

A User Manual for Scrabble

With the increasing presence of technology in our daily lives, people are constantly looking for more and more ways to turn real-life objects into virtual ones. While this project does not target a specific problem, it does aim to provide users with a virtual Scrabble game.

Technology is ever-present, and while it may be unlikely for a user to be able to carry around a Scrabble board, it is likely a user would have a computer to run a computer version of Scrabble.

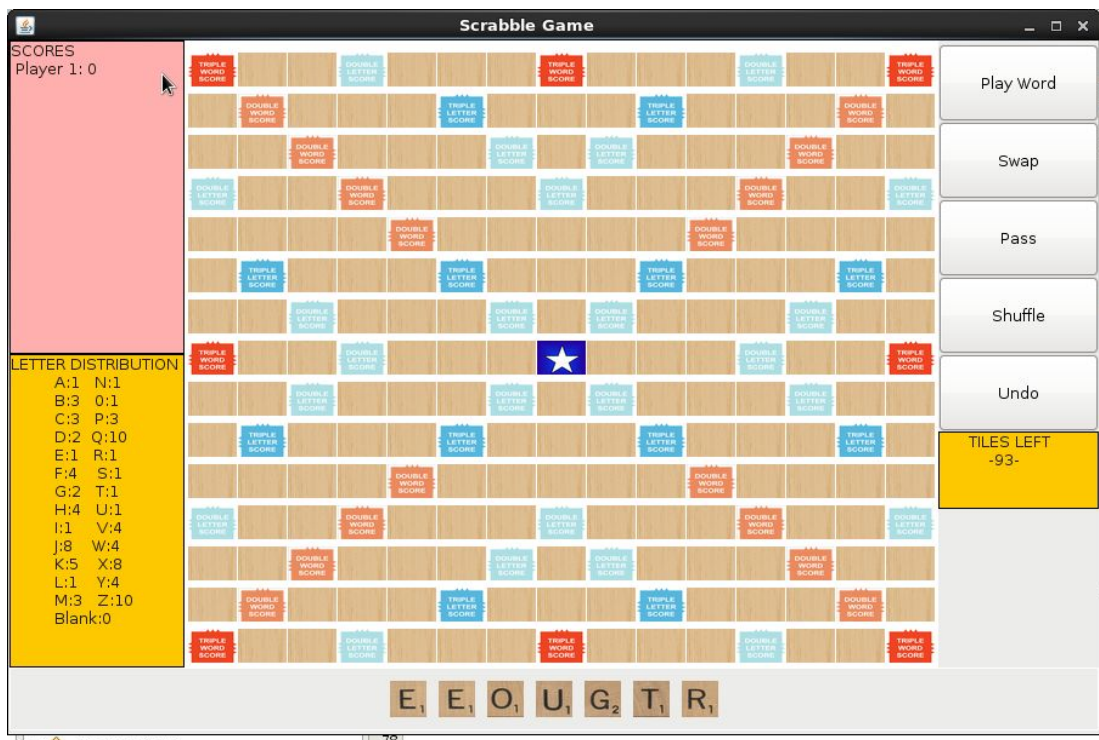
{Not only does a computerized game of Scrabble allow for the game to be played on the go, but also it allows players to play from different computers, whether they're a few feet to a few miles away. The typical Scrabble game requires the players to sit around the same Scrabble board, and this program allows a game to be played without the proximity requirement. To make this Scrabble game possible between different computers, a network connection must be established between players for the game to run.



Players have the option of starting their own game or joining an existing game, depending on variables such as whether existing games are full, or if they are unaware of any existing games. To enter an existing game, they must enter in the IP address of the computer

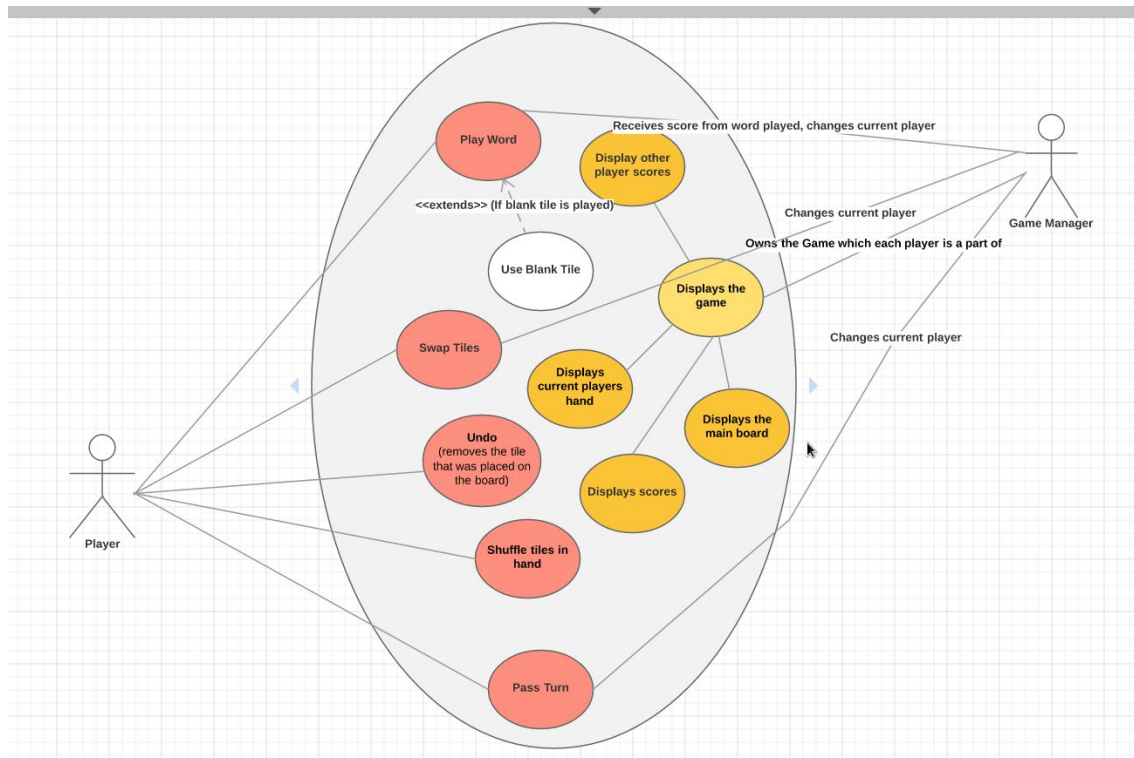
which initially created the game. To start a new game, they enter their name, specify how many players they would like to allow to join the game, and then wait for the rest of the players to join the game. Their IP address must be shared with those who would like to join the game. }

To get the Scrabble program to fully and truly represent the Scrabble board game, the players must have a variety of options available to them. The game starts with each player drawing a hand of 7 tiles, drawn from a communal tile bag of 100 tiles. In the tile bag, there are a set number of each letter of the alphabet, as well as a two blank tiles. These tiles can be assigned any value, but are worth 0 points when the word is scored.



Players are provided with the ability to shuffle the tiles in their hand, perhaps helping them to identify possible words to play. The starting player must play their first word on the board over the center star, and the played word must exist in the Scrabble dictionary. Once the player has played a legal word, they draw from the tile bag until their hand is back to 7 tiles.

Within a player's turn, they have 3 different options: play a word and receive a score for that word, swap tiles with randomly selected tiles from the bag, and pass their turn completely. The players rotate taking turns, and the game winds down once the tile bag runs out of tiles. Players keep taking turns until no one can play any more valid words on the board. The player with the highest score wins.



The players play a key role in actually playing the Scrabble game, but another important role in this program is the game manager. The game manager is not necessarily a real person, but rather a part of the program which holds all the information of the Scrabble game that needs to be the same for each player: the board, the tile bag, the turn rotation, and so on. The game manager ensures the players are seeing the same exact Scrabble board, draw from the same tile bag, and keeping track of each player's score.

Citations

- Bevilacqua, Fernando. "Building a Peer-to-Peer Multiplayer Networked Game - Envato Tuts+ Game Development Tutorial." *Game Development Envato Tuts+*. N.p., 12 Aug. 2013. Web. Nov.-Dec. 2015.
- "Scrabble Rules - Scrabble Official Rules." *The Official Rules of Scrabble*. N.p., n.d. Web. 08 Dec. 2015.