

Final Project : Game 2048 with web saving function

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Advanced implement include: GUI, Threading, Network.

The whole project is in the final assignment.zip document.

Intro:

There are 6 java class in this project.

Game2048.java:

In this class, I design all the game function, include the how to initial the game, how to play the game, what events each keys lead to.

Frame2048.java:

This class extends JFrame, I design the main game UI in this class. Include the menu and the 4*4 block for the game. Also I add the event listener listening to the direction keys in this class.

ImagePanel.java

I have drawn all the number image by myself and write a map corresponding each image to its number in Frame2048.java. This ImagePanel.java class is responsible to repaint the blocks after each operation.

GameServer.java

This is a multithread server which receive the game record sent from players. I wanted to attach a database to this server but I do not have time to implement it. The server is always listening for the new clients. If the player first play the game, the player should input 0 to create a new player and the server would assign a random Player ID to the player(if we have a database, when the player input the assigned ID used before, he can retrieve the game

record. But there is no database, so input 0 is the only valid operation, sorry for that.). Also the server can respond to the save and load commands from the client.

GameClient.java

This is the game client, I add the create player button listener, saving button listener and loading button listener in this class to communicate with the game server.

NameFrame.java

This is a little class extends JFrame, which appears when player click the new player button in the main menu. Player inputs the ID here.

How to test the code:

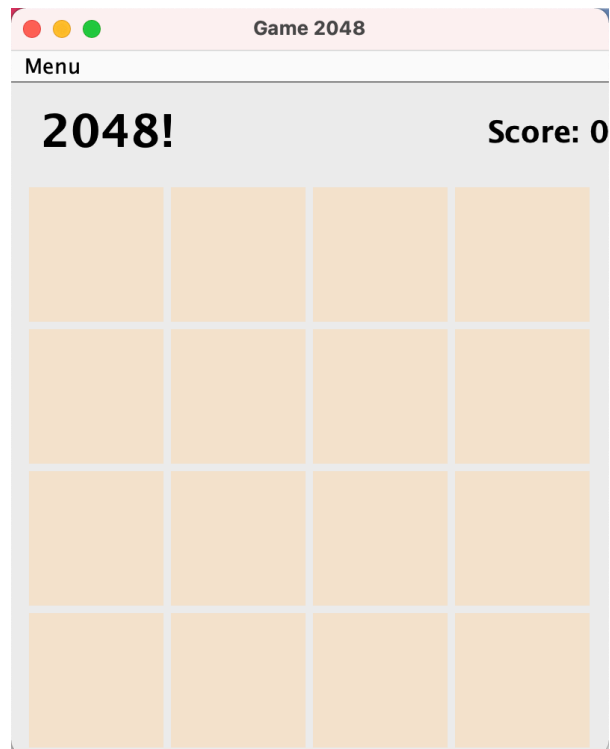
1. Run GameServer.java to start the server.

It should looks like this:

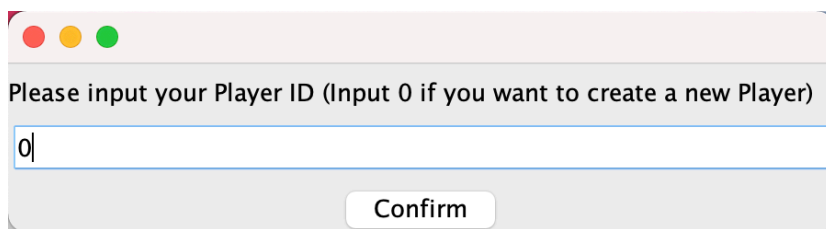


2. Run GameClient.java to start the client.

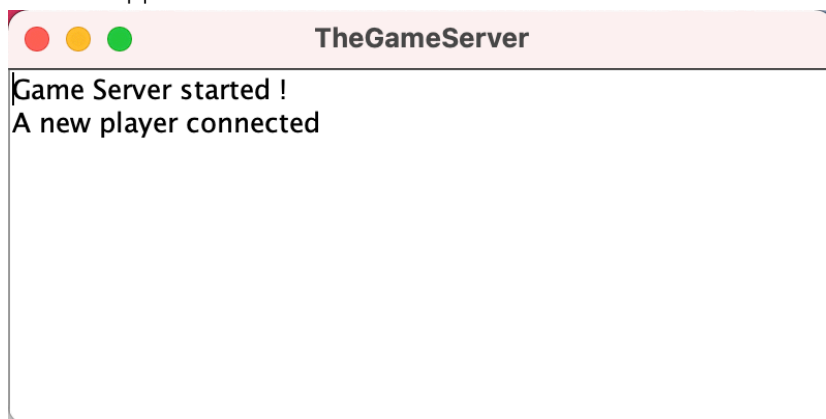
It should looks like this:



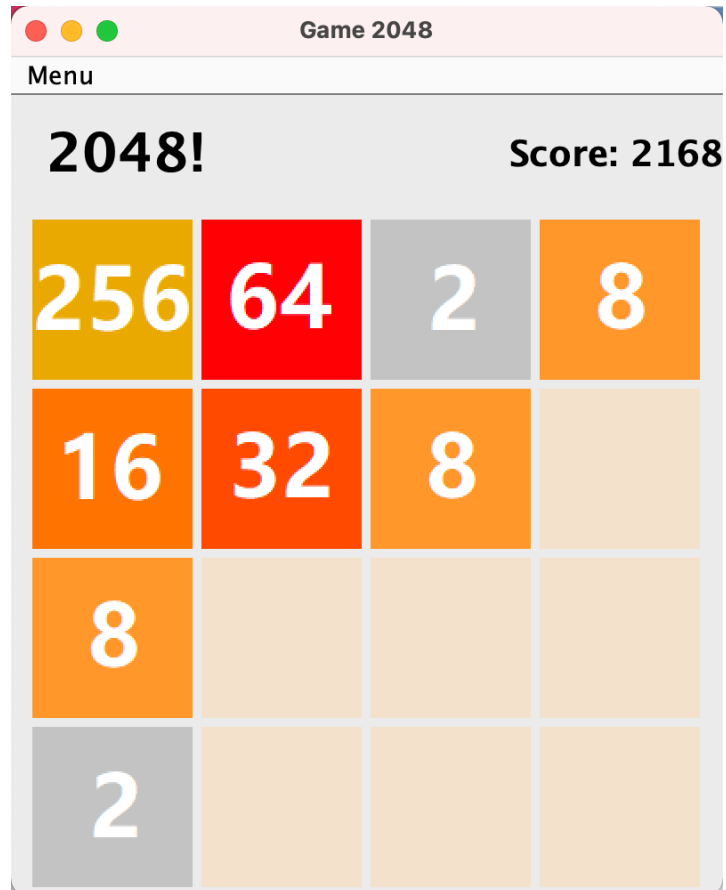
3. Click New Player button in the menu and input **0** to create a new player.
It should looks like this:



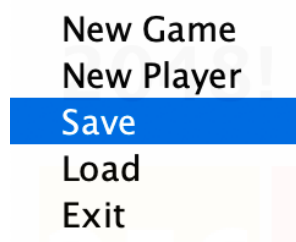
The server should appear:



4. After you have created a new player, click New Game to start a new game and play using the direction keys on your keyboard.
It should looks like this:



5. During the game, you can click save button in the menu to upload your game record to the server and save the game. Also you can click load button in the menu to load the game.



```

Player : 113821 is playing the game!
Game saved successfully
Game loaded successfully
Game loaded successfully
Game loaded successfully
  
```

That is all, hope you enjoy the game!

