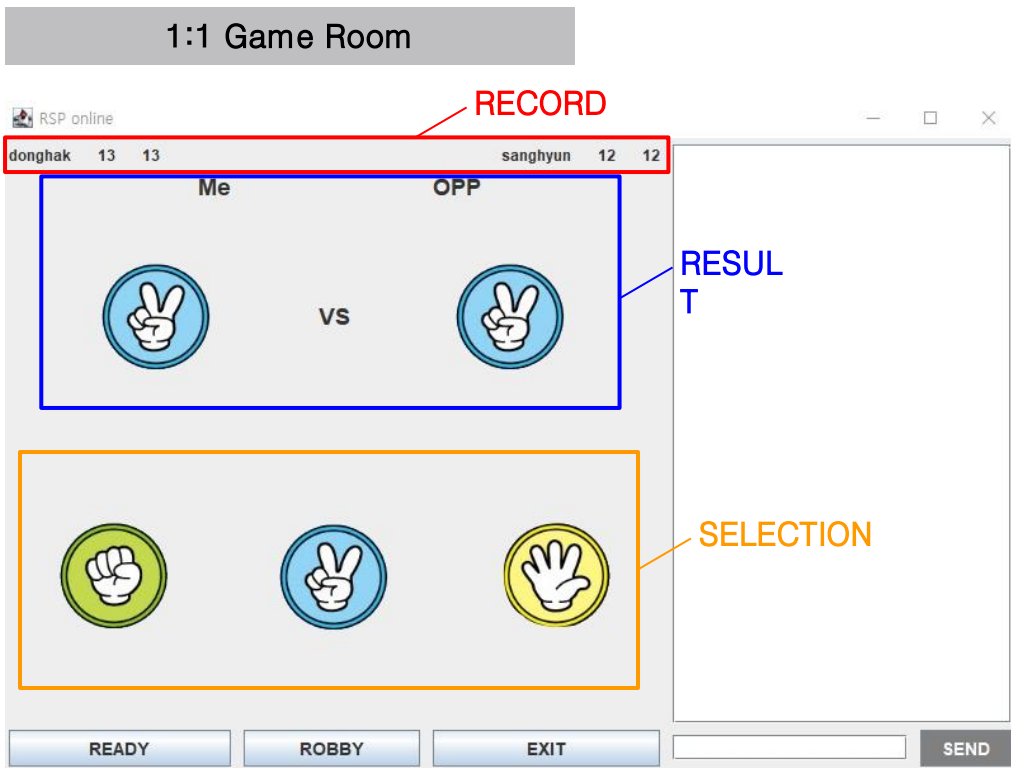
The person who receives the invitation receives the sender's nickname and invitation message.

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



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.

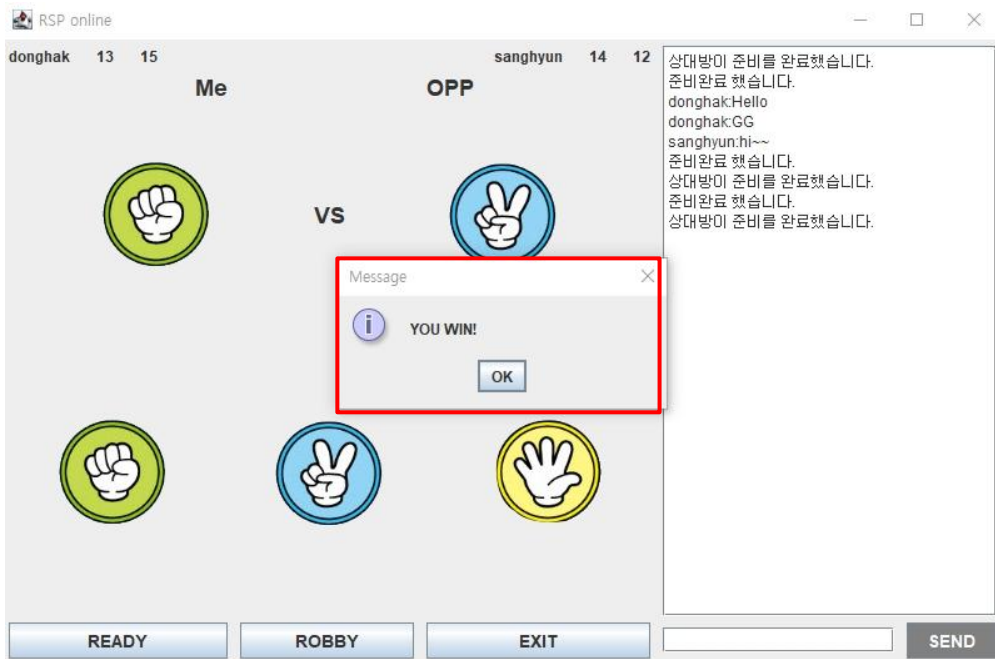
User choose between READY, ROBBY, and EXIT buttons.

If user press Ready, user can restart again.

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

# Game Room

WIN



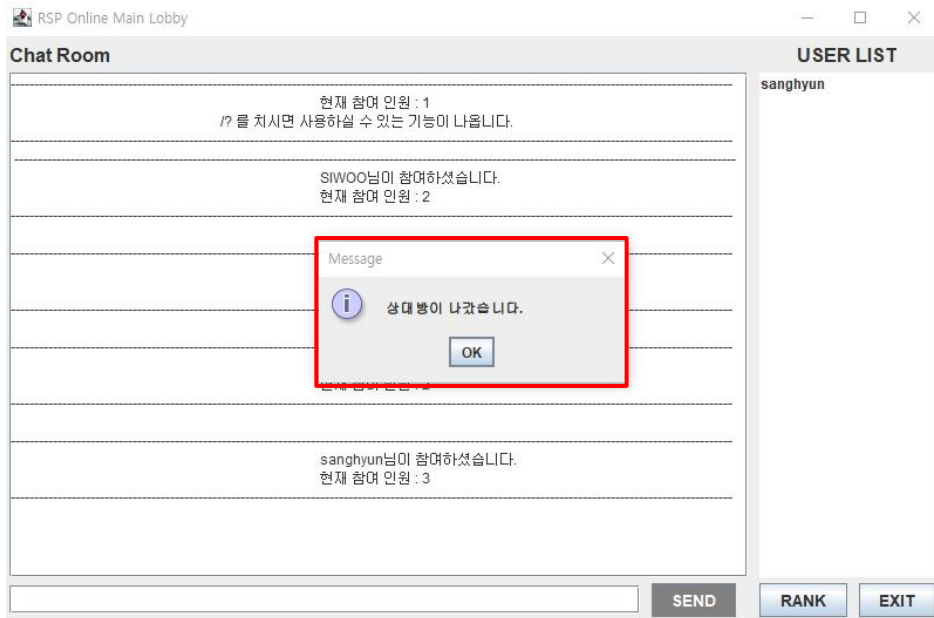
## RESTART

Winning the game.

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

# Main Lobby

Back to Lobby



## Opponent Left

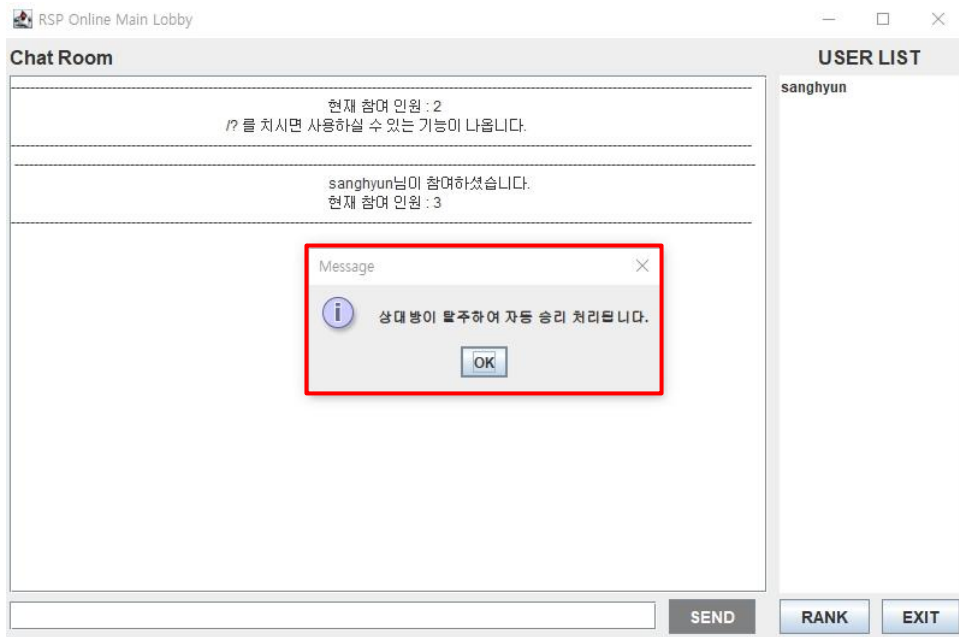
If even one user leaves the game room, everyone will be taken to the waiting room.

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

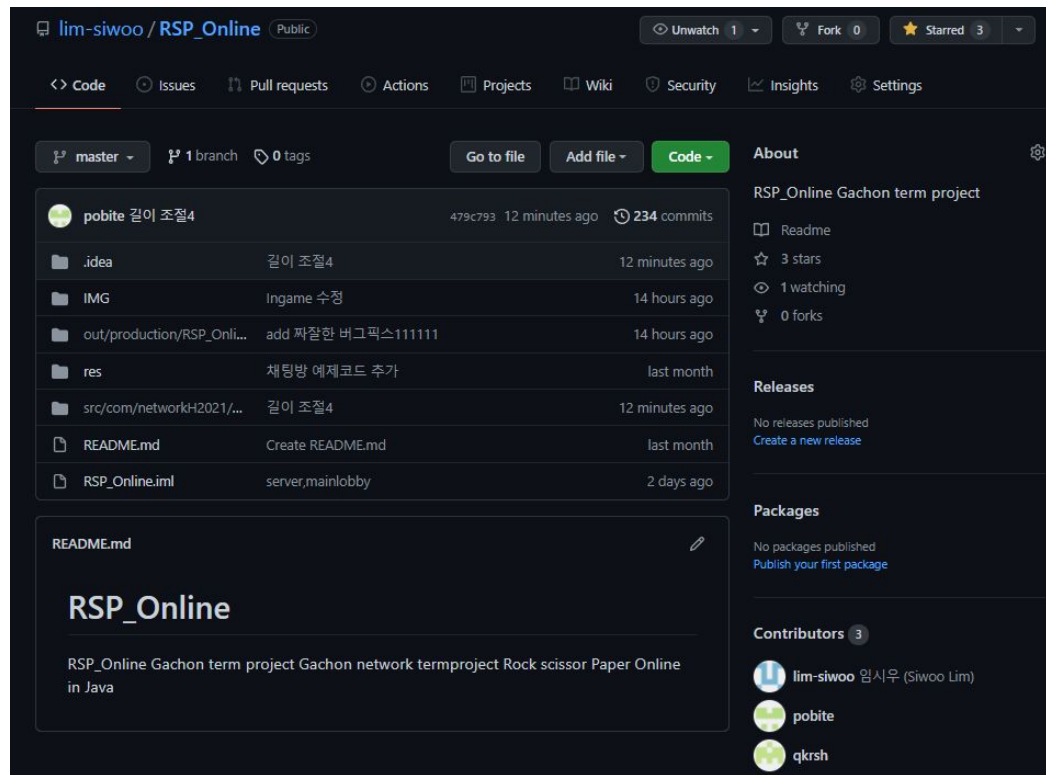
If all users are ready and leave, the user who left will be defeated.

The remaining users are treated as a victory.



### 3. Link URL

# Repository



The screenshot shows the GitHub interface for the repository 'lim-siwoo / RSP\_Online'. The repository is public and has 1 branch (master) and 0 tags. The file list includes .idea, IMG, out/production/RSP\_Online..., res, src/com/networkH2021/..., README.md, and RSP\_Online.iml. The README.md file is selected, showing the title 'RSP\_Online' and the description 'RSP\_Online Gachon term project Gachon network termproject Rock scissor Paper Online in Java'. The right sidebar shows the repository's statistics: 3 stars, 1 watching, and 0 forks. The 'About' section mentions 'RSP\_Online Gachon term project'. The 'Releases' section states 'No releases published'. The 'Packages' section states 'No packages published'. The 'Contributors' section lists three contributors: lim-siwoo, pobite, and qkrsh.

lim-siwoo / RSP\_Online Public

Unwatch 1 Fork 0 Starred 3

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

master 1 branch 0 tags Go to file Add file Code

pobite 길이 조절4 479c793 12 minutes ago 234 commits

- .idea 길이 조절4 12 minutes ago
- IMG Ingame 수정 14 hours ago
- out/production/RSP\_Online... add 짜잘한 버그픽스111111 14 hours ago
- res 채팅방 예제코드 추가 last month
- src/com/networkH2021/... 길이 조절4 12 minutes ago
- README.md Create README.md last month
- RSP\_Online.iml server,mainlobby 2 days ago

README.md

## RSP\_Online

RSP\_Online Gachon term project Gachon network termproject Rock scissor Paper Online in Java

About RSP\_Online Gachon term project

Readme 3 stars 1 watching 0 forks

Releases No releases published Create a new release

Packages No packages published Publish your first package

Contributors 3

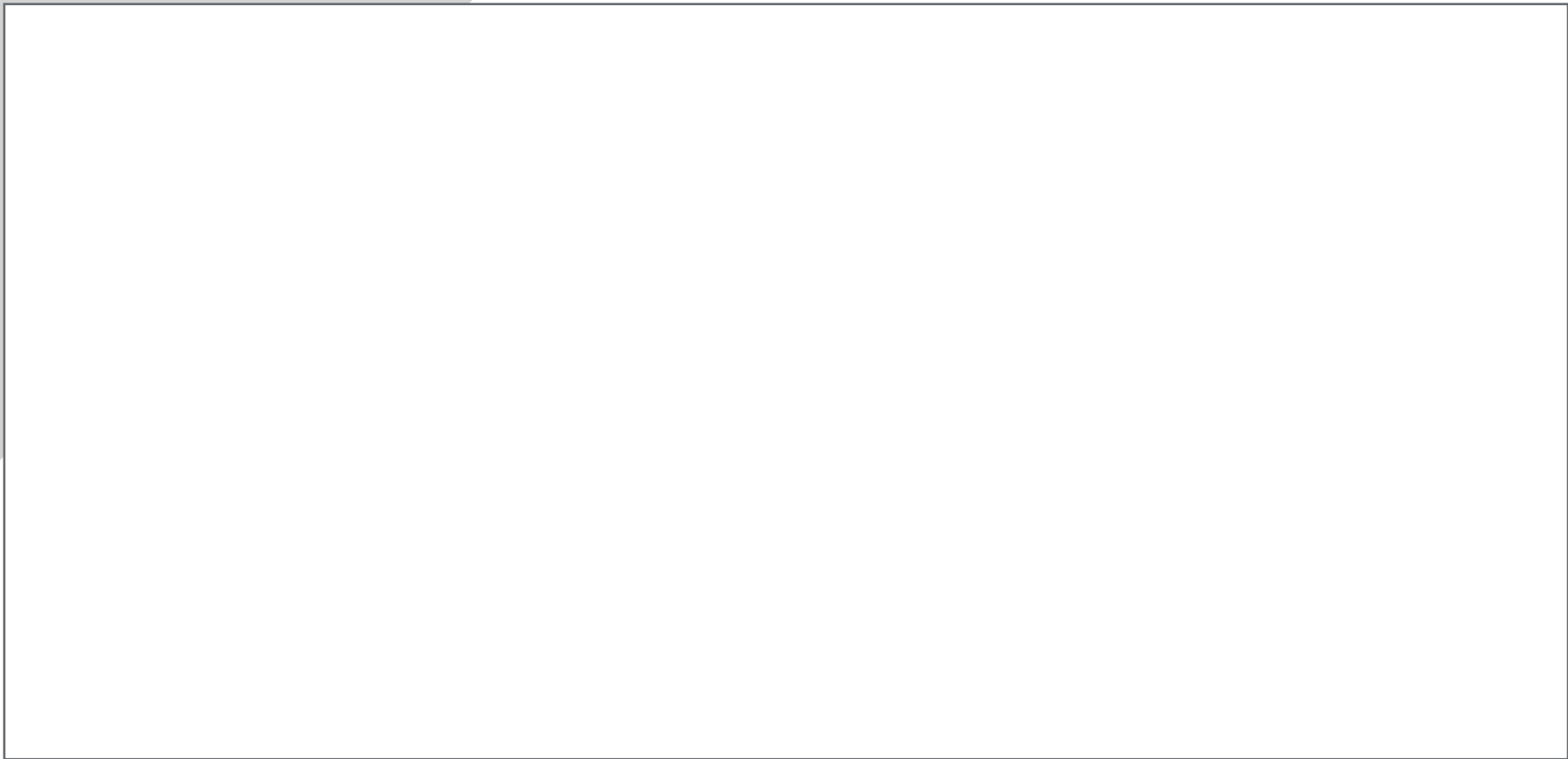
- lim-siwoo 임시우 (Siwoo Lim)
- pobite
- qkrsh



[https://github.com/lim-siwoo/RSP\\_Online](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**