Final Project MileStone2 User Manual

Author: Jiawei Wu (jw84) & Pei Chen (pc30)

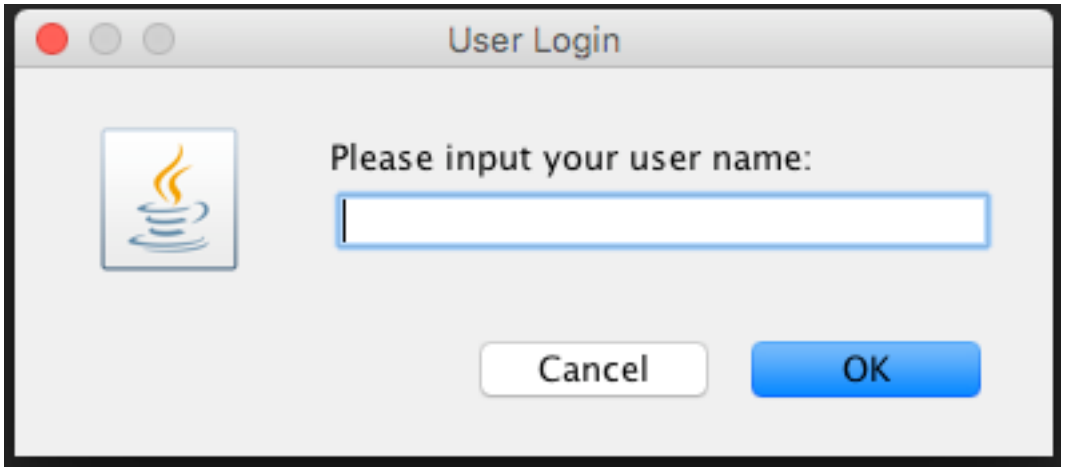
1. Operational Description

The chat app view remains nearly the same in MileStone2. The model side is modified according to the common API package.

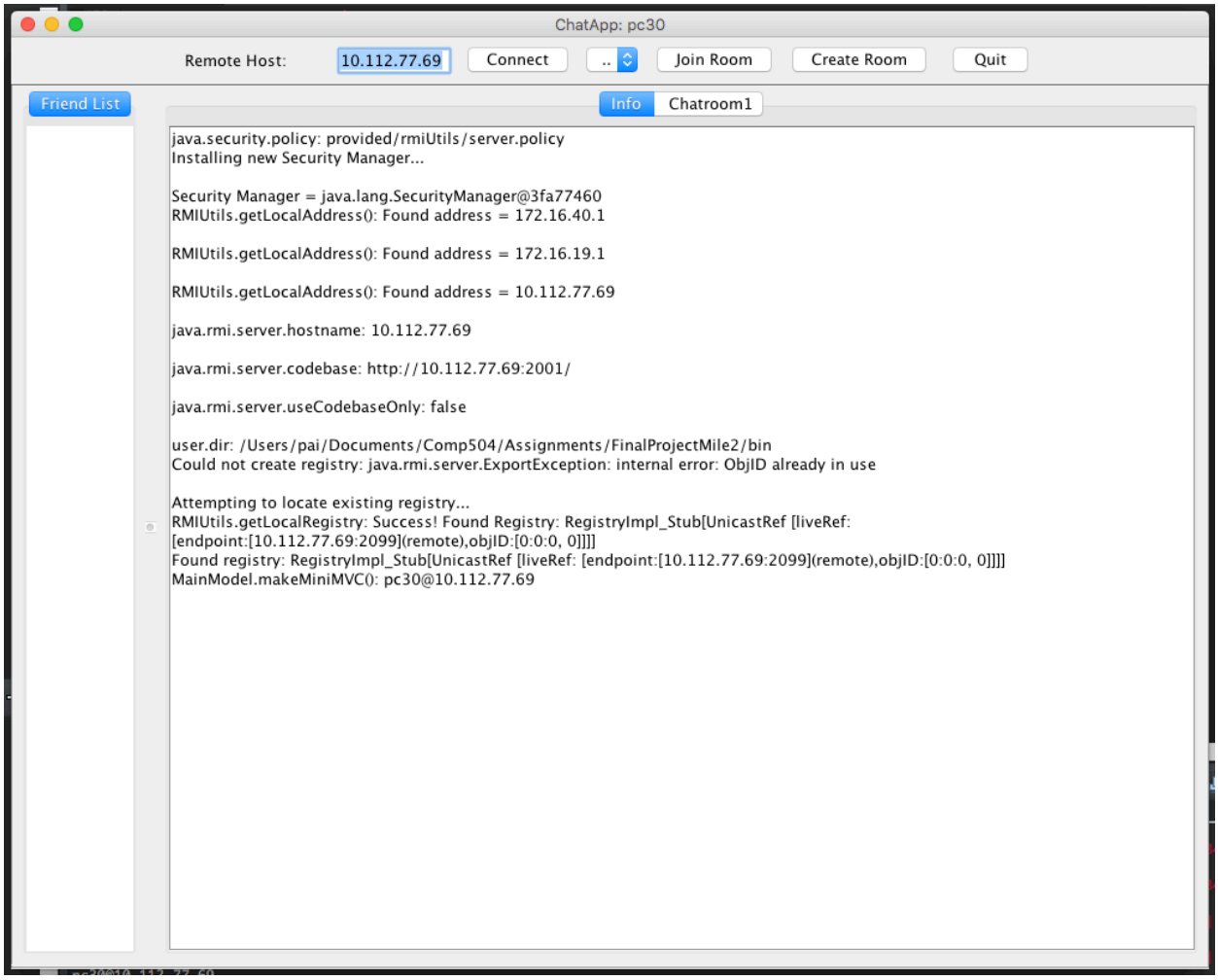
For the game, we modify its logic to add more features. In the fully implemented game design, we add a Cmd2ModelAdapter within the game model, so that it can send message to other users as the game processes. Specifically,
public <T extends IChatMsg> void sendMsg2LocalChatroom(Class<T> index, T msg); is used to send message with unknown cmd to other players, so that others' window can show a cross mark which means that the mine there is already revealed. By doing this, one mine can be revealed one time only. It is synchronized. On the other hand, in MiniModel, we call the receive method of server to send how many mines are revealed after the game ends. So that the server side can compute the rank of this team (All teams' game results are recorded on the server side so that the server side can compare historical records and new data and get the correct rank to players by sending a text message into the chatroom).

2. How to start the program, both the program itself as well as any individual games or processes.

Either start from clientLaunchFile.launch or serverLaunchFile.launch, you can start the program as the client or as the server.



First, input your user name. Then, you will see the chatapp GUI.



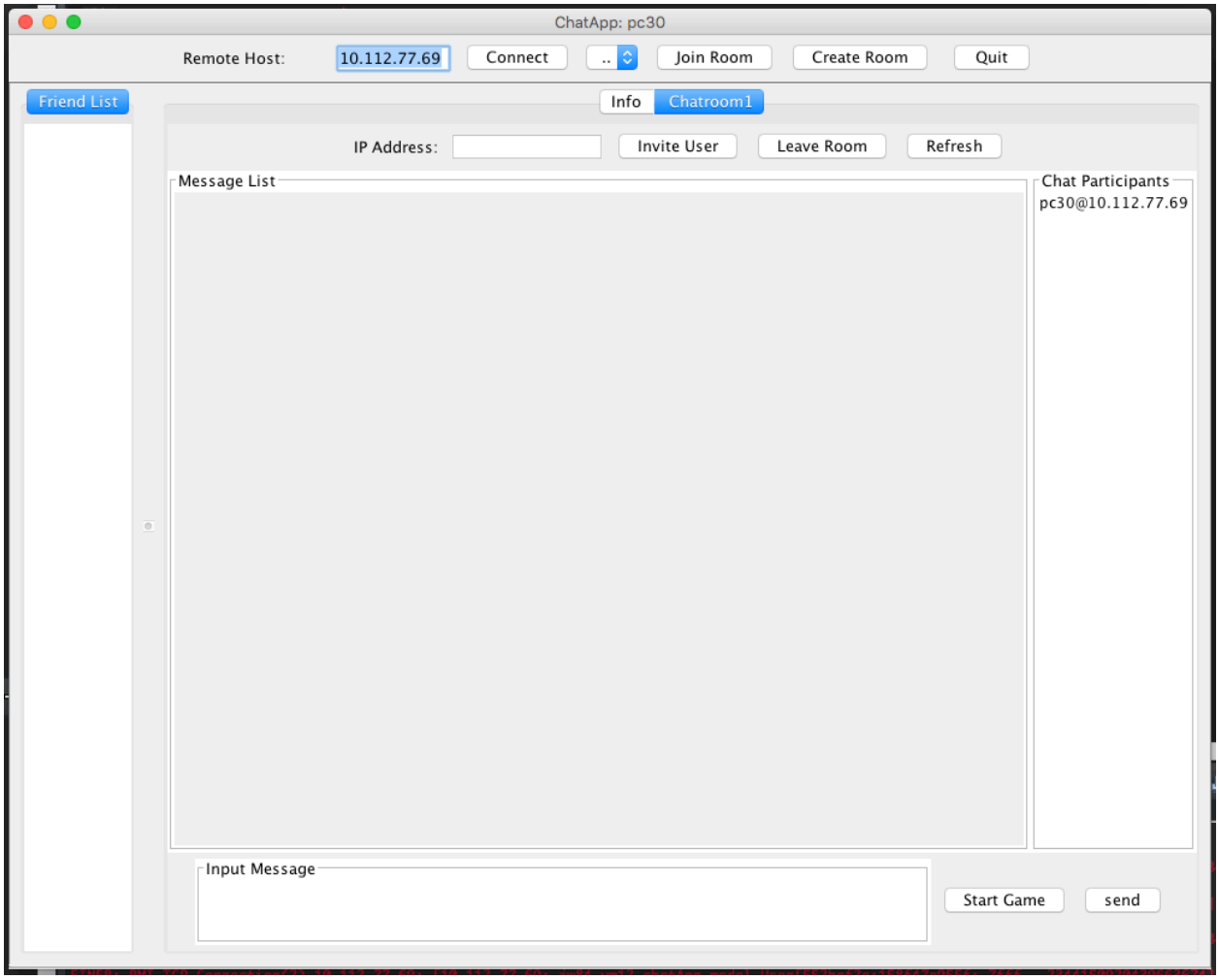
3. How to connect to other users

On top of the GUI, you can input the IP of remote host and then click “Connect”. You can connect to other users in the user level.

Or, you can invite others into a room or be invited by others, by doing these, you are connected with others within a room, but you are not in the user level connecting others.

4. How to use every feature of the program.

From the above, we know how to connect to others. We can click on “Join Room” to connected friends rooms. Or we can create rooms by clicking on “Create Room”.



We can input other's IP address in the blank and when we click on "Invite User", that person is invited into the room. If we click on "Leave Room", we leave the room correctly. If you are invited to a chatroom, the room tag will be automatically attached after existing rooms. If we cannot see updated chat participants, we can click on "Refresh". If we want to send text message, just type in the input message block, and click on "send". When others send text message, you can also receive it. If you are on the server side, you can click on "Start Game" then others can play the game within the game window.

5. How to end and exit the program

If we want to exit the game after it ends, just close the game window. If we want to leave a chatroom, just click on "Leave Room". If we want to quit the chat App, click on "Quit" or close the window by the upper left corner's cross button.

6. Game User Manual

Name of Game: Minesweeper

Number of teams: No limit (one team in one chatroom)

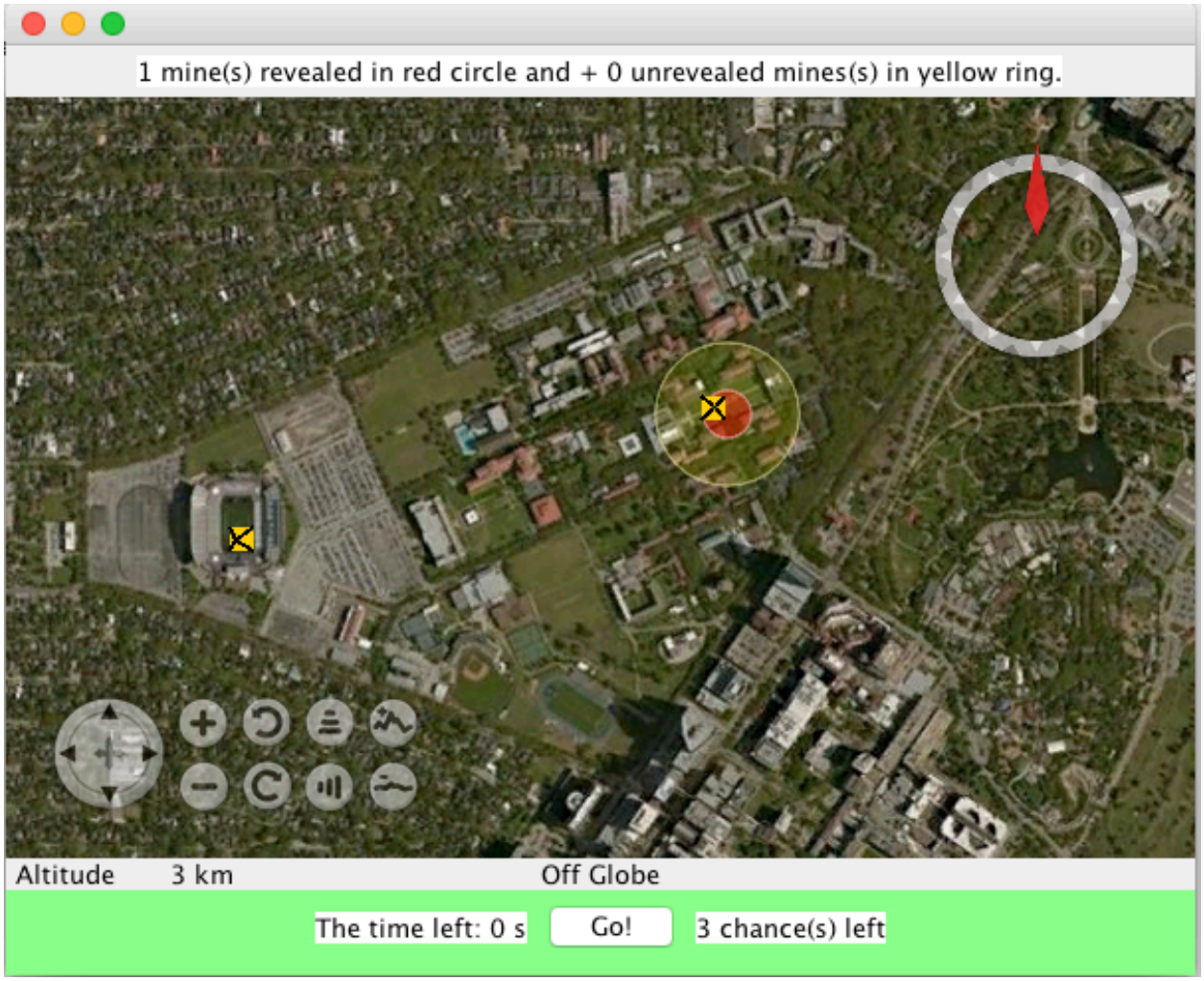
How to start the game:
Teammates go into the same chatroom, either by invitation or by joining process. When all people are ready, one of team invites the server. Then the server can send the game to this chatroom's participants.

Then, the server of team 30 will send a game to all the members in the chatroom. Those members in a chatroom cooperate to play the game.

How to play the game:

In the beginning, you should click on "Go" button, then the map will navigate the player to Rice campus. Various mines are hidden on campus. Your goal is to reveal them. You will have 5 chances within a limited range of time(100s). Either time is out or chances are out will lead you into a watching-mode, you can not do anything but watching other teammates playing the game.

You use your right-click to locate a region you want to reveal. The circle taking your click point as the center and 50 meters as the diameter will be marked as red color. If there is any mine in this red circle, you are lucky! Then the revealed mine will be marked as a cross, this cross will also send to your teammates. Other teammates can not click on it anymore(don't need to waste chances here). If there is no mine lying here, you may try other location. What's more, in order to help you locate the mine, the game will tell you how many mines are in the yellow ring around the red circle. This is the hint, make use of it!



Finally, all the players end the game. Your score(how many mines in total are revealed) is recorded in the server, thus the server can compare and give you the rank. In detail, the server will send a text message into the chatroom to tell everyone that this play's rank. That's how the win-lose judgment works.

Discussion on System Architecture Requirement

.

The system architecture could be divided into two parts, the game parts and the chat app part. The chat app part, made up of jw84_ym12_chatApp package, contains MVC structure for both main program which is the chat app and mini program which is the chatroom MVC structure. Besides, it contains the implementation of the common API. The second part is the game related package,pc_30_jw84_gmap, it contains all necessary code for creating a mine sweeper game. We defined game adapter, game factory, game MVC and other stuff in it. The game and the chat APP and related through using unknown data packet and ICmd2ModelAdpt.

About The Repo of MileStone 2 and MileStone 1

You can roll back several version which contains comment “Commit of MileStone1 adding game description.” Because as is indicated by one of TAs, the MileStone1 should be the old version of MileStone2 in the same project with the name “FinalProject”. Sorry about that, so that is to say, originally we use another folder and if you want to have a double check, you can use the HEAD version of the project in folder FinalMileStone1 of jw84’s repo