Minesweeper Game Proposal

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1. Game Description

This game is called Minesweeper. It could be played by multiple players. The users in the same chatroom is in one team. Mines are placed ramdonly on Rice Campus. The target of a team is to reveal as many mines as possible. Users can choose a location and then a certain distance closer to this point which forms up a round region will be revealed. The users hope that this region contains as many mines as possible. Then, this team will also receive a piece of information which indicates how many mines there are in neighborhood region which haven't been revealed, which provides a hint for next step. The game will last for 2 rounds or when the mines are all revealed.

Teamwork is important for this game. You should use the information provided by the action of your teammates to help you choose a location which more possibly contains many mines.

2. Design Description

In our design, the final project can be split into three MVC model: chatApp module, gameTeam module and gamePlay module. The app module is mainly responsible for connecting players,join a player team,etc. The gameTeam module is used for team-wise communication. The game module will contains the neccessary part to start a game.

ChatApp model could get IConnect object from other players. The IConnect contains a datapacketalgo,which enable it to handle incoming messages like Invitation2Chatroom. Currently, to solve the asynchronous issue of message passing, we use UUID to identify a pair of request and response. Take invitation as an example. Suppose player A want to invite player B to a game.

First,Player A will connect with Player B and get play B's IConnect stub,Player A's client will send a invitation2chatroom message to Player B's client, Player B's IConnect will handle this

request and if he accept, he will send back an AddMe message to all the players in the chatroom, then everybody will add him to the chatroom list.

The chatApp part in Final Project is no big difference from the HW08 part except from some minor modification. We will mainly discuss how the client communicate with server and start game.
We assume that client and server are in a work space with full access to WWJ library.

First, when you start the client, you are going to find someone as your team members, you may accomplish this through invite other people to your chatroom or through join an existed chatroom

When you have gathered enough team members, You may send a invitation message to the server . The server will send back a start game message to all users in the chatrroom. This message is an unknown type to clients.

When a client receives this unknown data type, it will ask the server to send it the correct command and add it to its local visitor.

The server receives CommandRequest,then it will send back a command, which contains a factory class which may start a game locally.

Clients will receive the command from server, get the game factory and able to start game.