SOFE 2720U
Principles of Software and Requirements Engineering

Final Project
Rummy-O Game
Requirements
Review Report

Lab Week 1 Group 7

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Introduction

The main objective of this project is to create a web-based working prototype of the Rummy-O tile game. In order to do this correctly, certain requirements need to be fulfilled during the development of the game. The game is similar to the rummy card game. It is supposed to host 2 to 4 players. There are four sets of tiles distinguished by four colors. Each set has tiles numbers from 1 to 13. There should also be 2 joker tiles in the deck, which means the deck should have 54 tiles. The game will start by shuffling the deck of tiles. Each player should then receive a tile each and the player with the lowest tile number starts first. Then, the players return the tile they received and the deck is reshuffled. Afterwards, the players each select 14 tiles which are not shown to the other players. The players then have to try to make an initial play worth 25 points by making runs and sets in order to start placing tiles on the board. A run is a sequence of numbers of the same number, and a set is a collection of the same number in different colors. The player is then supposed to keep playing tiles until they eliminate all the tiles they hold in their hand. The players are also allowed to use placed tiles on the board to make runs and sets after they make their initial play and they are also allowed to replace jokers.

Requirements

1. Basic Gameplay

The basic requirements and rules of the Rummy-O game.

1.1 Tile deck shuffling

Tiles in the deck should be shuffled in random order.

1.2 Tile selection

Each player selects a random shuffled tile turn by turn until the player has 14 tiles in their hand.

1.2 Start Player Selection

Players are given a tile each from a shuffled tile deck and the player with the lowest tile goes first.

1.4 Initial meld

The starting run/set value placed by every player should add up to 25. This allows the player to start re-melding tiles starting from the next turn.

1.5.1 Re-melding tiles

Players can modify current melds by adding to them or removing tiles from a meld on the board to create a new meld by adding tiles from their own hands.

1.5.2 Replacing Jokers

A joker can be replaced in a meld on the board with a tile from the player's hand. The joker then can take any value and be used to complete sets or runs.

1.6 Win condition

The win condition occurs when all the tiles in a player's hand have been eliminated. The first player to eliminate all the tiles in their hand wins the game.

2. Multiplayer Gameplay

The multiplayer aspect of the game is that 2 to 4 players can play on a server. Each player has a turn where they are allowed to make a move.

2.1 Remote gameplay

Players should be able play on seperate devices.

2.2 Turn time limit

Each player has at most 1.5 minutes to play their turn.

3. Player Accessibility

Certain features implemented to improve user experience.

3.1 Auto Shuffling of player hand

Rearranging the tiles in the players hand to show possible runs and sets automatically at the start of each turn.

3.2 Auto Shuffling of board

The board should shuffle all the tiles to appropriate locations after each turn.

3.3 Game controls

Mouse inputs for gameplay (drag and drop tiles on the board)

4. User personalization

Players can personalize aspects of the display of their game

4.1 Board Theme

Players should have an option to customize the background of their game

4.2 Player Identity

Players can personalize their in-game avatar. Players can change their in-game name.

User Stories

Auto Sorting
Narrative: As an end-user, I want the game to automatically sort the tiles in my hand and on the board so that I can easily focus on the strategy of the game.
Acceptance Criteria:
Scenario 1: Strategy Given that making sets and groups in the game may require for me to sort the tiles on the game board to earn points. It would be easier for me to see the possible set of moves when all the tiles are sorted. Then, I will be able to play the strategy of the game and win more games.
Scenario 2: Finding Given that there may be many tiles in my hand or on the board at one given time. When there are a lot of tiles in the game, I will need to find specific tiles to locate the one(s) that best suit(s) my strategy. If the tiles are sorted, then it makes it easier for me to find the tile(s) I'm looking for as they would follow a distinct sorting pattern (i.e. ascending order with specific order of colours)

Easy Game Operation
Narrative:

As a customer, I want the user to be able to play the game using solely the mouse. It benefits players because it eases the complexity of the game.
Acceptance Criteria:
Scenario 1: Ease of Use Given that the game is meant to be a relaxing experience. When the game is played, being able to play with minimal effort is ideal. Then playing with the mouse allows for one-handed play and comfort.

Gameplay and Animation
Narrative: As a customer I want the fluidity of the titles and animation of shuffle and draw to be visually appealing. Each player should be able to customize their avatar before playing the game to differentiate personalities. Along with the ability to change the look of an avatar, the players should also be to change the colors of the website to a more muted and darker profile.So that the user feels comfortable with their playing environment.
Acceptance Criteria:
Scenario 1: Given a user that is tired, the ease of animation will not make them feel worn out. When the user feels comfortable, and has less fatigue. Then the user will play longer.

Quicker Gameplay Experience

Narrative: As an End-user, I want every turn in the game to last for a limited time so that if there is any player who is away from keyboard or someone is taking too much time to complete their turn, the game would skip their turn and make them auto draw. This way the gameplay will be much quicker and the game would not last forever.
Acceptance Criteria:
Scenario 1: If there is a player who joined the lobby and then for some reason had to move away from the device he is using then the game would still continue after the timer runs out for his turns instead of having everyone wait till the player returns.
Scenario 2: If a player is indecisive and they are taking too long to play their turn then the timer would force them to make quicker decisions. This will cause players to make mistakes as well which is supposed to be part of the gameplay.

Multiplayer Privacy
Narrative: As a End-user, I want the game to allow multiplayer with remote users along with game privacy so that the game can be enjoyed without the presence of an unwanted player.
Acceptance Criteria:

Scenario 1:

Given that you want to play with some of your high school friends and during the game someone types some private information. If there is a random player in the lobby they would have access to such private information and this would ruin the game experience for those players who queued together.

Conclusion

In conclusion, the requirements of this project consist of the basic functionality of the Rummy-O game concept but it also adds several features which would improve user experience. For the working prototype, it was decided by the team to implement all the basic gameplay functionality of the game which includes the multiplayer aspect. The user personalization requirements were omitted during planning for the creation of the game due to the time constraint on the project and the fact that it is not a core feature of the Rummy-O game. Since this is meant to be a working prototype, the personalization elements can be implemented at a later date when the game is out of the prototyping stage and is closer to completion.