

## Testing Documentation

Test Case #	Requirement Tested	Method Used	Rationale	Input(s)	Expected Output
1	1.1.0	Black Box	Upon opening the application, the user is greeted with an option box that includes all configuration options for gameplay. These options include "1 Player Mode", "2 Player Mode", "Human Opponent" (if two player mode is selected), "Computer Opponent" (if two player mode is selected), and text fields to enter the associated player names. Also included is a "Start" button and a "Close" button (both of which are always enabled). This option dialog box should pop up over the main GUI set to a solid green color.	User opens the application.	An option box pops up that includes all configuration options for gameplay ("1 Player Mode", "2 Player Mode", "Human Opponent" (if two player mode is selected), "Computer Opponent" (if two player mode is selected), and text fields to enter the associated player names.) Also included is a "Start" button and a "Close" button (both of which are always enabled).
2	1.1.1	Black Box	If the user selects the "Close" button at any time, the application closes.	User selects "Close" from the game mode option box.	The application immediately closes.
3	1.1.2	Black Box	The "1 Player Mode" is highlighted by default when the application is first opened, and a blank text field for player one's name is displayed.	User opens the application.	The "1 Player Mode" option is highlighted and a blank text field for player one's name is displayed.
4	1.1.2.a	Black Box	If the user selects the "Start" button with "1 Player Mode" highlighted and the "Player One Name" field empty, the one player GUI opens with the name "Jacob" assigned to player one.	User selects the "Start" button from the game mode options menu without entering a name in the "Player One" name text box.	The single player mode GUI opens with the name "Jacob" assigned to player one.
5	1.1.2.b	Black Box	If the user selects the "Start" button with "1 Player Mode" highlighted and a name supplied in the "Player One Name" text field, the one player GUI opens with the provided name assigned to player one.	User selects the "Start" button from the game mode options menu with a name entered in the "Player One" name text box.	The single player mode GUI opens with the supplied name assigned to player one.
6	1.1.3	Black Box & White Box	If the user highlights the "2 Player Mode" option, the "1 Player Mode" option is deselected, and two more options appear ("Human Opponent" and "Computer Opponent"). The "Human Opponent" option is highlighted by default.	User selects the "2 Player Mode" option from the game mode options menu.	"1 Player Mode" is no longer highlighted, and options for the opponent type are displayed ("Human Opponent" and "Computer Opponent"). "Human Opponent" is selected by default.
7	1.1.4	Black Box & White Box	When the "Human Opponent" option is highlighted, two text fields are displayed, labeled "Player One Name", and "Player Two Name".	User selects "2 Player Mode" and "Human Opponent" from the game mode option menu.	Two text fields are displayed, "Player One Name", and "Player Two Name".

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8	1.1.4.a	Black Box	If "Two Player Mode" is highlighted, "Human Opponent" is highlighted, the "Player One Name" field is empty, the "Player Two Name" field is empty, and the user selects the "Start" button, the two player mode GUI is opened, and the names "Jacob" and "Brant" are assigned to player 1 and player 2, respectively.	User selects "2 Player Mode" and "Human Opponent" from the game mode option menu, and selects the "Start" button without entering names for player one or player two.	The two player mode GUI opens with the names "Jacob" and "Brant" assigned to player one and player two, respectively.
9	1.1.4.b	Black Box	If "Two Player Mode" is highlighted, "Human Opponent" is highlighted, the "Player One Name" field is empty, the "Player Two Name" field contains a name, and the user selects the "Start" button, the two player mode GUI is opened, the name "Jacob" is assigned to player 1, and the supplied name is assigned to player 2.	User selects "2 Player Mode" and "Human Opponent" from the game mode option menu, provides a name for player two, and selects the "Start" button without entering a name for player one.	The two player mode GUI opens with the the supplied name assigned to player two, and the name "Jacob" assigned to player one.
10	1.1.4.c	Black Box	If "Two Player Mode" is highlighted, "Human Opponent" is highlighted, the "Player One Name" field contains a name, the "Player Two Name" field is empty, and the user selects the "Start" button, the two player mode GUI is opened, the name "Brant" is assigned to player 2, and the supplied name is assigned to player 1.	User selects "2 Player Mode" and "Human Opponent" from the game mode option menu, provides a name for player one, and selects the "Start" button without entering a name for player two.	The two player mode GUI opens with the the supplied name assigned to player one, and the name "Brant" assigned to player two.
11	1.1.4.d	Black Box	If "Two Player Mode" is highlighted, "Human Opponent" is highlighted, the "Player One Name" field contains a name, the "Player Two Name" field contains a name, and the user selects the "Start" button, the two player mode GUI is opened, and the supplied names are assigned to player 1 and player 2 accordingly.	User selects "2 Player Mode" and "Human Opponent" from the game mode option menu, supplies names for player one and player two, and selects the "Start" button without entering names for player one or player two.	The two player mode GUI opens with the supplied names assigned to player one and player two, respectively.
12	1.1.5	Black Box & White Box	When the "Computer Opponent" option is highlighted, the text fields for "Player One Name" and "Player Two Name" are displayed, but the "Player Two Name" field is disabled, and "Computer" is supplied for the "Player Two Name".	User selects "2 Player Mode" and "Computer Opponent" from the game mode options menu.	Two text fields are displayed, "Player One Name", and "Player Two Name". The "Player Two Name" text field is filled in with the name "Computer" and is disabled.

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Test Case #	Requirement Tested	Method Used	Rationale	Input(s)	Expected Output
13	1.1.5.a	Black Box	If "Two Player Mode" is highlighted, "Computer Opponent" is highlighted, the "Player One Name" field is empty, and the user selects the "Start" button, the two player mode GUI is opened, the name "Jacob" is assigned to player 1, and "Computer" is assigned to player 2.	User selects "2 Player Mode" and "Computer Opponent", and the "Start" button from the game mode options menu without supplying a name for player one.	The two player GUI opens with the name "Jacob" assigned to player one, and the name "Computer" assigned to player two.
14	1.1.5.b	Black Box	If "Two Player Mode" is highlighted, "Computer Opponent" is highlighted, the "Player One Name" field contains a name, and the user selects the "Start" button, the two player mode GUI is opened, the supplied name is assigned to player 1, and "Computer" is assigned to player 2.	User selects "2 Player Mode" and "Computer Opponent", and the "Start" button from the game mode options menu and supplies a name for player one.	The two player GUI opens with the supplied name assigned to player one, and the name "Computer" assigned to player two.
15	1.2.1	Black Box	The center of the screen shall display the six dice used during gameplay. These dice shall display the name of the game, "Farkle", until the user selects the roll button for the first time.	User starts a one player mode, or a two player mode game.	The dice display the name "Farkle" until the user selects the roll button for the first time.
16	1.2.2	Black Box	The total turn score shall be displayed above the dice in the center of the screen, and the score for the selected dice of the current roll shall be displayed directly below the turn score in the center of the screen. This score shall be updated as each die is selected.	After a given roll, the user selects any combination of scoring dice.	If all selected dice contribute to the score, the calculated score for the selected dice is displayed just above the dice. If any of the selected dice are not scorable, 0 is displayed just above the dice.
17	1.2.3	Black Box	Rules for the scoring combinations shall be displayed on the right side of the screen.	User starts a one player mode, or a two player mode game.	An image summarizing scoring rules is displayed on the right side of the screen.
18	1.2.4	Black Box	A "Roll Dice" button shall be displayed below the dice in the middle of the screen.	User starts a one player mode, or a two player mode game.	A "Roll Dice" button is displayed below the dice in the middle of the screen.
19	1.2.5	Black Box	A "Bank Score" button shall be displayed below the dice in the middle of the screen, and shall initially be disabled.	User starts a one player mode, or a two player mode game.	A "Bank Score" button is displayed below the dice in the middle of the screen, and is initially disabled.
20	1.2.6	Black Box	After each roll, dice that have previously been selected, scored, and locked shall be shaded to indicate they will not be available on the next roll, and the turn accumulated score shall be displayed above the dice.	At the conclusion of a roll, the user selects scoring dice and subsequently selects the "Roll Dice" button.	All selected dice are shaded to indicate that they are locked, and the remaining dice are rolled.

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21	1.2.7	Black Box	If any roll results in 0 points, the word "Farkle" is prominently displayed, and 0 points is displayed in the accumulated turn score above the dice. The dice retain their current values that resulted in the Farkle. After the Farkle message is displayed, the dice still retain the values that resulted in the Farkle, but all dice are unlocked and play passes to the next player (in two player mode), or to the next turn (in one player mode).	The user selects "Roll Dice", and the resulting roll results in a score of 0 for every possible combination of the rolled dice.	A message dialog box pops up displaying the word "Farkle". The accumulated turn score displayed above the dice is set to 0. The dice retain the values that resulted in the farkle until the next turn is taken.
22	1.2.8	Black Box	A "Select All" button shall be displayed below the dice in the middle of the screen, and shall be initially disabled.	User starts a one player mode, or a two player mode game.	A "Select All" button is displayed below the dice in the middle of the screen, and is disabled at the start of the game.
23	1.2.9	Black Box	During a current roll, current dice selected by the user shall be indicated with a yellow border around each selected die, and the score for the currently selected dice shall be updated above the dice.	User rolls the dice, and selects at least one die after the roll.	All currently selected dice are indicated by being boxed in a yellow border. The score of the selected dice is displayed above the dice.
24	1.2.10	Black Box	A menu shall be displayed at the top of the main GUI with one main option, "File", and five sub options: "Hint", "New Game", "Restart Game", "Reset High Score", and "Quit".	User starts a one player mode, or a two player mode game.	A menu is displayed with "File" as the main option, and four sub options: "Hint", "New Game", "Restart Game", and "Quit".
25	1.2.10.a	Black Box	If the user selects the "New Game" option, the select game mode option box is displayed.	User selects the "New Game" option under the "File" main menu.	The game mode option box is displayed.
26	1.2.10.b	Black Box & White Box	If the user selects the "Restart Game" option, the current game with all current configurations (player mode, player names, and player types) is restarted.	User selects the Restart Game" option under the "File" main menu.	The game is restarted with the current game configuration for player mode, player names, player types, etc.
27	1.2.10.c	Black Box	If the user selects the "Quit" option, the application is closed.	User selects the "Quit" option under the "File" main menu.	The application immediately closes
28	1.2.10.d	Black Box	If the user selects the "Hint" option, the dice combination for the highest possible score for the current roll is displayed.	User selects the "Hint" option under the "File" main menu after rolling the dice.	The combination of dice that results in the maximum score for the current roll is displayed in a message box.
29	1.2.10.e	Black Box	The "Hint" option shall only be available after a player has rolled, and before that player has selected any dice.	The user has yet to roll the dice, or the user has rolled the dice and selected one or more dice	The hint menu option is disabled
30	1.2.10.f	Black Box & White Box	If the user selects the "Reset High Score" option, the high score is reset to 0.	The user selects the "Reset High Score" menu option	The high score is reset to 0 points

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Test Case #	Requirement Tested	Method Used	Rationale	Input(s)	Expected Output
31	1.2.10.g	Black Box	The "New Game" option and the "Reset Game" option shall be disabled while the computer is taking its turn.	The computer takes a turn in a two player mode against a computer opponent game.	The "New Game" and "Reset Game" options are disabled
32	1.3.1	Black Box	The title of the window shall display: "Farkle – Single Player Mode".	One player mode is started.	The title of the one player GUI window displays "Farkle - Single Player Mode".
33	1.3.2	Black Box	The overall point total for the current game shall be displayed on the upper left hand corner of the screen, just below the player's name.	One player mode is started.	The point total for the current game is initially displayed as 0. This total is updated after each turn.
34	1.3.3	Black Box	The left side of the screen shall have an area to display the point total for each of the ten turns taken in single player mode.	One player mode is started.	The left hand of the screen displays ten separate turns, each of which are initially empty. After a turn, that turn is updated with the points accumulated during the turn.
35	1.3.4	Black Box	The current turn shall be indicated by highlighting that turn on the left side of the screen. This turn shall be highlighted as soon as the previous turn ends (which occurs after the player selects the "Bank Score" button, or the Farkle message dialog box animation concludes), and before the player selects the "Roll Dice" button for the current turn.	One player mode is started.	Turn 1 is initially highlighted indicating it is the current turn. After the turn is complete, the next turn is highlighted.
36	1.3.5	Black Box	The current highest achieved score shall be displayed on the lower left hand corner of the screen . This score shall initially be set to 0 points.	One player mode is started.	The current highest achieved overall score in one player mode is initially set to 0 points. If any game results in a higher overall score, the highest achieved score is set to that score.
37	1.3.6	Black Box	The top of the left hand side of the screen shall display "Player: ", along with the provided name of the player.	One player mode is started.	The top of the left hand side of the screen displays "Player: ", along with the provided name of the player.
38	1.4.1	Black Box	The title of the window shall display, "Farkle – Two Player Mode".	Two player mode is started.	The title of the window shall display, "Farkle – Two Player Mode".
39	1.4.2	Black Box	The left side of the screen shall have an area to display the overall accumulated point total for each player. This takes the place of the area displaying the point total for each turn in the one player mode graphic user interface.	Two player mode is started.	Left hand side of screen displays overall accumulated point total for each player for the current game

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40	1.4.2.a	Black Box	Each player shall be indicated in the following manner: "Player: " along with the provided player's name, or "Computer" if a "Computer Opponent" has been selected, followed by the running point total for the current game for that player.	Two player mode is started.	Each player shall be indicated in the following manner: "Player: " along with the provided player's name, or "Computer" if a "Computer Opponent" has been selected, followed by the running point total for the current game for that player.
41	1.4.3	Black Box	The player whose turn it is shall be indicated by highlighting that player's current turn on the left side of the screen. The turn shall be highlighted after the previous player's roll ends and before the player selects the "Roll Dice" button for the first time for the current turn.	Two player mode is started.	The current player's turn is indicated by highlighting that player.
42	1.4.4	Black Box	The first player to meet the minimum total point threshold required to win the game (equal to 10,000 points) shall be highlighted in a different color to indicate each subsequent player has one more turn to try and beat that player's score.	A player in two player mode reaches 10,000 points.	The player to reach 10,000 points is indicated so by highlighting that player in a different color.
43	1.4.5	Black Box	The turn totals for each player shall be displayed in a scroll pane below that player's name and game score. This scroll pane shall initially display 5 turns, adding additional turns after they are taken. The scrolling ability shall be enabled at the beginning of the 11th turn.	A given player reaches the 11th turn during a game	Scrolling ability is enabled for that player's turn panel, and is automatically scrolled to the bottom
44	1.4.6	Black Box	After a player has surpassed the 10,000 point threshold, a message dialog box is displayed indicating the other player has one last turn to try and beat that player's total score.	A player surpasses the 10,000 point threshold during a 2 player game	A message dialog box is displayed indicating the other player has one last turn to try and beat that player's total score.
45	1.5.1	Black Box	At the conclusion of the game, an option box shall be displayed with the player's overall score for the completed game (in one player mode), or the winner of the current game (in two player mode). This option box shall include three options: "Play Again?", "Main Menu", and "Quit".	A game in either one player mode or two player mode ends.	An option box shall be displayed with the player's overall score for the completed game (in one player mode), or the winner of the current game (in two player mode) that includes three options: "Play Again?", "Main Menu", and "Quit".

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Test Case #	Requirement Tested	Method Used	Rationale	Input(s)	Expected Output
46	1.5.1.a	Black Box & White Box	If the user selects the "Play Again?" button, the game will be restarted with all of the same configuration options of the previous game (player mode, player's names, and player types).	The user selects the "Play Again?" button from the conclusion of game option box.	The game is restarted with the current game configuration for player mode, player names, player types, etc.
47	1.5.1.b	Black Box & White Box	If the user selects the "Main Menu" button, the select game mode option box will be displayed.	The user selects the "Main Menu" button from the conclusion of game option box.	The game mode option box is displayed.
48	1.5.1.c	Black Box	If the user selects the "Quit" button, the application will immediately close.	The user selects the "Quit" button from the conclusion of game option box.	The application closes.
49	1.5.1.d	Black Box	If the user selects the close button in the upper portion of the conclusion of game option box, the application will immediately close.	The user selects the close button from the conclusion of game option box.	The application closes.
50	2.1.0	Black Box	When one player mode is selected, the one player mode graphic user interface is displayed with the name "Farkle" displayed on the dice, the "Bank Score" button disabled, the "Select All" button disabled, and turn number one highlighted. The user will have ten turns to try and get as many points as possible.	One player mode is started.	The one player mode GUI opens with the "Bank Score" and "Select All" buttons disabled, and "Farkle" displayed on the dice.
51	2.1.1	Black Box	Each turn is taken according to the requirements of section 4.0.0.	One player mode is started.	Each turn follows the requirements of requirement 4.0.0
52	2.1.2	Black Box & White Box	The game ends at the conclusion of the tenth turn, and the player's score is compared to the current high score.	The tenth turn is completed in one player mode.	The conclusion of game option box is displayed.
53	2.1.3	Black Box	If the player's score is greater than the current high score, a congratulatory message is displayed, and the player's score replaces the previous high score.	The tenth turn is completed in one player mode, and the player achieves a high score.	A congratulatory message is displayed, and the player's score replaces the previous high score.
54	2.1.4	Black Box	The conclusion of game option box is displayed at the completion of the tenth turn.	The tenth turn is completed in one player mode.	The conclusion of game option box is displayed.
55	2.2.0	Black Box	When two player mode against a live person is selected, the two player mode graphic user interface is displayed with the name "Farkle" displayed on the dice, the "Bank Score" button disabled, the "Select All" button disabled, and player one highlighted indicating it is his or her turn.	Two player mode against a human opponent is started.	The two player mode GUI opens with the "Bank Score" and "Select All" buttons disabled, and "Farkle" displayed on the dice.

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56	2.2.1	Black Box	Each turn is taken according to the requirements of section 4.0.0. The current player for each turn is highlighted during that player's turn.	Two player mode against a human opponent is started.	Each turn follows the requirements of requirement 4.0.0, and the current player's turn is indicated by highlighting that player.
57	2.2.2	Black Box	The first player to surpass 10,000 total points at the end of a given turn is highlighted in a different color.	A player surpasses 10,000 points in two player mode against a human opponent.	A player surpasses 10,000 points and that player's turn ends.
58	2.2.3	Black Box & White Box	The other player has one more turn to try and surpass the point total of the first player to surpass 10,000 points.	A player surpasses 10,000 points in two player mode against a human opponent, and the turn ends passing control to the other player.	A player surpasses 10,000 points and that player's turn ends.
59	2.2.4	Black Box	The conclusion of game option box is displayed after a player wins.	A two player mode against a human opponent game ends with a winner.	The conclusion of game option box is displayed.
60	2.3.0	Black Box	When two player mode against the computer is selected, the two player mode graphic user interface is displayed with the name "Farkle" displayed on the dice, the "Bank Score" button disabled, the "Select All" button disabled, and player one highlighted indicating it is his turn.	Two player mode against a computer opponent is started.	The two player mode GUI opens with the "Bank Score" and "Select All" buttons disabled, and "Farkle" displayed on the dice.
61	2.3.1	Black Box	Each turn is taken according to the requirements of section 4.0.0. The current player for each turn is highlighted during that players turn.	Two player mode against a computer opponent is started.	Each turn follows the requirements of requirement 4.0.0, and the current player's turn is indicated by highlighting that player.
62	2.3.2	Black Box	Decisions made during the computer player's turn are chosen in accordance with requirements section 5.0.0.	The computer takes a turn in a two player mode against a computer opponent game.	The computer takes a turn in two player mode against a computer opponent.
63	2.3.3	Black Box	The first player to surpass 10,000 total points at the end of a given turn is highlighted in a different color.	A player surpasses 10,000 points in two player mode against a computer opponent.	A player surpasses 10,000 points and that player's turn ends.



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64	2.3.4	Black Box & White Box	The other player has one more turn to try and surpass the point total of the first player to surpass 10,000 points.	A player surpasses 10,000 points in two player mode against a computer opponent, and the turn ends passing control to the other player.	A player surpasses 10,000 points and that player's turn ends.
65	2.3.5	Black Box	The conclusion of game option box is displayed after a player wins.	A two player mode against a computer opponent game ends with a winner.	The conclusion of game option box is displayed.
66	3.1.0	Black Box & White Box	Farkle is played with six standard 6 sided dice with each side numbered from 1 through 6 (inclusive).	One player mode or two player mode is started.	Six dice are displayed in the center of the screen.
67	3.2.0	Black Box & White Box	Each die that is rolled shall be assigned a random value from 1 to 6 (inclusive) at the conclusion of the roll.	A roll occurs during one player mode or two player mode.	The dice values after the roll are randomly determined, and fall within the range of 1 to 6 (inclusive).
68	4.1.0	Black Box	At the beginning of the turn, the turn score is set to 0. The player selects the "Roll Dice" button, and all 6 dice are rolled in accordance with requirement 3.2.0. The "Select All" button is enabled after the initial roll takes place.	A previous turn ends and a new turn begins, and the player selects the "Roll Dice" button.	The turn score is 0, and all 6 dice are rolled. The "Select All" button is enabled.
69	4.2.0	White Box	The resulting roll is analyzed according to requirement 6.0.0 to determine if the player farkled. A farkle occurs if the roll results in 0 points.	A player completes a roll of the dice.	If all combinations of the rolled dice result in 0 points, the player Farkles.
70	4.3.0	Black Box	If the player did not farkle, he or she must select at least one scoring die. The score for the selected dice is calculated according to requirement 5.0.0, and is updated after each die selection. The score for the selected dice is displayed in accordance with section 1.2.9. If any of the selected dice are not scorable, a selected dice score of 0 is displayed and the "Roll Dice" and "Bank Score" buttons are disabled.	A player completes a roll of the dice, in which at least one die is scorable. The player then selects dice he or she wants scored for that roll.	If all selected dice contribute to the score, the calculated score for the selected dice is displayed below the dice, and the "Roll Dice" button is enabled. If any of the selected dice are not scorable, 0 is displayed below the dice and the "Roll Dice" button is disabled. If the turn score is greater than or equal to 300, the "Bank Score" button is enabled.

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71	4.4.0	Black Box	When all of the selected dice contribute to the point total for the roll, the "Roll Dice" button is enabled, and the roll point total is added to the turn score.	A player completes a roll of the dice, in which at least one die is scorable. The player then selects dice he or she wants scored for that roll. All selected dice are scorable.	The "Roll Dice" button is enabled, and the roll point total is added to the current turn score.
72	4.5.0	Black Box	If the current turn score is greater than or equal to 300, the bank button is enabled.	A player completes a roll of the dice, in which at least one die is scorable. The player then selects dice he or she wants scored for that roll. All selected dice are scorable, and the turn score is greater than or equal to 300.	The "Bank Score" button is enabled.
73	4.6.0	Black Box	If the player elects to roll again the selected dice are locked, the remaining dice are rolled, and the process returns to requirement 4.2.0.	A player completes a roll of the dice, in which at least one die is scorable. The player then selects dice he or she wants scored for that roll. All selected dice are scorable, and the player selects the "Roll Dice" button again.	The selected dice are locked (indicated by shading them), and the remaining dice are rolled.
74	4.7.0	Black Box	If all six dice have been selected, and they all contribute to the turns point total, the player is issued a bonus roll indicated with a message in the current turn box. All selected and locked dice are deselected and unlocked, and the process returns to requirement 4.1.0.	A player completes a roll of the dice, and all rolled dice are scorable and selected.	A "Bonus Roll" message is displayed in the current turn for the current player, all selected and locked dice are deselected and unlocked, and the "Roll Dice" button is enabled.
75	4.8.0	Black Box & White Box	If the player selects the bank button, the current turn point total is added to the player's game point total, and the turn is over.	A player's turn score is greater than or equal to 300, and that player selects the "Bank Score" button.	The turn score is displayed in the point total for that turn, and is added to the player's game total.

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76	4.9.0	Black Box	If the player farkles on any roll during the current turn, that player loses all points accumulated during the current turn, the farkle message is displayed, and the turn is over.	All combinations of dice after a player's roll result in 0 points.	A farkle message is displayed, the player is awarded 0 points for the turn, and play passes to the next turn (one player mode), or the next player (two player mode).
77	4.10.0	Black Box & White Box	When the turn is over all dice are unlocked while continuing to display their last value, the "Roll Dice" button is enabled, the "Bank Score" button is disabled, the "Select All" button is disabled, the current turn point total is set to 0, the current roll point total is set to 0, and play passes to the next player (two player mode) or the next turn (single player mode) by highlighting the appropriate player or turn on the left hand side of the screen.	A turn ends via Farkle or selection of the "Bank Score" button.	All dice are unlocked and unselected while continuing to display their last value. Play passes to the next turn (one player mode) or the next player (two player mode) indicated via highlighting. The "Bank Score" and "Select All" buttons are disabled. The "Roll Dice" button is enabled. The current turn point total, and current roll point totals are set to 0.
78	5.1.0	Black Box	The computer player takes its turn in accordance with requirement 4.0.0, and the dice selection as well as the decision to continue rolling the dice are made in accordance with the following requirements.	The computer takes a turn in a two player mode against a computer opponent game.	The computer decides to roll again based on the following requirements.
79	5.2.0	Black Box	After each roll, the computer player always selects the maximum scoring combination of dice.	The computer takes a turn in a two player mode against a computer opponent game.	The computer selects all scorable dice after a roll.
80	5.3.0	Black Box	If the current turn point total is less than the goal calculated in section 5.5.0, the computer always rolls again.	The computer's turn score after a given roll is less than 300.	The computer always rolls again.
81	5.4.0	Black Box	If the previous roll resulted in a bonus roll, the computer always rolls again.	The computer's roll results in a bonus roll	The computer always rolls again.
82	5.5.0	Black Box	The computer's goal is calculated after each roll. This goal is pseudo-randomly selected as 300 fifty percent of the time, 600 thirty percent of the time, and 1000 twenty percent of the time.	The computer rolls the dice	The computer will elect to bank the dice if the score is greater than 300 points 50% of the time, if the score is greater than 600 80% of the time, and if the score is greater than 1000 100% of the time. Provided a bonus roll was not achieved on the previous roll.
83	6.1.0	White Box	Each 1 rolled is worth 100 points.	A single 1 die is selected.	The player is given 100 points.

## Testing Documentation

Test Case #	Requirement Tested	Method Used	Rationale	Input(s)	Expected Output
84	6.2.0	White Box	Each 5 rolled is worth 50 points.	A single 5 die is selected.	The player is given 50 points.
85	6.3.0	White Box	Three 1's are worth 1000 points.	Three 1 dice are selected	The player is given 1000 points.
86	6.4.0	White Box	Three of a kind of any value other than 1 is worth 100 times the value of the die (e.g. three 4's is worth 400 points).	Three same value dice are selected (other than 1's).	The player is given the die value * 100 points.
87	6.5.0	White Box	Four, five, or six of a kind is scored by doubling the three of a kind value for every additional matching die (e.g. five 3's would be scored as $300 \times 2 \times 2 = 1200$ ).	Four, five, or six same value dice are selected.	The player is given the three of a kind value * $2^{(\text{number of matching dice} - 3)}$ .
88	6.6.0	White Box	Three distinct doubles (e.g. 1-1-2-2-3-3) is worth 750 points. This scoring rule does not include the condition of rolling four of a kind along with a pair (e.g. 2-2-2-2-3-3 is worth does not satisfy the three distinct doubles scoring rule).	Three distinct pairs of dice are selected.	The player is given 750 points.
89	6.7.0	White Box	A straight (e.g. 1-2-3-4-5-6), which can only be achieved when all 6 dice are rolled, is worth 1500 points.	A six dice straight is selected.	The player is given 1500 points.

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