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| Title:Use Case ID: 1 | Start Game |
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| **Description**: | This use case describes the steps required to begin a game of Super Rummy. |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Lobby Host |
| **Participants**: | Lobby Guest |
| **Goal**: | Begin a game. |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes the user has accessed the Super Rummy website and is on the main selection menu |
| **Success Postcondition**: | The game has begun. |

| **Actor:**  1.) Host has arrived at the Super Rummy site.  3.) Host clicks the button.  5.) Host sees that the display has changed.  7.) Host and Guests can see the cards in their hand face-up, and see cards in opponent’s hands face down.  9.) Host and Guests can see the top card of the discard pile. | **System Responses:**  2.) Super Rummy displays the start screen, including a button labeled “Start Game”  4.) Super Rummy changes from the start screen to the game screen.  6.) Super Rummy deals cards to each player. The number of cards is determined by customizable rules.  8.) Super Rummy moves the top card of the deck into the discard pile and turns it face-up. |
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| Title:Use Case ID: 2 | Join Game |
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| **Description**: | User will enter a lobby hosted by another player. |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Lobby Guest |
| **Participants**: | Lobby Host |
| **Goal**: | Multiple human players will be in the same lobby. |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | The Host has shared the room code with the Guest. |
| **Success Postcondition**: | The Guest has entered the lobby. |

| **Actor:**  1.) Guest types a room code into the “Join Lobby” space, then hits enter.    3.) The Guest   1. Sees the error message or 2. Sees that they have entered the lobby and the Host sees that the Guest has entered their lobby as well. | **System Responses:**  2.) Super Rummy determines whether an open lobby exists with that code, and if there is it:   1. Lets the Guest into the lobby or 2. It will either display a message that the lobby is full or 3. It will display a message that there is no lobby with that code. |
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| **Title:**Use Case ID: 3 | Determine rules |
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| **Description**: | This use case describes the steps taken to select specific rules for playing Rummy |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Lobby Host |
| **Participants**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Goal**: | Make selections about the available rules. |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a mobile device |
| **Precondition**: | This use case assumes the user has navigated to the “edit rules” screen from the main menu. |
| **Success Postcondition**: | The user has selected the rules from a specific ruleset and is ready to start the game |

| **Actor:**  1.) Host has navigated to the rules menu.  3.) User adjusts a slider by clicking it and dragging it to the side.  5.) User sees these changes. | **System Responses:**  2.) Super Rummy displays rules, and sliders with which to change what they’re set to. i.e. “How many decks of cards will be used” with the slider ranging from 1-3.  4.) Super Rummy displays that the slider has moved and associated rules have been changed. |
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| Title:Use Case ID: 4 | Add AI Player |
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| **Description**: | This use case describes the steps for adding AI players to lobbies. |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Lobby Host |
| **Participants**: | Lobby Guest |
| **Goal**: | Have an additional AI player in the lobby. |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | The Host has entered the Super Rummy website. |
| **Success Postcondition**: | An additional AI player will be in the lobby. |

| **Actor:**  1.) Host clicks the “Add AI Player” button.  3.) Host and Guests can see the additional AI player in the list of players. | **System Responses:**  2.) Super Rummy adds an AI player to the displayed list of players in the lobby. |
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| Title:Use Case ID: 5 | Load Game |
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| **Description**: | This use case describes the steps for loading a game. |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Lobby Host |
| **Participants**: | Lobby Guest |
| **Goal**: | Load a previously saved game. |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | Host and Guests have entered the website, all desired Guests are in the lobby, and the Host knows the Save Code for a previously saved game. |
| **Success Postcondition**: | An additional AI player will be in the lobby. |

| **Actor:**  1.) Host enters the Save Code into the “Load Save Code” field, and hits enter.  3.) Host and Guests see their username as well as the usernames of the players in the saved game, and can click the username of a previous player.  5.) Host and Guests will see, beneath each previous player’s username, the username of the player who has chosen that previous player.  7.) Host clicks the button.  9.) Host and Guests will see this change and can continue play as normal. | **System Responses:**  2.) Super Rummy checks that the Save Code is valid, and that there aren’t more people in the lobby than were in the saved game. If valid, it displays the “Choose Seats” screen.  4.) The system will display that user’s username beneath the selected previous player’s username.  6.) Once the Host and each Guest has chosen a previous player, the system will display the Resume Game button to the host.  8.) Super Rummy loads the game, with the Host and each Guest having the hand and score of their chosen previous player. |
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| Title:Use Case ID: 6 | Determine Appearance |
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| **Description**: | This use case describes the steps for changing the appearance of Super Rummy. |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Super Rummy User |
| **Participants**: |  |
| **Goal**: | Allow for UI customization. |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | User has navigated to the Appearance menu, either from the pause menu or the main menu. |
| **Success Postcondition**: | The UI will have changed. |

| **Actor:**  1.) User navigates to the Appearance menu.  3.) User clicks an option from one or more categories.  5.) User exits the menu. | **System Responses:**  2.) Super Rummy displays various display options, organized into Card Back, Card Front, and Board, as well as a button to return to the menu from which they arrived.  4.) System displays that the selected option has been selected.  6.) User sees the menu from which they arrived, which the UI changed to the settings they chose, if applicable. |
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| Title:Use Case ID: 7 | Draw a card |
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| **Description**: | This use case describes the steps taken for the user to draw a card from the top of the deck |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Rummy users |
| **Participants**: |  |
| **Goal**: | Draw a card from the deck or discard pile. |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes that the user must draw a card from the top of the deck in order to begin their turn |
| **Success Postcondition**: | The user successfully drew a card and is ready to create melds, match, or discard |

| **Actor:**  1.) Before having drawn a card this turn, the user taps either the deck or the discard pile.  3.) User sees that the card has been moved to their hand. | **System Responses:**  2.) Super Rummy moves the top card of the tapped pile to the user’s hand.   1. If the discard pile was tapped, all users can see what is now the top of the discard pile. |
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| Title:Use Case ID: 8 | Prevent illegal moves |
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| **Description**: | This use case describes the steps for creating illegal moves for the rummy game |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Rummy user |
| **Participants**: |  |
| **Goal**: | To prevent players from making certain moves |
| **Related Use Cases**: | Extension of Create Melds  Extension of Match Melds |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes the player has drawn a card to begin their turn and is ready to make a move |
| **Success Postcondition**: | To deny the user from making a move that would be considered “illegal” |

| **Actor:**  1.) The user attempts to perform an illegal move during their turn  3.) User sees the message that their move was illegal. | **System Responses:**  2.) Super Rummy prevents the user from performing this move, providing a description of why the move was illegal, if possible. |
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| Title:Use Case ID: 9 | Create melds |
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| **Description**: | This use case describes the steps necessary for creating a meld |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Rummy users |
| **Participants**: |  |
| **Goal**: | Create a meld as either a set or a run, sets and runs are defined as follows but are subject to change based on selected rules:   * **Set:** 3 or more of the same card based on its value (2-10, jack, queen, king, ace).   + Suit and color DO NOT MATTER when making a set * **Run:** 3 or more cards in ascending/descending order of the same color/suit. These cards must be in order, one after the next, by value!   + This order cannot wrap back around from the highest to the lowest card (cannot create a run with a high ace that goes ace, 2, 3 and vice versa) |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes that the user has drawn a card to begin their turn, and has at least three cards selected. |
| **Success Postcondition**: | The user is successfully able to create a meld in the form of either a set or a run |

| **Actor:**  1.) User selects at least three cards.  3.) User selects the “Create Meld” button.  5.) User sees the cards move onto the board or sees the message stating that the move was illegal. | **System Responses:**  2.) Super Rummy presents a “Create Meld” button.  4.) Super Rummy checks that the move is legal, if it is, it moves the selected cards onto the board. If not, it displays a message that the move was illegal, with details why if possible. |
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| Title:Use Case ID: 10 | Match melds |
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| **Description**: | This use case outlines the steps required for matching cards to other users melds |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Rummy users |
| **Participants**: |  |
| **Goal**: | When it is the users turn, they should be able to match or “append to” to other players melds as long as they have placed down a meld of their own |
| **Related Use Cases**: | Prevent Illegal Moves (extends) |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes the user has one or more cards selected and at least one meld is present on the board. |
| **Success Postcondition**: | The user is able to match a card to another users meld |

| **Actor:**  1.) The user, with at least one card selected, taps a meld on the board.  3.) User views updated hand and sees all users view matched card | **System Responses:**  2.) Super Rummy checks that the move is legal, and if it is, moves the selected cards to be part of the selected meld. |
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| Title:Use Case ID: 11 | Select Card |
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| **Description**: | This use case outlines the steps of a user selecting cards in their hand. |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Rummy users |
| **Participants**: |  |
| **Goal**: | Allow the user to select cards so that they can match and create melds. |
| **Related Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes the user has one or more cards in their hand. |
| **Success Postcondition**: | The user has selected one or more cards. |

| **Actor:**  1.) The user clicks a card.  3.) User views that the card has moved. | **System Responses:**  2.) Super Rummy moves that card up slightly in the UI, so that it stands out from the others. It is registered as selected. |
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| Title:Use Case ID: 12 | Discard a card |
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| **Description**: | This use case describes the steps taken to discard one card and add it to the end of the discard pile |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Rummy users |
| **Participants**: |  |
| **Goal**: | The user must be able to discard one card and add it to the discard pile in order to end their turn |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes that the user has exactly one card selected. |
| **Success Postcondition**: | The user successfully discards one card and adds it to the end of the discard pile |

| **Actor:**  1.) User, with one card selected, clicks the discard pile.  3.) User sees that the card has moved and that their turn has ended. | **System Responses:**  2.) Super Rummy moves that card to the discard pile, displaying it for all users, and ends User’s turn. |
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| Title:Use Case ID: 13 | Assign card point values |
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| **Description**: | This use case describes the steps for assigning point values to cards |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Rummy Users |
| **Participants**: |  |
| **Goal**: | Give a specific point value to each card as follows:   * 2-9 = 5 points * 10-King = 10 points * Ace = 15 points(high), 5 points(low) |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes that the user has created a meld/has current melds displayed or has matched a card to a meld |
| **Success Postcondition**: | Each card successfully has its own point value which is used to determine user scores at the end of each round |

| **Actor:**  1.) User has matched cards or melds displayed on the board  3.) Users see displayed point values and can determine the current score of the game | **System Responses:**  2.) Super Rummy assigns total point value to the meld or matched card and displays it to the user. follows the point values given in the “Goal” section |
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| Title:Use Case ID: 14 | Pause / Unpause game |
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| **Description**: | This use case describes the steps taken in order to pause the current progression of a game |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Rummy users |
| **Participants**: |  |
| **Goal**: | To provide the ability to halt the current progression of the game as well as providing a “pause menu” which outlines specific options such as “save game”, “exit game”, “help”, etc. |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes that the user has begun a game |
| **Success Postcondition**: | The user is able to successfully pause the game and has access to the pause menu and its options |

| **Actor:**  1.) User is in game and selects the pause option in order to select option from pause menu  3.) User sees pause menu and decides if they would like to select one of the options given or to resume play  5.) User selects to “resume play” | **System Responses:**  2.) Super Rummy receives pause request, halting the current game progression and displays the pause menu with its multiple options to the user  4.) Super Rummy’s next actions depend on users choice, however, base case would be to provide the user with a “resume play” input display  6.) Super Rummy unpauses the game and game progression commences again |
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| Title:Use Case ID: 15 | Save game |
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| **Description**: | This use case describes the steps taken to save the progress of an ongoing game |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Rummy users |
| **Participants**: |  |
| **Goal**: | To allow users to save the current state of their game if they want to come back to play later |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes the user has begun playing a game |
| **Success Postcondition**: | The user can save the state of the game and come back to it to play at a different time |

| **Actor:**  1.) User has started a game and would like to save the game progress in order to resume play at a different time  3.) User sees “save game” display and taps the option to save the progress  5.) User sees the message that the save has gone through successfully. | **System Responses:**  2.) Super Rummy shows display which asks user to “save game” and invokes the user to tap on it through some form of vibrant UI  4.) Super Rummy stores the current game state (melds, hands, total points, etc.) and displays a message that the game state has been saved. |
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| Title:Use Case ID: 16 | Exit game |
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| **Description**: | This use case describes the steps taken when a user wants to exit the game |
| **System Under Design:** | Super Rummy |
| **Primary Actor**: | Rummy user |
| **Participants**: |  |
| **Goal**: | To be able to exit the current game either closing the or bringing the user back to the main menu |
| **Following Use Cases**: |  |
| **Invariant**: | The user has a device with internet access, and has accessed the Super Rummy website. |
| **Precondition**: | This use case assumes the user is ready to stop playing the current game they are in and have accessed the “pause menu” |
| **Success Postcondition**: | The user successfully exits the game bringing them to either the main menu or exiting the |

| **Actor:**  1.) User is ready to exit game and is looking at the “pause menu” display  3.) User sees “exit game” display option and selects it  5.) User selects the option to return to Main Menu.  7.) User sees that they have been returned to the main menu. | **System Responses:**  2.) Super Rummy displays “exit game” option in “pause menu” and allows the user to select it through UI  4.) Super Rummy shows new display message stating that all unsaved progress will be lost, and provides an option to “Exit to Main Menu”  6.) Super Rummy returns user to the main menu. |
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