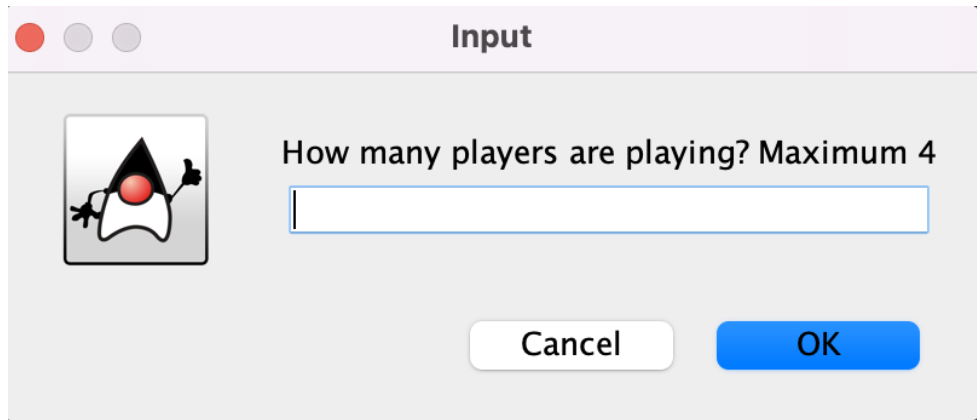


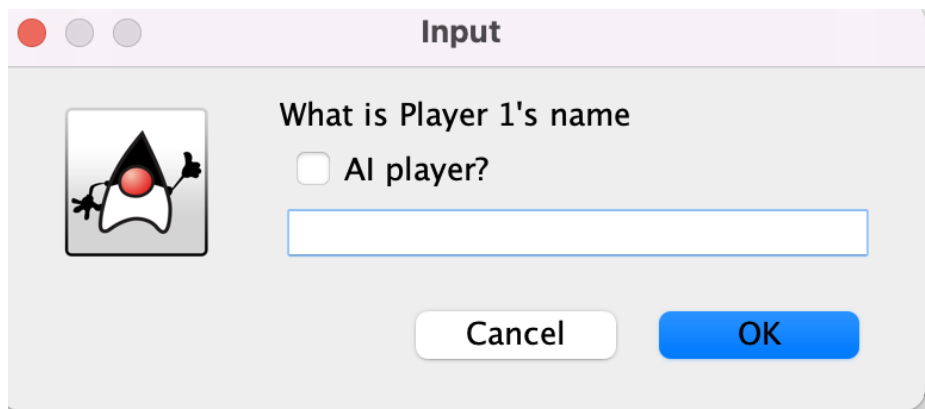
## Scrabble GUI Instructions

### Starting Game:

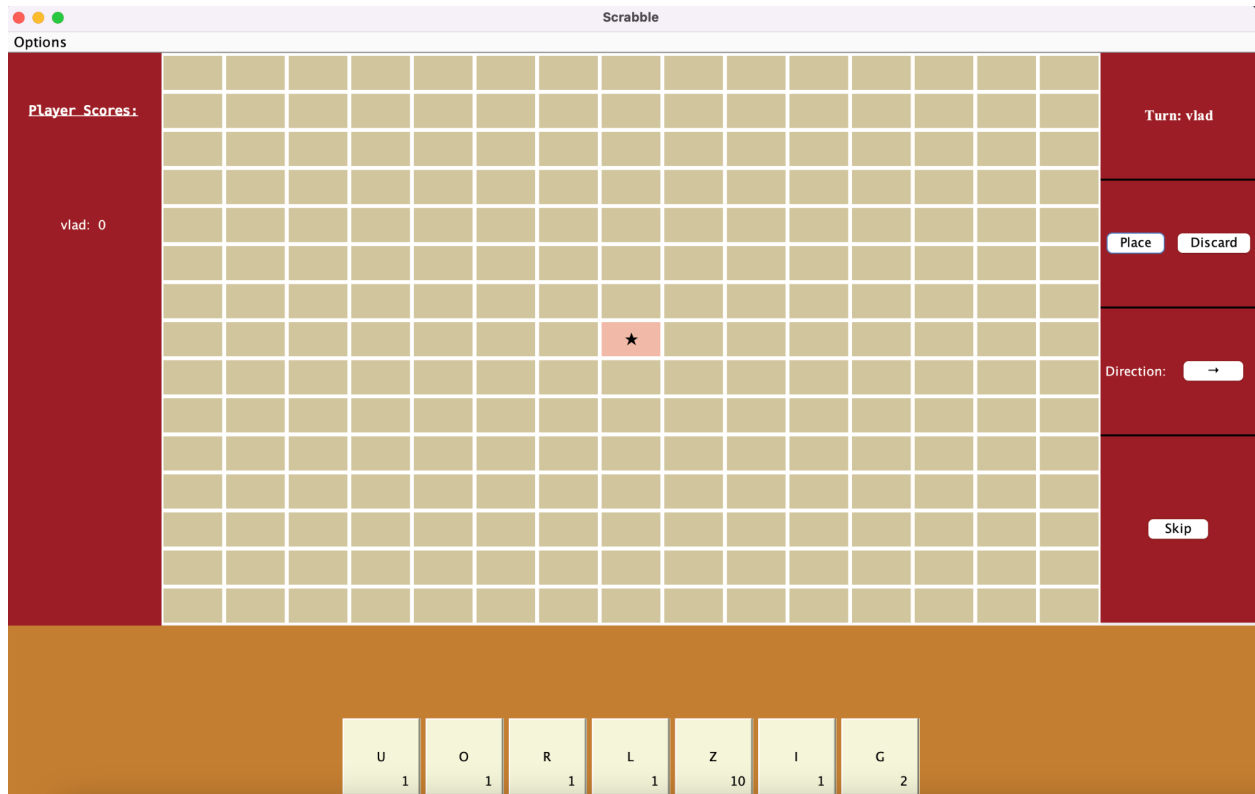
-When the game is first launched, the user interface will prompt the user for the number of players playing the game. The user must enter a valid number between 1 and 4 players (inclusive).



-Once the number of players have been selected, the user interface will ask the user for the names of each of the players, there is also the option to select if this player is an AI.



-The GUI when the game starts is set up in the following format:



- The left side of the GUI displays the players in the game and their respective scores.
- The right side of the GUI displays which players turn it is, options to either place or discard tiles, the direction of the tiles to be placed (arrow pointing right is horizontal, arrow pointing down is vertical, to switch directions the user must toggle the button), and the option to skip his turn.
- The bottom of the GUI displays the player's hand, which consists of 7 tiles the user can play with.
- The top of the GUI is a menu bar with options, the options are: New Game (not implemented yet), Save Game (not implemented yet) and Game Rules (takes you to the website with Scrabble rules).
- The game board is in the middle, the star tile indicates the start position, this is where the first player must place their word.

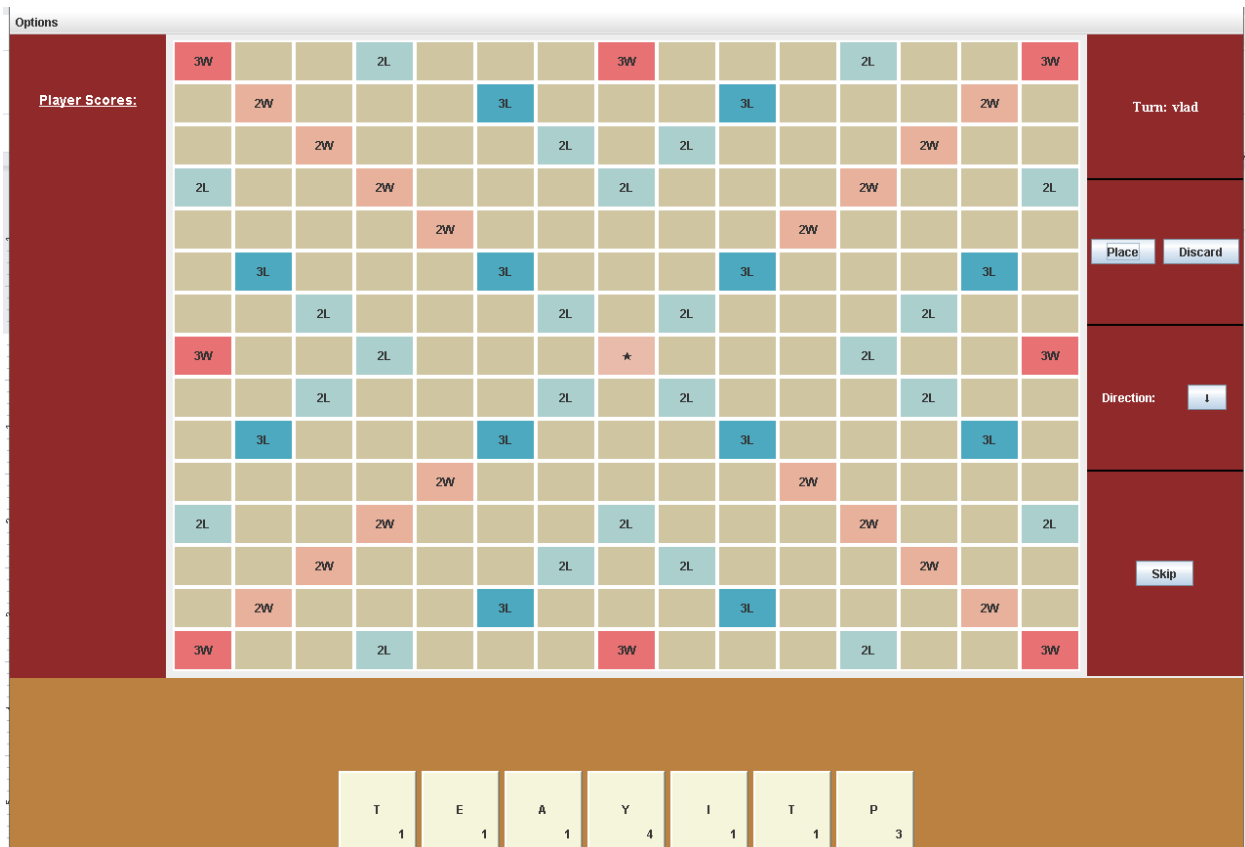
## Selecting Game Board:

Once the players names have been entered, the game will prompt the user for a configuration file (xml format). If the user has a custom xml file with personalized locations for the premium tiles they can enter the file name ("example.xml"), make sure that the file is in the current project directory.



A screenshot of a small dialog box titled "Input" with a close button (X) in the top right corner. Inside the dialog, there is a green square icon with a white question mark. To the right of the icon, the text reads "Enter XML filename, leave blank for no configuration file". Below this text is a text input field. At the bottom of the dialog, there are two buttons: "OK" and "Cancel".

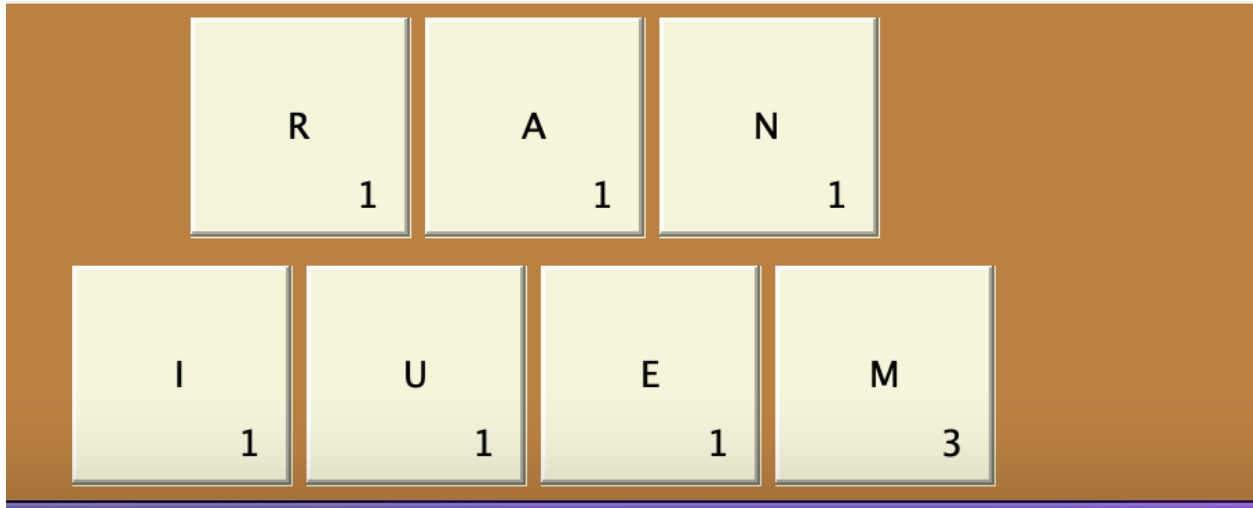
If the user doesn't want to use a custom board file, simply leave the text field **empty** and press "OK". This will load the default board:



A screenshot of a game board interface. The board is a 15x15 grid of squares. The squares are colored in a repeating pattern of light blue, light green, and light yellow. Some squares contain text: "3W", "2L", "3L", "2W", and a star symbol (\*). The board is surrounded by a dark red border. On the left side, there is a section labeled "Player Scores:". On the right side, there is a section labeled "Turn: vlad" and buttons for "Place" and "Discard". Below the board, there is a section labeled "Direction:" with a button labeled "1". At the bottom of the interface, there is a row of seven yellow boxes, each containing a letter and a number: T 1, E 1, A 1, Y 4, I 1, T 1, P 3.

## Placing Word:

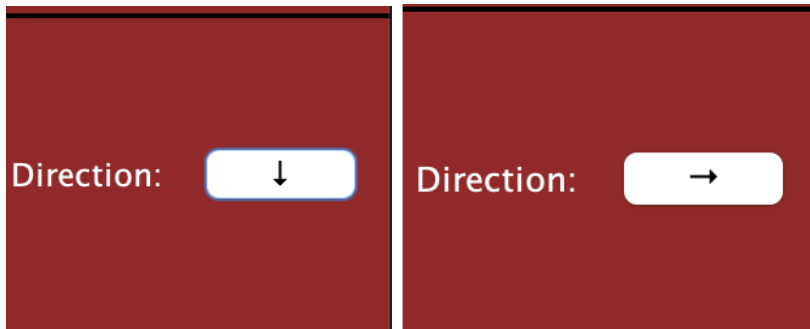
-The first step to placing a word down on the board is to select the tiles to place, this is done by clicking on the tiles in your hand, the selected tiles will be moved to a new row on the GUI display, just above the unselected tiles:



(In this case R,A,N is selected the others are not)

\*\*\*Important Note: The tiles must be selected in the correct order to form the word \*\*\*

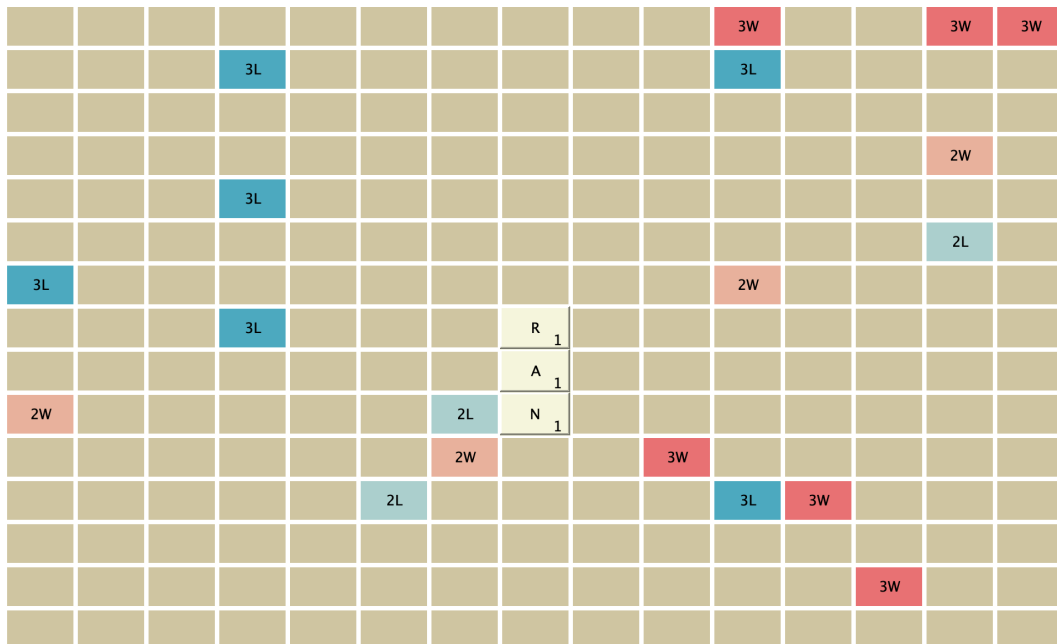
-Once you have selected the letters to place, the next step is to choose the direction to place, toggle the direction button until you desired direction is showing (horizontal or vertical):



-Once the user has selected the desired direction, the next step is to click the “place” button.

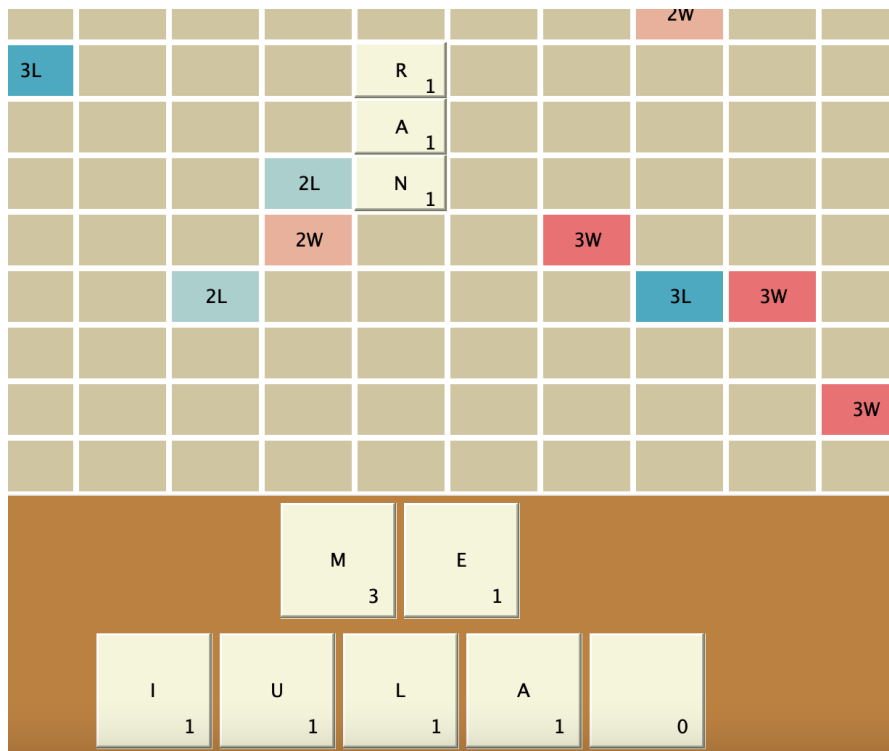


-Once the place button has been pressed, the user can select the spot on the board where they wish to place the letters. The letters will be placed if the selected location is a valid board placement and the selected letters form a valid word with the letters on the board (in other words, letters will only place if it is a valid scrabble move).

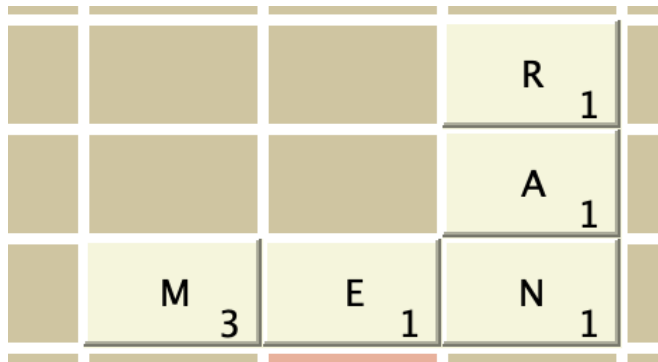


-In some cases, the user might wish to add onto a word already placed on the board, or to create an intersecting word with words already on the board. In this case the steps are the same as above however the letters selected should only include the letters of the word that is not currently on the board:

**Example:** Placing Men on the board, across the word Ran

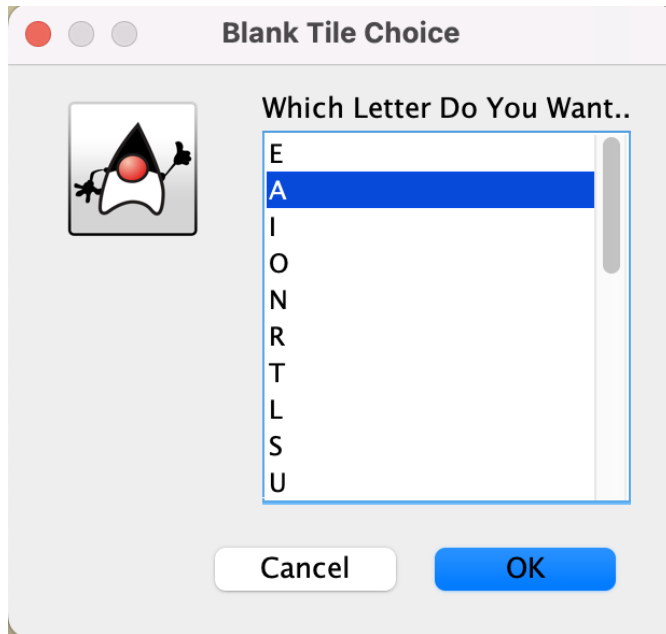


After placement:



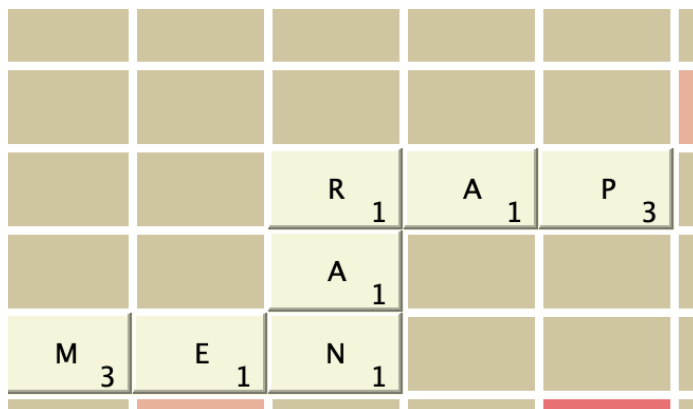
## Placing Blank Tile:

-In some cases the user might have a blank tile, in this case the blank tile acts as any word, but has a score of 0. It is placed the same way as any other tile (first selected, and then the game will attempt to place it), therefore the user should think about the blank tile as any other tile. However the only difference is that when the board attempts to place the selected letters, it will prompt the user to select what letter the blank tile should be. This will be a drop down menu, with all valid choices:



Once a valid letter is selected the tile will be placed on the board and will represent the letter selected:

**Example:** blank tile is selected, and turns into “P” when placed on the board to create the word “RAP”



## Discarding Letters:

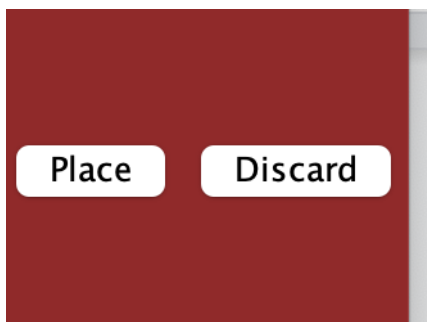
-Another option the user has is to discard letters in his hand. To do this, the user will select the tiles he wishes to discard (by clicking the tiles). Once all the tiles are selected, the user can press discard. The selected tiles will be discarded and new ones will be added to the hand.

**Example:** Discarding X,E and V

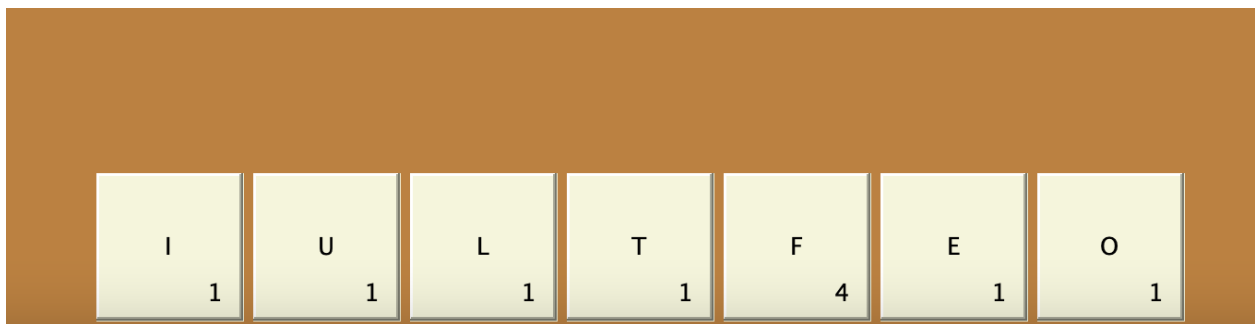
Select tiles to discard



Press discard



Selected letters are discarded and new ones put in hand



Discarding counts as a turn so it will be the next players turn once the user decides to discard.

## Skipping Turn

-The last option a player has is to skip their turn, this is done by pressing the “Skip” button. The game will go to the next player once the user presses skip.



**Example:** Jon skips his turn

**Options**

| Player Scores: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Turn: Jon     |
|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---------------|
| Vlad: 0        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Place Discard |
| Bob: 0         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Direction: →  |
| Jon: 0         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Skip          |
| Kush: 0        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |               |

E 1 N 1 U 1 W 4 D 2 A 1 A 1

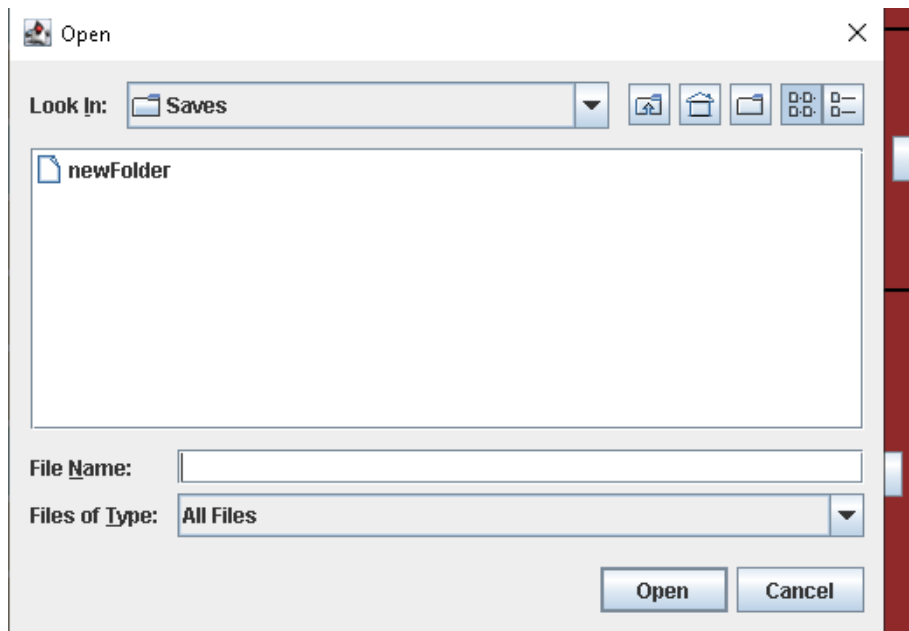
[illegible]

## Options Menu:

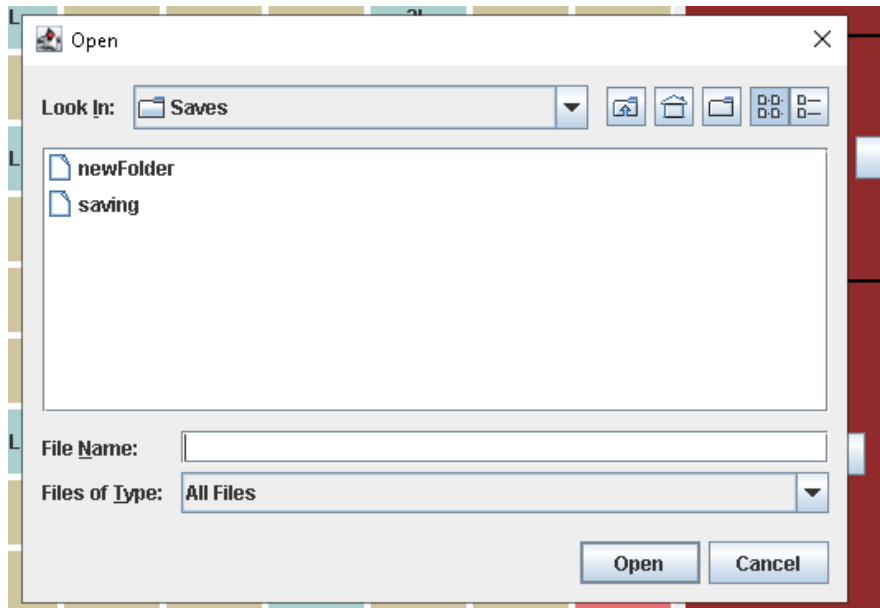
If the user clicks on the Options menu bar, a drop down window will appear:



One option the user has is to “Save Game” and to “Load Game”. If the user selects the “**Save Game**”, he will be prompted with a pop up window to select the place and filename to save the game to:



If the user selects “**Load Game**” another pop-up window will be displayed asking the user to select which file to load the game from (Only previously saved games can be loaded):



Once a file has been selected the new saved game will be loaded onto the board.

If the user selects “**Game Rules**” they will be taken to the [Scrabble Game Rules](#) website to look at the rulebook if they have any questions in regards to how the game is played.

The user also has the options to “Undo” and “Redo” his move. If the user selects to “Undo” his move, the previously placed move will be undone:

Example: Vlad places “Hi” and then selects undo

Before undo:

Options

Player Scores:

vlad: 10

|    |    |    |    |    |    |    |     |    |    |  |    |    |    |    |
|----|----|----|----|----|----|----|-----|----|----|--|----|----|----|----|
| 3W |    |    | 2L |    |    |    | 3W  |    |    |  | 2L |    |    | 3W |
|    | 2W |    |    |    | 3L |    |     |    | 3L |  |    |    | 2W |    |
|    |    | 2W |    |    |    | 2L |     | 2L |    |  |    | 2W |    |    |
| 2L |    |    | 2W |    |    |    | 2L  |    |    |  |    | 2W |    | 2L |
|    |    |    |    | 2W |    |    |     |    |    |  | 2W |    |    |    |
|    | 3L |    |    |    | 3L |    |     |    | 3L |  |    |    | 3L |    |
|    |    | 2L |    |    |    | 2L |     | 2L |    |  |    | 2L |    |    |
| 3W |    |    | 2L |    |    |    | H 4 |    |    |  | 2L |    |    | 3W |
|    |    | 2L |    |    |    | 2L | I 1 | 2L |    |  |    | 2L |    |    |
|    | 3L |    |    |    | 3L |    |     |    | 3L |  |    |    | 3L |    |
|    |    |    |    | 2W |    |    |     |    |    |  | 2W |    |    |    |
| 2L |    |    | 2W |    |    |    | 2L  |    |    |  | 2W |    |    | 2L |
|    |    | 2W |    |    |    | 2L |     | 2L |    |  |    | 2W |    |    |
|    | 2W |    |    |    | 3L |    |     |    | 3L |  |    |    | 2W |    |
| 3W |    |    | 2L |    |    |    | 3W  |    |    |  | 2L |    |    | 3W |

Turn: vlad

Place

Discard

Direction:

1

Skip

E 1

R 1

A 1

Q 10

E 1

G 2

E 1

After undo is selected:

Options

Player Scores:

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 3W |    |    | 2L |    |    |    | 3W |    |    |    | 2L |    |    | 3W |
|    | 2W |    |    |    | 3L |    |    |    | 3L |    |    |    | 2W |    |
|    |    | 2W |    |    |    | 2L |    | 2L |    |    |    | 2W |    |    |
| 2L |    |    | 2W |    |    |    | 2L |    |    |    | 2W |    |    | 2L |
|    |    |    |    | 2W |    |    |    |    |    | 2W |    |    |    |    |
|    | 3L |    |    |    | 3L |    |    |    | 3L |    |    |    | 3L |    |
|    |    | 2L |    |    |    | 2L |    | 2L |    |    |    | 2L |    |    |
| 3W |    |    | 2L |    |    |    | *  |    |    |    | 2L |    |    | 3W |
|    |    | 2L |    |    |    | 2L |    | 2L |    |    |    | 2L |    |    |
|    | 3L |    |    |    | 3L |    |    |    | 3L |    |    |    | 3L |    |
|    |    |    |    | 2W |    |    |    |    |    | 2W |    |    |    |    |
| 2L |    |    | 2W |    |    |    | 2L |    |    |    | 2W |    |    | 2L |
|    |    | 2W |    |    |    | 2L |    | 2L |    |    |    | 2W |    |    |
|    | 2W |    |    |    | 3L |    |    |    | 3L |    |    |    | 2W |    |
| 3W |    |    | 2L |    |    |    | 3W |    |    |    | 2L |    |    | 3W |

Turn: vlad

Place Discard

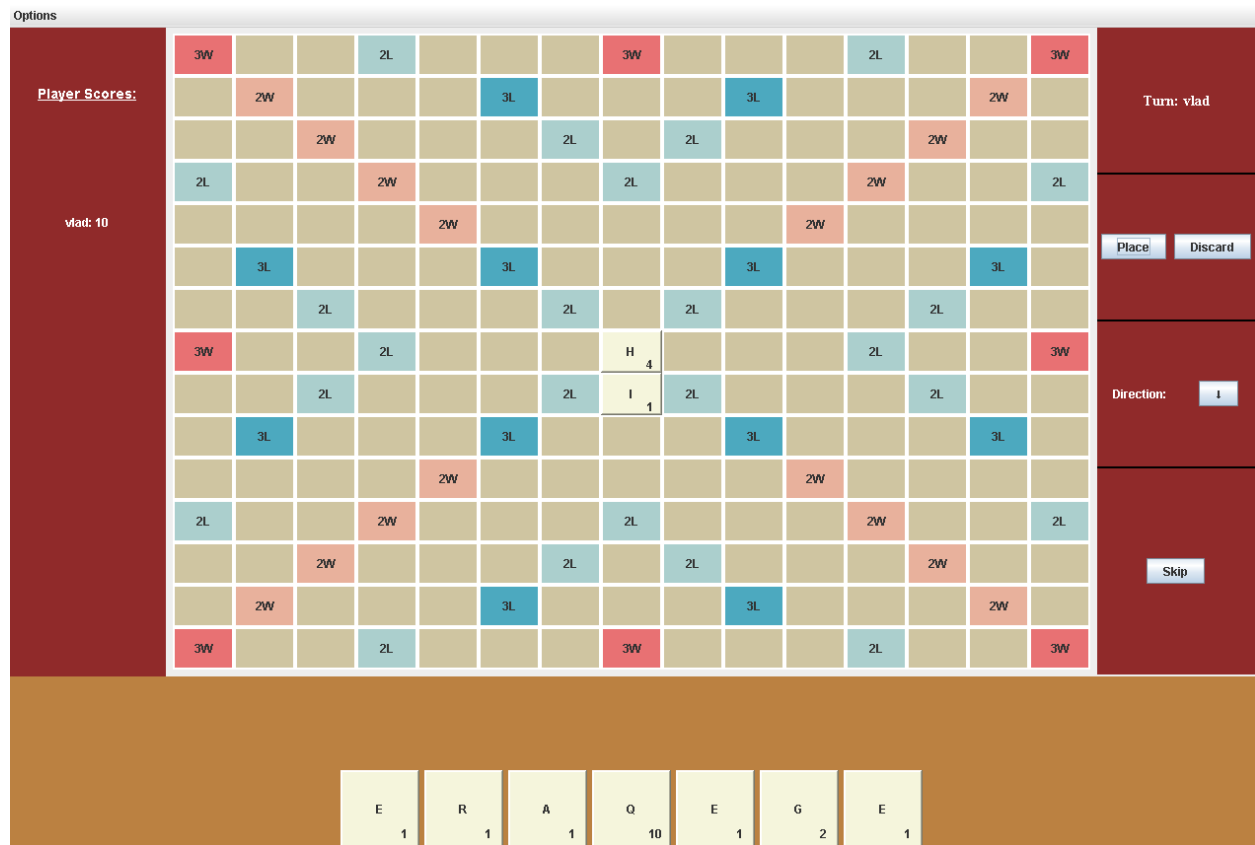
Direction: ↓

Skip

|   |   |   |   |    |   |   |
|---|---|---|---|----|---|---|
| I | E | R | A | Q  | E | H |
| 1 | 1 | 1 | 1 | 10 | 1 | 4 |

The player can also select “Redo”, this will redo the last undo:

**Example:** Vlad decides to redo the last undo, “Hi” will be placed back on the board:



\*It's important to note that the score and hand are changed accordingly when the user selects undo and redo

## Game Ending:

One change in our ruleset compared to the hasbro version is that the game will automatically end once there are no more letters left inside the draw pile. The player with the highest score will be the winner. A pop up window will appear, indicating the end of the game and winner.

