

Scrabble Program User Guide

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INTRODUCTION

Scrabble is a word game, which players get points by placing tiles of characters onto a game board that is divided in rectangular shapes of 20 by 20 and forming a word out of those tiles. When you start a game, each player gets some tiles out of 56 tiles in an inventory. Some tiles have more point value. A distribution and point value of tiles are explained in the table below.

LETTERS	NUMBER OF TILES FOR EACH LETTER	POINT VALUE FOR EACH LETTER
A,E,I,O,U	29	1
Y	15	2
B,C,D,F,G,H,J,K,L,M,N,P,Q,R,S,T,V,W,X,Y,Z	12	5

Players alternate each turn. A player can use every tile on his tile rack. The tile rack will be refilled after each turn from the inventory. When the inventory becomes empty, the tile rack doesn't get refilled.

The player can get points when he assembles an English word by placing tiles on squares in a vertical or horizontal position.

The player with the greatest score at the end of the game wins.

BEGINNING THE GAME (on a local computer)

If you want to play a game of Scrabble on one local computer, run the LocalDriver class in the code.client package.

Setting the number of players

When you start the SCRABBLE PROGRAM 9000, your computer prompt will show something like below:

```
How many players do you want?
```

When you see this prompt, you need to enter number of people who are going to play the game. Remember that only four people can play the game at the same time.

Setting player's name

After entering in the number of players, you will see something like below:

```
How many players do you want? 2  
Please enter player 1's name in:
```

When you see this prompt, you need to enter each player's name.

BEGINNING THE GAME (through RMI connection)

If you want to play a game with multiple computers over a RMI connection, one player will need to run the ServerDriver class in the code.server package. Use port number 50047 when starting the server. Once the server is running, other users can connect to it by running the ClientDriver class in the code.client package.

Clients connecting to the server will be asked in the console: "Do you want to start the game". The first client to connect should respond "1" in the console and press enter. All subsequent clients should respond "0" and press enter.

HOW TO PLAY THE GAME

SCRABBLE PROGRAM 9000 uses an innovative UI by using a tool called a mouse. You control a pointer on your screen by moving the mouse. You can choose an element by clicking a button that resides on the mouse.

Please be reminded that the UI shown at examples may look different from yours.

PLACING A TILE

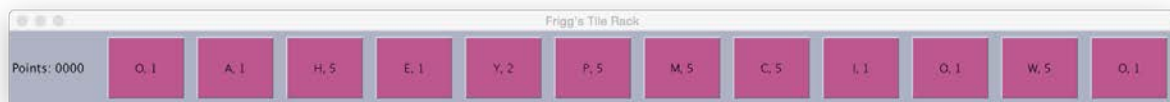
When you start the game, you will see several windows: a main window, players' tile racks, and an option window.

Before placing a tile, you may need to check whether it is your turn or not.



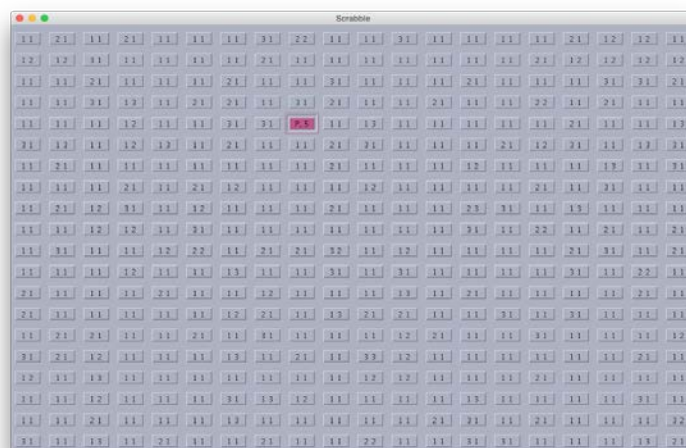
You can check the turn by referencing the option window.

In order to place a tile, you need to click a tile you want to place on your tile rack.



The points label on the left shows how much points you have right now.

After clicking the tile, you need to click an available space on the board. Available spaces are grey and they display the letter multiplier (on the left) and the word multiplier (on the right). The program will place the tile you choose on the main window. After the first turn, you may only place tiles adjacent to other tiles already present in the main window.



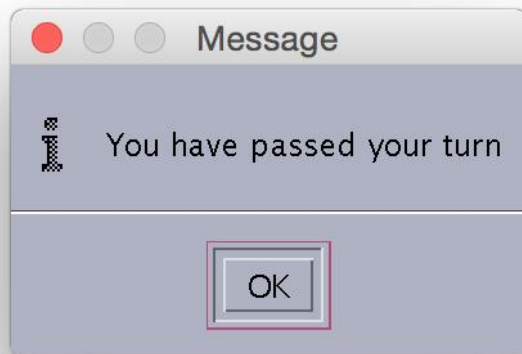
In order to maximize your score, you should take letter multipliers and word multipliers into consideration. A letter multiplier (represented by the left number on board spaces) will multiply the point value of a Tile placed on the corresponding space on the board. A word multiplier (represented by the right number on board spaces) will multiply the point value of an entire word placed on the corresponding spaces on the board. In both cases, letter multipliers and word multipliers are set to 1 after being played over with a valid word.

PASSING A TURN

After finishing placing the tiles, you need to pass a turn to another player. Clicking the PASS button on the option window will easily do the job.



After passing your turn, the program will check the validity of the word you placed on the board. Assuming you spelled a valid word, the tiles you placed on the board will remain there and your score will be updated appropriately. When you pass your turn, a pop-up message will show up to remind you that you have passed your turn.

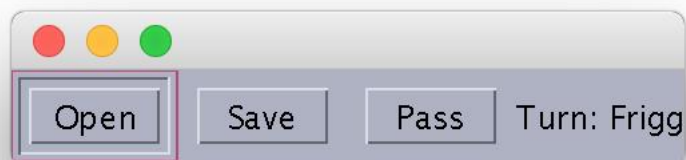


If upon passing your turn it is determined you spelled an invalid word, the tiles you placed will be removed from the board and replaced back in your tile rack. You will not score any points and the turn will pass to the next player.

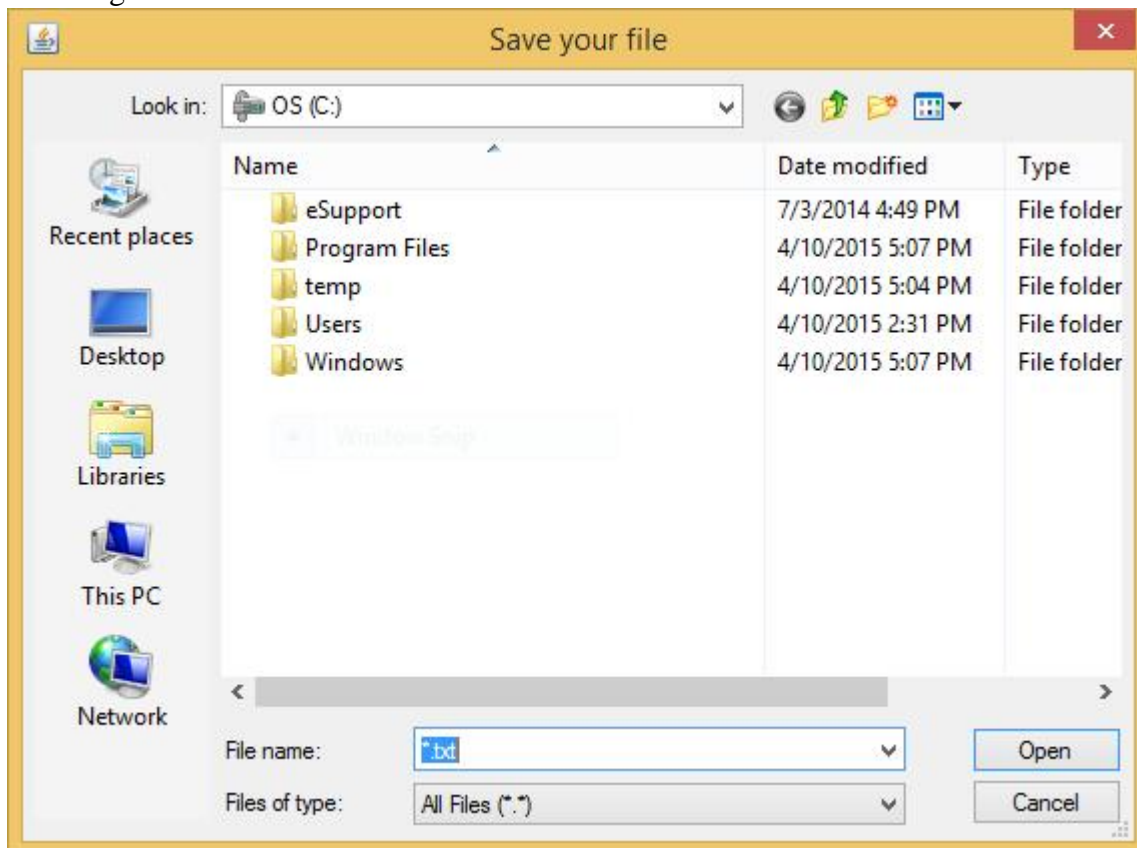
HOW TO SAVE AND LOAD THE GAME

SAVING THE GAME

Saving the game can be easily done by clicking the Save button on the option window.



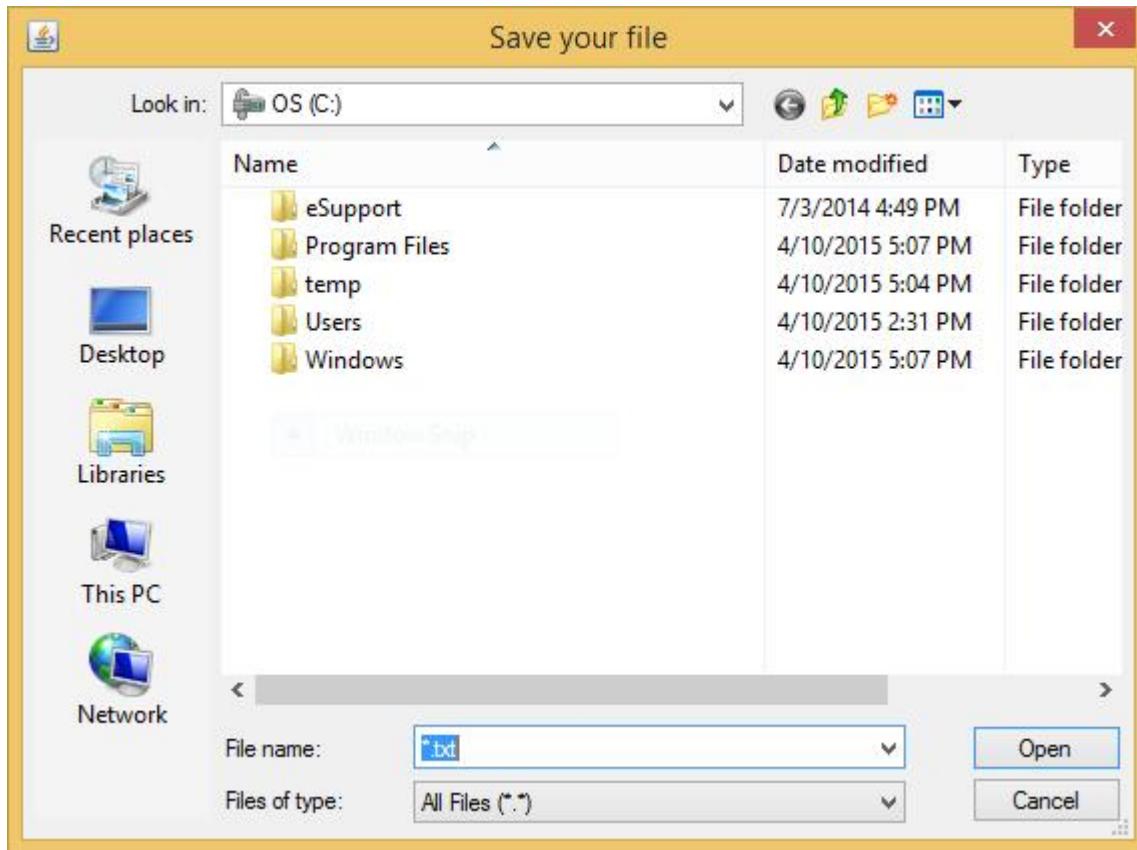
Clicking the Save button will show a window like below:



After choosing the file name and where to save the file, please click the save button.

LOADING THE GAME

When you click the Open button, a window that resembles what you saw when you saved. You should choose a save file to load and choose the Open button on the window that popped up.



ENDING THE GAME

The game will end in one of two ways. If all players pass their turn in a row without placing any tiles on the board, the program will terminate and print the name of the winner in the console. In addition, the program will also terminate and display the winner's name if both a player's tile rack is empty and the inventory when a player attempts to fill his or her tile rack.