**Group 14 - Test Specification**

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# **INTRODUCTION**

## Purpose Of This Document

The purpose of this document is to provide a testing standard/specification to be used to aid the creation and testing of the buccaneer game. At the later stage of production, another document will be completed with the test result table [4] showing which of the requirements have been met.

## Scope

This document will include a detailed table for the test procedures and document change history to track changes made. The References section includes the Requirements Specification and User Interface Specification. Appendix provides key constant values taken for the Requirements Specifications which are used multiple times in the tests.

Documents to be read [2]

## Objectives

In this document we will outline in detail each of the system tests to be done as part of a formal test process as described in the test procedure standards [3], this will be cross-referenced with the appropriate section of the functional requirements.

1. **TEST SPECIFICATION**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test Ref | Req being tested | Test Content | Input | Output | Pass Criteria |
| SE-F-001 | FR1 | Test that system can request 4 name inputs | Enter 4 names: Jay, Ali, Eric, Thomas | List of names should include those names | Correct data is stored |
| SE-F-002 | FR1 | Test that system only accepts player names shorter than 10 characters being only letters, and does not allow blank names or duplicate names | Enter 4 names: Jay, Eric, Hassan, Incorrect Name | Should prompt for name again on input: Incorrect Name | Not accept input over 10 characters and re-prompt |
| SE-F-003 | FR2 | Test if system can assign ports to users | Getting usernames inputted at SE-F-001 | Each username is retrieved correctly and assigned to a port | Each user is assigned one port out of: London, Genoa, Marseilles, and Cadiz |
| SE-F-004 | FR2 | Test if only one unique port is assigned to each user | Names from SE-F-001 | Each username is retrieved correctly and assigned to one port only | Data is assigned correctly |
| SE-F-005 | FR3 | Test if there are 36 Crew Cards in the game | N/A | Number of all Crew Cards in the game | The number of Crew Cards in the game is equal to 36 |
| SE-F-006 | FR3 | Test if correct Crew Cards are stored | Count all the Crew Cards in the game | A list of all Crew Cards in the game | There are 6 copies each Crew Card with value 1, 2 and 3 in red and in black |
| SE-F-007 | FR3 | Test if game stores the Crew Cards randomly | Check where all the Crew Cards are assigned in one game, then run another game and compare | Two collections of crew cards from two different games to be compared | The Crew Cards are in different order every time |
| SE-F-008 | FR3 | Test if card returned to deck is stored at bottom of the deck | Drawing a card and then returning it to the deck | Returned card stored/located at the end of the array/deck | Returned card is at index n-1 |
| SE-F-009 | FR3 | Test if card drawn is from the top of the deck | Retrieving a card from the deck | First card of the deck is retrieved | The card retrieved was from position 0 in the array |
| SE-F-010 | FR3 | Test if retrieved card is not present in the deck | Retrieving card | Card is not located/stored in the deck | The card retrieved is not stored in the card array |
| SE-F-011 | FR4 | Test if there are 28 Chance Cards in the deck at the beginning of the game | Initialise the game | There are 28 cards in the deck | There are 28 distinct cards in the Crew Cards deck |
| SE-F-012 | FR4 | Test if the game sorts the cards randomly at the beginning of each game | Initialise two games and iterate through and compare the order of cards in them | The cards in the games are in different order | The game sorts the cards in a random order at the begging of every game |
| SE-F-013 | FR4 | Test if the game correctly puts chance cards at the bottom of the pile | Distribute all cards among the players | The Chance Card at the top of the pile is the same card as the first one taken | The first card taken is the same card as the 29th card taken |
| SE-F-014 | FR4 | Test if the game assigns the cards that are meant to be kept by the players | Distribute all cards among the players | The assignable cards have been assigned to the players. | The players have the chance card assigned to them |
| SE-F-015 | FR4 | Test if the game removes the assignable crew cards from the deck when they are assigned to a player | Distribute all cards among the players | There are 24 crew cards | The assignable crew cards are removed from the deck |
| SE-F-016 | FR4 | Test that the assignable crew cards are returned to the bottom of the pack after they have been used | Distribute all cards among the players and perform the action that specified on the assignable crew cards | The assignable crew cards are returned to the deck after the action has been performed | Assignable crew cards are returned to the bottom of the pack |
| SE-F-017 | FR5 | Test if the Treasure Island stores 4 diamonds at the beginning of the game | Initialise the game | The Treasure Island Stores 4 diamonds | The Treasure Island stores the correct number of treasures at the beginning of the game |
| SE-F-018 | FR5 | Test if the Treasure Island stores 4 rubies at the beginning of the game | Initialise the game | The Treasure Island Stores 4 rubies | The Treasure Island stores the correct number of treasures at the beginning of the game |
| SE-F-019 | FR5 | Test if the Treasure Island stores 4 gold bars at the beginning of the game | Initialise the game | The Treasure Island Stores 4 gold bars | The Treasure Island stores the correct number of treasures at the beginning of the game |
| SE-F-020 | FR5 | Test if the Treasure Island stores 4 pearls at the beginning of the game | Initialise the game | The Treasure Island Stores 4 pearls | The Treasure Island stores the correct number of treasures at the beginning of the game |
| SE-F-021 | FR5 | Check that the number of diamonds in the game is equal to 4 | Initialise the game, count the number of diamonds assigned to all ports, ships, and the Flat Island | The total number of diamonds assigned to all ships, ports and the Flat Island is equal to 4 | The number of diamonds in the game is equal to 4 |
| SE-F-022 | FR5 | Check that the number of rubies in the game is equal to 4 | Initialise the game, count the number of rubies assigned to all ports, ships, and the Flat Island | The total number of rubies assigned to all ships, ports and the Flat Island is equal to 4 | The number of rubies in the game is equal to 4 |
| SE-F-023 | FR5 | Check that the number of gold bars in the game is equal to 4 | Initialise the game, count the number of gold bars assigned to all ports, ships, and the Flat Island | The total number of gold bars assigned to all ships, ports and the Flat Island is equal to 4 | The number of gold bars in the game is equal to 4 |
| SE-F-024 | FR5 | Check that the number of pearls in the game is equal to 4 | Initialise the game, count the number of pearls assigned to all ports, ships, and the Flat Island | The total number of pearls assigned to all ships, ports and the Flat Island is equal to 4 | The number of pearls in the game is equal to 4 |
| SE-F-025 | FR5 | Check that the number of barrels of rum in the game is equal to 4 | Initialise the game, count the number of barrels of rum assigned to all ports, ships, and the Flat Island | The total number of barrels of rum assigned to all ships, ports and the Flat Island is equal to 4 | The number of barrels of rum in the game is equal to 4 |
| SE-F-026 | FR5 | Test that a request to obtain a treasure that has been assigned elsewhere form the Treasure Island should be refuser | Reassign all treasure of one type from the Treasure Island to a ship, try to assign the same type of treasure from TI to another ship | Refusal | Refusal to assign the treasure |
| SE-F-027 | FR5 | Test if the value of Diamonds is stored correctly | Assign one diamond to a ship | One diamond is now assigned to the ship | The value of the treasure on this ship is equal to 5 |
| SE-F-028 | FR5 | Test if the value of Rubies s is stored correctly | Assign one ruby to a ship | One ruby is now assigned to the ship | The value of the treasure on this ship is equal to 5 |
| SE-F-029 | FR5 | Test if the value of Gold Bars is stored correctly | Assign one gold bar to a ship | One gold bar is now assigned to the ship | The value of the treasure on this ship is equal to 4 |
| SE-F-030 | FR5 | Test if the value of Pearls is stored correctly | Assign one pearl to a ship | One pearl is now assigned to the ship | The value of the treasure on this ship is equal to 3 |
| SE-F-031 | FR5 | Test if the value of Barrels of Rum is stored correctly | Assign one barrel of rum to a ship | One barrel of rum is now assigned to the ship | The value of the treasure on this ship is equal to 2 |
| SE-F-032 | FR6 | Test if the value of Crew Cards is stored correctly | Assign a black crew card of value 1 to a player | Their combat value is now 1 | The player’s combat value is equal to 1 |
| SE-F-033 | FR6 | Test if the value of Crew Cards is stored correctly | Assign a black crew card of value 2 to a player | Their combat value is now 2 | The player’s combat value is equal to 2 |
| SE-F-034 | FR6 | Test if the value of Crew Cards is stored correctly | Assign a black crew card of value 3 to a player | Their combat value is now 3 | The player’s combat value is equal to 3 |
| SE-F-035 | FR6 | Test if the player’s combat value is calculated correctly | Assign a black crew card of value 3 and a red crew card of value 1 to a player | Their combat value is now 2 | The player’s combat value is equal to 2 |
| SE-F-036 | FR7 | Test if game can correctly keep track of the nr of cards at Port London | Add 5 cards to the port | Correct sum of nr of cards will be 5 | The returned card array size is equal to the number of cards added (5) |
| SE-F-037 | FR7 | Test if game can correctly keep track of the nr of cards at Port Marseilles | Add 6 cards to the port | Correct sum of nr of cards will be 6 | The returned card array size is equal to the number of cards added (6) |
| SE-F-038 | FR7 | Test if game can correctly keep track of the nr of cards at Port Cadiz | Add 3 cards to the port | Correct sum of nr of cards will be 3 | The returned card array size is equal to the number of cards added (3) |
| SE-F-039 | FR7 | Test if game can correctly keep track of the nr of cards at Port Genoa | Add 1 card to the port | Correct sum of nr of cards will be 1 | The returned card array size is equal to the number of cards added (1) |
| SE-F-040 | FR7 | Test if the game stores the value of cards correctly | Add 3 cards to the port, all with the value of 2 | Returned values of cards total is 6 | The returned value of cards is correct (6) |
| SE-F-041 | FR7 | Test if the game correctly keeps track of the cards after a card is removed | Remove 1 card out of the previously added 5 in SE-F-011 | Returned value of number of cards is 4 | The returned value of cards is correct (4) |
| SE-F-042 | FR7 | Test if the game correctly keeps track of the treasure at the port London | Add 1 piece of treasure | Returned value of treasure amount is equal to 1 | The returned value of treasure is correct (1) |
| SE-F-043 | FR7 | Test if the game correctly keeps track of the treasure at the port Marseilles | Add 2 pieces of treasure | Returned value of treasure amount is equal to 2 | The returned value of treasure is correct (2) |
| SE-F-044 | FR7 | Test if the game correctly keeps track of the treasure at the port Cadiz | Add 3 pieces of treasure | Returned value of treasure amount is equal to 3 | The returned value of treasure is correct (3) |
| SE-F-045 | FR7 | Test if the game correctly keeps track of the treasure at the port Genoa | Add 4 pieces of treasure | Returned value of treasure amount is equal to 4 | The returned value of treasure is correct (4) |
| SE-F-046 | FR7 | Test if the game correctly keeps track of treasure once removed | Remove 1 treasure from port London | Returned value of treasure amount is equal to 0 | The returned value of treasure is correct (0) |
| SE-F-047 | FR7 | Test if the game correctly keeps track of treasure once removed | Remove 1 treasure from port Marseilles | Returned value of treasure amount is equal to 1 | The returned value of treasure is correct (1) |
| SE-F-048 | FR7 | Test if the game correctly keeps track of treasure once multiple treasure is removed | Remove 2 treasure from port Cadiz | Returned value of treasure amount is equal to 1 | The returned value of treasure is correct (1) |
| SE-F-049 | FR7 | Test if the game correctly keeps track of treasure once more than stored removed is removed | Remove 5 treasure from port Genoa | Returned value of treasure amount is equal to 0 | The returned value of treasure is correct (0) and not -1 |
| SE-F-050 | FR7 | Test if the ports have players assigned to them | Add a player/owner to the port London: “Hassan” | Returned value of port owner is Hassan | Data is stored correctly |
| SE-F-051 | FR7 | Test if the ports have players assigned to them | Add a player/owner to the port Marseilles: “Thomas” | Returned value of port owner is Thomas | Data is stored correctly |
| SE-F-052 | FR7 | Test if the ports have players assigned to them | Add a player/owner to the port Cadiz: “Ali” | Returned value of port owner is Ali | Data is stored correctly |
| SE-F-053 | FR7 | Test if the ports have players assigned to them | Add a player/owner to the port Genoa: “Eric” | Returned value of port owner is Eric | Data is stored correctly |
| SE-F-054 | FR8 | Test if the game can correctly keep track of the nr of cards at Flat Island when cards are added | Add 10 cards to Flat Island | Stored cards at Flat Island contain the previously added 10 total cards | Data is stored correctly |
| SE-F-055 | FR8 | Test if the game can correctly keep track of the nr of cards at Flat Island when cards are removed | Remove 3 cards from previously added 10 in: SE-F-030 | Stored cards total now equal 7 (10-3) | Data is processed and stored correctly |
| SE-F-056 | FR8 | Test if the game can correctly keep track of the nr of cards at Flat Island when more cards are removed than available | Remove 8 cards from the previously removed 3 in: SE-F-030 | Stored cards total now equal 0 and not –1 as (7-8=-1) | Data is processed and stored correctly |
| SE-F-057 | FR8 | Test if the game can correctly keep track of the nr of treasure at Flat Island when treasure is added | Add 10 treasure to Flat Island | Stored treasure at Flat Island contains the previously added 10 total treasures | Data is stored correctly |
| SE-F-058 | FR8 | Test if the game can correctly keep track of the nr of treasure at Flat Island when treasure is removed | Remove 3 treasure from previously added 10 in: SE-F-032 | Stored treasure total now equal 7 (10-3) | Data is processed and stored correctly |
| SE-F-059 | FR8 | Test if the game can correctly keep track of the nr of treasure at Flat Island when more treasure is removed than available | Remove 8 treasure from the previously removed 3 in: SE-F-033 | Stored treasure total now equal 0 and not –1 as (7-8=-1) | Data is processed and stored correctly |
| SE-F-060 | FR9 | Test if port London is at the correct coordinates | Return name of element in grid: 13, 19 | Returned name equals: Port of London | Correct data is stored |
| SE-F-061 | FR9 | Test if port Cadiz is at the correct coordinates | Return name of element in grid: 19, 6 | Returned name equals: Port of Cadiz | Correct data is stored |
| SE-F-062 | FR9 | Test if port Marseilles is at the correct coordinates | Return name of element in grid: 6. 0 | Returned name equals: Port of Marseilles | Correct data is stored |
| SE-F-063 | FR9 | Test if port Genoa is at the correct coordinates | Return name of element in grid: 0, 13 | Returned name equals: Port of Genoa | Correct data is stored |
| SE-F-064 | FR9 | Test if Mud Bay is at the correct coordinates | Return name of element in grid: 0, 19 | Returned name equals: Mud Bay | Correct data is stored |
| SE-F-065 | FR9 | Test if Anchor Bay is at the correct coordinates | Return name of element in grid: 19, 0 | Returned name equals: Anchor Bay | Correct data is stored |
| SE-F-066 | FR9 | Test if Cliff Creek is at the correct coordinates | Return name of element in grid: 0, 0 | Returned name equals: Cliff Creek | Correct data is stored |
| SE-F-067 | FR9 | Test if Flat Island is at the correct coordinates | Return name of element in grid spanning: x-15, y-18, z-18, w-16 | Returned name equals: Flat Island | Correct data is stored |
| SE-F-068 | FR9 | Test if Pirate Island is at the correct coordinates | Return name of element in grid spanning: x-1, y-3, z-4, w-1 | Returned name equals: Pirate Island | Correct data is stored |
| SE-F-069 | FR9 | Test if Treasure Island is at the correct coordinates | Return name of element in grid spanning: x-8, y-11, z-11, w-8 | Returned name equals: Treasure Island | Correct data is stored |
| SE-F-070 | FR10 | Test if each player is dealt 5 Crew Cards from the pack | Initialise the game | Each player has 5 cards in their collection of Crew Cards | Every player has 5 crew cards assigned to them |
| SE-F-071 | FR10 | Test if all the Trading Ports are dealt 2 crew cards | Initialise the game | The Trading ports are assigned 2 crew cards | All the Trading Ports have exactly two cards at the beginning of the game |
| SE-F-072 | FR10 | Test if for all Trading Ports the sum of crew cards and treasure is equal to 8 at the beginning of the game | Initialise the game | The sum of all the Crew Cards and Treasure in all the Trading Ports is equal to 8 | The Trading Ports have exactly two cards, which values sum up to 8 |
| SE-F-073 | FR10 | Test if all the players get a unique home port at the beginning of the game | Initialise the game | All players have unique home ports | Each player starts the game in a different port |
| SE-F-074 | FR10 | Test if the start position for each ship is their Home Port | Initialise the game | Each ships begins the game in their home port | Ship’s coordinates are matching their Home Port |
| SE-F-075 | FR11 | Test that the order of the players in a turn is as specified (London, Genoa, Marseilles, Cadiz) | Initialise the game | The order of players is correct | The order in which the player take turns is London, Genoa, Marseilles, Cadiz |
| SE-F-076 | FR11 | Check if the player can choose to either turn or move their ship | Initialise the game | A window allowing the user to choose to either move or turn | The player can choose to either move or turn |
| SE-F-077 | FR11 | Test that the player’s decision for change of direction is represented in the game | Choose South as the direction | The direction of the player is South | The ship’s direction changes to South |
| SE-F-078 | FR11 | Test that the player can’t move more squares than the sum of his crew cards | User with crew cards that sum up to 5 tries to move 6 squares | Refusal/ error message | The player can only move up to their legal range |
| SE-F-079 | FR 11 | Test that that the player must move their ship when it’s in a port | Player starting the turn in their port | The player can only move when he’s in the port | The only option possible is to move |
| SE-F-080 | FR11 | Test if the legal squares are shown to the player | Initialise the game, player chooses to move | Legal squares are highlighted on the board | The legal squares are highlighted |
| SE-F-081 | FR11 | Test if the player can move to a square withing his legal range | User with crew cards that sum up to 5 tries to move 4 squares | The player moves successfully | Player’s position changes |
| SE-F-082 | FR11 | Test that the player cannot move to a square outside of his legal range | User with crew cards that sum up to 5 tries to move 6 squares | Refusal/ error message | The player is not allowed to move more squares than their legal range |
| SE-F-083 | FR11 | Test that the player can move only in the direction he’s facing | Try to move in a different direction | Refusal/ error message | The player can only move in the direction he’s facing |
| SE-F-084 | FR11 | Test that the player can only move in a straight line when leaving port | Try to move to a square that is not in a straight line from the port | Refusal/ error message | The player can only move in a straight line |
| SE-F-085 | FR11 | Test that it's refused when the player tries to move more squares than his legal range (when in the port) | Player with the sum of crew cards equal to 5 tries to move 6 squares outside form the port | Refusal/ error message | The player can only move up to their legal range when leaving a port |
| SE-F-086 | FR11 | Test that it's refused when the player tries to move outside of the board | Player tries to move to a position that is not on the board | Refusal/ error message | The player can only move in the coordinates of the board |
| SE-F-087 | FR 11 | Test that the player can’t move on the squares occupied by the Islands (refer to Appendix for coordinates) | Player tries to move to a coordinate occupied by an island | Refusal/ error message | The player can only move on the squares that are not occupied by the islands |
| SE-F-088 | FR11 | Test that after making a move the player can choose a direction to turn | Player makes a move not involving an attack | The player can choose their direction | The player’s decision is represented in the game |
| SE-F-089 | FR11 | Test that the player cannot turn in a direction in which they can’t move at least one square | Player moves to a position at the edge of the board and tries to turn towards the edge of the board | Refusal/ error message | The player cannot turn in the invalid direction |
| SE-F-090 | FR11 | Test that when a player moves to a square adjacent to the Tresure Island the correct sequence is followed | A player moves to the coordinate  (8, 13) | Correct sequence is followed | Refer to FR13 for further tests |
| SE-F-091 | FR11 | Test that when a player moves to a square adjacent to the Flat Island the correct sequence is followed | A player moves to the coordinate  (4, 16) | Correct sequence is followed | Refer to FR 14 for further test |
| SE-F-092 | FR11 | Test that when a player moves to a square representing a port the correct sequence is followed | A player moves to the coordinate (1,7) | Correct sequence is followed | Refer to FR 15 for further tests |
| SE-F-093 | FR 12 | Test if the fighting strength of the ships is calculated correctly | N/A | N/A | Refer to FR6 tests |
| SE-F-094 | FR12 | Check that the winner is announced correctly | Conduct an attack, with Player 1 (10 fighting strength), Player 2 (9 fighting strength) | Player 1 wins | Player with the higher fighting strength |
| SE-F-095 | FR12 | Test if when the losing ship has treasure, the winner takes its treasure | Conduct an attack, Player 1 with two treasure, Player 2 with no treasure | Player 2 wins and is assigned Player 1’s treasure | The winner of an attack takes the treasure of the loser (only when the winner has less than 2 treasure in their ship) |
| SE-F-096 | FR12 | Test if when the winner cannot accommodate the treasure, it is returned to the Treasure Island | Conduct an attack, Player 1 with two treasure, Player 2 with 2 treasures | Player 2 wins, the treasure is returned to the Treasure Island | Test that the loser’s treasure is returned to the Treasure Island when the winner cannot accommodate it |
| SE-F-097 | FR12 | Test if when the loser doesn’t have treasure, the lowest crew cards are given to the winner | Conduct an attack, Player 1 with no treasure and crew cards (1,2,3), Player 2 | Player 2 wins and gets assigned crew cards of value 1 and 2 | The lowest crew cards of the loser are given to the winner |
| SE-F-098 | FR12 | Test if when the loser doesn’t have treasure and has only one crew card it is given to the winner | Conduct an attack, Player 1 with no treasure and one crew card, Player 2 | The crew card is given to Player 2 | The loser’s crew card is given to the winner |
| SE-F-099 | FR12 | Test that after the attack the loser is asked what direction they want to turn | Conduct and attack Player 2 loses | Player 2 can choose the direction to choose | The loser can choose the direction to turn |
| SE-F-100 | FR12 | Test that the above decision is represented in the game | Player 2 chooses the direction | The change is represented in the game | The decision of the player is reflected in the game |
| SE-F-101 | FR12 | Test that the loser must move at least one square | Player 2 tires to stay on the same square | Refusal/ error message | The loser must move away from the square |
| SE-F-102 | FR12 | Test that the winner is facing the same direction as they were before the attack | Player 1 wins the attack | Player 1 is facing the same direction as they were moving/ facing | The winner stay sin the same direction |
| SE-F-103 | FR13 | Test if a player is given a chance card when adjacent to Treasure Island at the end of their turn from the top of the deck. | Change location of a ship to be adjacent to Treasure Island | The ship`s owner is given a chance card from top of the deck | Previously top card now is given/executed and now appears to be at the bottom of the deck |
| SE-F-104 | FR13 | Test if given Chance card is executed correctly | Give card number 1 | The player is moved 5 squares away from the nearest side. If they are at a corner square of the island they are moved away diagonally. After the move, they are given a choice of which direction they wish to face. C1 applies. | Correct number of spaces moved and correct direction, including a choice of direction change given at the end |
| SE-F-105 | FR13 | Test if given Chance card is executed correctly | Give card number 2 | The player is given a choice of which of the other three players gives them crew cards. C1 applies. | The system automatically assigns them the lowest values card from a chosen player, then card is returned to the pack |
| SE-F-106 | FR13 | Test if given Chance card is executed correctly | Give card number 3 | Move player's ship to nominated square. C1 applies. Allow player to select orientation of ship. | Player's ship is moved to Mud Bay and are given 4 crew cards from pirate island if strength is less/equal to 3 and a direction change is given |
| SE-F-107 | FR13 | Test if given Chance card is executed correctly | Give card number 4 | Move player's ship to nominated square. C1 applies. Allow player to select orientation of ship | Player's ship is moved to Cliff Creek and are given 4 crew cards from pirate island if strength is less/equal to 3 and a direction change is given |
| SE-F-108 | FR13 | Test if given Chance card is executed correctly | Give card number 5 | Move player's ship to nominated square. C1 applies. Empty ship of any treasure | Player's ship is moved to Home Port and are given 4 crew cards from pirate island if strength is less/equal to 3 and Ship is emptied from any treasure |
| SE-F-109 | FR13 | Test if given Chance card is executed correctly | Give card number 6 | Move player`s ship to nearest port in the direction they are facing, and give 4 Crew Cards if their crew total is smaller or equal to 3 | Correct direction is calculated using ship direction and location on map, correct number of Crew Cards (4) are given if applicable |
| SE-F-110 | FR13 | Test if given Chance card is executed correctly | Give card number 7 | One treasure or 2 crew cards lost and given to nearest ship, if multiple ships at equal distance, then card is ignored | Correctly calculate nearest ship using non land squares, if multiple ships at equal distance, then ignore this card, assign least valuable treasure to nearest ship if applicable otherwise assign up to two lowest value cards to other ship and removed from player`s ship |
| SE-F-111 | FR13 | Test if given Chance card is executed correctly | Give card number 8 | One treasure or 2 crew cards lost and given to Flat Island | Least valuable treasure is assigned to Flat Island if the player has any treasure. Otherwise assign up to two lowest value cards instead and removed from player`s ship |
| SE-F-112 | FR13 | Test if given Chance card is executed correctly | Give card number 9 | One most valuable treasure (if applicable) or card lost and given to Flat Island | Most valuable treasure if any or most valuable card assigned to Flat Island and removed from player`s ship |
| SE-F-113 | FR13 | Test if given Chance card is executed correctly | Give card number 10 | Most valuable crew card deserted to pirate Island immediately | Highest values card taken from player and added to pirate island |
| SE-F-114 | FR13 | Test if given Chance card is executed correctly | Give card number 11 | Treasure taken up to values of 5 or 2 crew cards from Pirate Island | Player given a choice between crew cards or treasure, correct amounts calculated and assigned to corresponding player and taken away from the corresponding Island, if one is not applicable automatically assign the other cards or treasure to player respectable of treasure space on ship and output to the player beforehand |
| SE-F-115 | FR13 | Test if given Chance card is executed correctly | Give card number 12 | Treasure taken up to values of 4 or 2 crew cards from Pirate Island | Player given a choice between crew cards or treasure, correct amounts calculated and assigned to corresponding player and taken away from the corresponding Island, if one is not applicable automatically assign the other cards or treasure to player respectable of treasure space on ship and output to the player beforehand |
| SE-F-116 | FR13 | Test if given Chance card is executed correctly | Give card number 13 | Treasure taken up to values of 5 or 2 crew cards from Pirate Island | Player given a choice between crew cards or treasure, correct amounts calculated and assigned to corresponding player and taken away from the corresponding Island, if one is not applicable automatically assign the other cards or treasure to player respectable of treasure space on ship and output to the player beforehand |
| SE-F-117 | FR13 | Test if given Chance card is executed correctly | Give card number 14 | Treasure taken up to values of 7 or 3 crew cards from Pirate Island | Player given a choice between crew cards or treasure, correct amounts calculated and assigned to corresponding player and taken away from the corresponding Island, if one is not applicable automatically assign the other cards or treasure to player respectable of treasure space on ship and output to the player beforehand |
| SE-F-118 | FR13 | Test if given Chance card is executed correctly | Give card number 15 | Two crew cards taken from Pirate Island | Player is assigned specified nr of carfs from specified location, if less cards then specified number available, then remaining cards are assigned, otherwise two lowest value cards assigned from another player or crew cards dealt from top of deck |
| SE-F-119 | FR13 | Test if given Chance card is executed correctly | Give card number 16 | Treasure taken up to 7 in value (2 in limit) and crew cards total reduced to 10 or below | Crew card total reduced to 10 or below, keeping total as close to 10, and added to the back of the deck, only 2 treasure is assigned up to ship limit |
| SE-F-120 | FR13 | Test if given Chance card is executed correctly | Give card number 17 | Treasure taken up to 6 in value (2 in limit) and crew cards total reduced to 11 or below | Crew card total reduced to 10 or below, keeping total as close to 10, and added to the back of the deck, only 2 treasure is assigned up to ship limit |
| SE-F-121 | FR13 | Test if given Chance card is executed correctly | Give card number 18 | Treasure taken up to 4 in total value (2 in limit) and if crew is 7 or less, 2 crew cards taken from Pirate Island | Only 2 treasure is assigned up to ship limit and correct amount of crew cards assigned if applicable, Player is assigned specified nr of carfs from specified location, if less cards then specified number available, then remaining cards are assigned, otherwise two lowest value cards assigned from another player or crew cards dealt from top of deck |
| SE-F-122 | FR13 | Test if given Chance card is executed correctly | Give card number 19 | All total nr of cards returned to Pirate Island, same number of cards given back from top of deck | All cards returned are at the bottom of the pack, all cards given are from top of pack, number of cards returned are equal to number of cards given, cards have a possibility to be recycled back |
| SE-F-123 | FR13 | Test if given Chance card is executed correctly | Give card number 20 | Exchange up to 2 crew cards with one player at Treasure Island, if no player at island, then return 2 cards to Pirate Island | If multiple players at Island, give an option to player to choose one of the players, correctly exchange up to 2 random cards between them, if not applicable (no other players) return 2 cards from player to Pirate Island |
| SE-F-124 | FR13 | Test if given Chance card is executed correctly | Give card number 21 | CARD IS KEPT WITH PLAYER, able to use this card to exchange crew cards up to 5 in value from a port, leaving it behind on used location | Correct number of card value (5) allowed to be exchanged with, card should belong to a player, card dropped on the port it is played at, state of ownership should change accordingly |
| SE-F-125 | FR13 | Test if given Chance card is executed correctly | Give card number 22 | All players crew cards reduced to 7 total cards if applicable and returned to Pirate Island | Correct number of cards reduced to correct total of 7 from all players, each player can choose which cards to return |
| SE-F-126 | FR13 | Test if given Chance card is executed correctly | Give card number 23 | CARD IS KEPT WITH PLAYER, able to be used for exchanging crew or treasure up to value of 5 from any port you visit | Correct number of card or treasure value (5) allowed to be exchanged with, card should belong to a player, card dropped on the port it is played at, state of ownership should change accordingly |
| SE-F-127 | FR13 | Test if given Chance card is executed correctly | Give card number 24 | CARD IS KEPT WITH PLAYER, able to be used for exchanging crew or treasure up to value of 4 from any port you visit | Correct number of card or treasure value (4) allowed to be exchanged with, card should belong to a player, card dropped on the port it is played at, state of ownership should change accordingly |
| SE-F-128 | FR13 | Test if given Chance card is executed correctly | Give card number 25 | CARD IS KEPT WITH PLAYER, Moved to Pirate Island (onto to anchor bay square), treasure taken up to value of 7 (2 limit) | Correct number of treasures is assigned from Treasure Island, card returned to bottom of deck |
| SE-F-129 | FR13 | Test if given Chance card is executed correctly | Give card number 26 | CARD IS KEPT WITH PLAYER, Moved to Pirate Island (onto to anchor bay square), treasure taken up to value of 7 (2 limit) | Correct number of treasures is assigned from Treasure Island, card returned to bottom of deck |
| SE-F-130 | FR13 | Test if given Chance card is executed correctly | Give card number 27 | Treasure given up to 5 in value (2 limit), or 3 crew cards from Pirate Island | Player given a choice between crew cards or treasure, correct amounts calculated and assigned to corresponding player and taken away from the corresponding Island, if one is not applicable automatically assign the other cards or treasure to player respectable of treasure space on ship and output to the player beforehand |
| SE-F-131 | FR13 | Test if given Chance card is executed correctly | Give card number 28 | Two crew cards given from Treasure Island | Player is assigned specified nr of carfs from specified location, if less cards then specified number available, then remaining cards are assigned, otherwise two lowest value cards assigned from another player or crew cards dealt from top of deck |
| SE-F-132 | FR14 | Test if treasure is given when player is adjacent to Flat Island | Move player position to be adjacent to Flat Island | Player is given Treasure if they have less then 2 treasures on their ship | Correct number of treasures given according to ship space |
| SE-F-133 | FR14 | Test if 1 treasure is awarded when player only has 1 space on ship, treasure given is highest value | Move player adjacent to Treasure Island with 1 piece of treasure already onboard | Player is given 1 treasure which is the highest value | Correct number and value of treasure is given to player |
| SE-F-134 | FR14 | Test if player is assigned any cards from Flat Island | Move player adjacent to Flat Island with 0 cards, add 5 cards to Flat Island | Player is given 5 cards and Flat Island will have 5 less cards | Correct number of cards assigned to player (all), and removed from Flat Island |
| SE-F-135 | FR15 | Test if ships are unloaded when reaching ports | Move player with treasure to their port | All treasure is deposited | Correct number and type of treasure deposited |
| SE-F-136 | FR15 | Test if players can trade in ports | Move player with cards and treasure to another port other than their own | Option to trade is given, all port deposited treasure and cards are shown including players own cards, player is allowed to select and confirm items to be traded, system trades items according to rules | System trades automatically from cards selected if both equal in value, system should be able to calculate values of worth correctly, and update port owner's cards respectively to change. |
| SE-F-137 | FR15 | Tests if Ports accept chance cards to trade | Move player with chance card NR 4 | Player can choose cards with value of up to 4 | Trading with cards is accepted, cards are deposited at port or the deck if applicable, value of items taken, and cards used are equal |
| SE-F-138 | FR16 | Test if when a player that holds Chance Card 25 gets to the Anchor Bay the correct sequence is followed | Player picks card number 25 and moves to the Anchor Bay | The sequence specified in Buccaneer Requirements document, Appendix A, Card 25 | The payer can take treasure up to 7 total values from the Treasure Island |
| SE-F-139 | FR16 | Test if when a player that holds Chance Card 26 gets to the Anchor Bay the correct sequence is followed | Player picks card number 26 and moves to the Anchor Bay | The sequence specified in Buccaneer Requirements document, Appendix A, Card 26 | The payer can take treasure up to 7 of total value from the Treasure Island |
| SE-F-140 | FR17 | Test if the game finishes when one of the players has a total of 20 points worth of treasure in the ports and the ship as they enter the port | Player with 10 points worth of treasure in their port and 10 points worth of treasure enters the port | The game is finished | The game is finished |
| SE-F-141 | FR17 | Test if the winner is announced by the game | A player wins the game | A window announcing the player as the winner | The player is announced the winner |
| SE-F-142 | FR17 | Test if at the end of a game the program gives a possibility to either start a new game or terminate | A player wins the game | A window allowing the users to either start a new game or terminate | Players can either terminate or start a new game |
| SE-F-143 | N/A | Test if play button works | Clicking on the play button | We are present the next scene where we can input names | We are presented the next screen which will ask for out names. |
| SE-F-144 | N/A | Test if instructions button works | Clicking on the instructions button | We are moved to the next scene which will show us the instructions | Instruction screen is popped up and shows us the instructions |
| SE-F-145 | N/A | Test if we can input names | Inputting names on the name prompt menu | Game is able to take name inputs | Name inputs are able to be taken |
| SE-F-146 | N/A | Test if the game assigns random ports to random players | Input names | Game randomly assigns the names | Names are assigned randomly when test is repeated |

Appendix

* Trading Ports are **Venice**(1, 7) and **Amsterdam**(20, 14)
* Player Ports include **London**(1, 14), **Genoa**(7, 1), **Marseilles**(20, 7) and **Cadiz**(14, 20)
* The bays are: **Mud Bay**(1,1), **Anchor Bay**(20, 1) and **Cliff Creek**(20, 20)
* Assignable cards are cards number **21**(Long John Silver), **23** (Doubloons), **24** (Pieces of eight), **25** (Kidd’s chart), **26** (Kidd’s chart)
* Islands: **Treasure Island**(rectangle with corners (2, 16) and (4, 19)), **Pirate Island** (rectangle with corners (17, 2) and (19, 5)), **Flat Island** (rectangle with corners (9, 9) and (12, 12)

1. **REFERENCES**

[1]-Requirements Specification for Buccaneer Online Board Game

[2]- SE.GP14.UISpec - User Interface Specification

[3]-SE.QA.06 – Test Procedure Standards

[4]- SE.GP14.TestReport – Project Test Report

1. **DOCUMENT CHANGE HISTORY**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Version | Issue No. | Date | Changes made to document | Changed by |
| 0.1 | N/A | 14.02 | Added tests for FR 4,5,6 | kap48 |
| 0.2 | N/A | 14.02 | Added tests for FR 1,2,3 | haf22 |
| 0.3 | N/A | 19.02 | Added tests for FR 7, 8, 9 | haf22 |
| 0.4 | N/A | 21.02 | Added tests for FR 10, 11, 12 | kap48 |
| 0.5 | N/A | 25.02 | Added test for FR 16, 17 and Appendix | kap48 |
| 1.0 | 16 | 27.02 | Added tests for FR 13, 14, 15 and some potential tests for the buttons | haf22 |
| 1.1 | N/A | 28.03 | Made changed basing on the feedback | kap48 |
| 1.2 | 14 | 04.05 | Updated The contents table and removed sections based on feedback | jal74 |