Introduction

The purpose of this manual is to explain the functionality of the Java based Scrabble application developed by Cole Galway and Taylor Brumwell. The gameplay is very similar to the classic board game Scrabble, using a provided dictionary of acceptable words and provided gameboard files.

Starting a New Game

Upon downloading the .jar executable file from the GitHub repository, double click on the executable .jar file inside of your system's file explorer, or right click on the .jar file and select the "Run" option from the dropdown menu. Upon execution the game will immediately prompt users to select one of two options: 1) New Game, or 2) Load Game.

New Game

Upon clicking the "New Game" button from the prompt menu, the user will be prompted to input the number of players, which can be anywhere between 2 - 5 players, and then Player Information and select their game board.

Load Game

If a user has previously saved a game using the "save game" option inside of the "File" menu, they are able to re-load that unfinished game by selecting this option. Upon selection of "Load Game" the game will confirm that the file was loaded, and will then re-open the closed game.

Player Information

When starting a new game the player will be required to input some information. Player 1 must be a human, and must input the name which they wish to use for the game. Any subsequent players can be AI players, or human players. If the other players are human, they will also need to enter a name in order to play the game.

Game Board Selection

In this version of Scrabble, custom game boards can be used through importing an XML file containing information about the location of premium tiles. The default download contains 3 game boards which the user will be prompted to choose between when beginning a new game. The "Standard" board is the default scrabble board, and "Custom 1" and "Custom 2" refer to custom game boards which are packaged alongside the .jar file, each with a unique assortment of premium tile layouts.

Custom Game Boards

Users can create and import their own custom game boards using the template files: custom_board1.xml or custom_board2.xml. Opening and editing either of these files in a text editor will allow players to create their own custom scrabble game boards which are automatically supported in the game.

NOTE: If creating a custom game board, you must use and replace either custom_board1.xml or custom_board2.xml. There is a maximum of 3 boards available at any given time.

The supported types for premium tiles are as follows:
DOUBLE_WORD
TRIPLE_WORD
DOUBLE_LETTER
TRIPLE_LETTER
CENTER → exclusively the center space.
NORMAL → default, non-premium scrabble squares.

Gameplay

Players will select a tile from their hand, and then select an unoccupied space on the gameboard where they wish to place the tile. The tiles will appear temporarily while the word is being formed upon the board.
The features of this Scrabble application are as follows:
- Play

Upon pressing the play button, the game will check to verify that the tiles placed on the board are:
a) In the correct location ***Note that first tile MUST be placed in the center space, and all subsequent tiles must be touching**
b) Form a valid word as outlined in the "scrabble_acceptedwords.csv" file provided alongside the .jar executable

If the tiles are in a valid location, and form a valid word, the play button will calculate the wordscore based on the combination of letters, and if any letters were placed on a premium tile before adding the final score to the player's score card which is tracked on the side of the game board.
The game will then advance to the next player's turn after filling the player's hand with the amount of tiles they placed on the board.

- Swap

Upon selecting a tile, the player can choose to swap the selected tile for a new tile from the bag. Returning the selected tile to the bag to be redrawn. The turn will only advance to the next player if the player chooses to play or pass their turn. There is no limit on the amount of swaps a player can make. **Note that only one tile can be selected and swapped at a time.**

- Pass

The player can choose to redraw their entire hand and skip their turn. This button will automatically skip the turn of the current player, advancing to the next player, and replace every tile in the player's hand with new tiles.

- Undo

This button will remove the most recent tile placed on the board and return it to the player's hand, this can be done to return to before the player has placed any tiles from their hand.

- Redo

This button will redo any undone moves.

Null Tiles

These tiles are represented by a "-" and may be used to represent any letter which the player chooses. Upon placing one on the board, and pressing play, the game will prompt the user to select which letter they wish to use in place of the "-".

Scoring

The scoring for the game follows the general rules for scrabble scoring, such that every letter is assigned a value and the combined letter score for each word will form the total score.

Null tiles return 0 points individually, but will return points for words formed using them.

Additionally, premium tiles contribute to the final score for a player:
- Triple word tiles are red, and will multiply the score of the word by 3.
- Double word tiles are pink, and will multiply the score of the word by 2.
- Triple letter tiles are blue, and will multiply the letter placed on that tile by 3.
- Double letter tiles are cyan, and will multiply the letter placed on that tile by 2.

Saving a Game

Players have the option to save a game, which will save the current score, tile placed, and player hands. This option is found inside the "File" menu located in the upper left corner of the game window, and will return a message indicating its success. After a game is saved, the player can close the game window without fear of losing game progress, as they can choose to reload the game from the startup menu.

NOTE only one game can be saved at a time, if a new game is saved the originally saved game data will be overwritten.