Software Engineering Group Project
The main use cases of the system

Authors:	David Hernandez Rodriguez [dah73], Alexander Gardemann [alg68], Khalid Ameen Aslam [kha9], Mukhriz Bin Mustafa [mub11]
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1. INTRODUCTION

1.1 Purpose of this Document

The purpose of this document is to describe the user interfaces components including what interactions the users may have with system and the errors which may occur.

1.2 Scope

This document specifies the typical user, what use cases will be carried out by the users in the software, and what errors may occur with their respective prompts.

1.3 Objectives

The objective of this document is to specify the use cases of the system that users can perform as well as the errors conditions.

2. USER INTERFACE

2.1 Typical User

In the Buccaneer online board game there are three main typical users, the inexperienced, the experienced and the users with disabilities [1] [2].

TU1	Inexperienced user	Peter is a new player, and he has no experience in Buccaneer online board game. Because he has no experience, he has the option to look at the rule book in the main menu, and if he forgets something he can check it whilst playing. He decides to start by to sailing to the treasure island in the centre of the map and draw from the chance cards. When Peter gets to the treasure island and draws a chance card, he gains treasure worth six points, but because of the chance card he loses crew cards and cannot move as many squares as before and his ships combat value is lower. Peter decides to sail to the closest harbour to trade. Here, Peter trades his treasure or crew cards on his ship with the ones in the harbour, this trade provides him with three identical treasures so he returns to his harbour town and there he places them in the safe zone so no other player can steal his treasure and his points accumulate. After returning to his own harbour peter sets sail to attack another ship and steal the other player's treasure. When he reaches the same square where the other players ship is located, he presses "ready to attack" Because he has a low ship combat value, he

		loses the fight, so his opponent takes two crew cards and Peter has no treasure left.
TU2	Experienced user	Priscila has played the Buccaneer online board game before, so she is experienced. Because Priscila has experience, she does not need to use the rule book or even hover over the components of the board to identify them. Priscila also sails to treasure island and draws a chance card gets a card that gives her 3 crew cards from Pirate Island. After, Priscila decides to catch up with another player that is close by as she can move further and has a high attack value. After engaging in battle with the other unfortunate player, Priscila wins and receives a diamond, then she sails to Venice and trades her crew cards to gain another diamond. After this Priscila sails to her home port and puts her three diamonds in the safe zone. She repeats this successfully until she obtains the 20 points required to win the game.
TU3	User with disability	Marcos is colour-blind, he is a player with a disability. To make it possible to play for Marcos, the Buccaneer online board game has the option to hover over the components of the game and a text will pop up describing the component and the name of it. Marcos uses this option to sail towards Treasure Island and draw from the chance card. Then he sails back with the treasure he gained and continues trading. Marcos can spot an enemy ship chasing him, so with his chance card number 27 he sails to anchor bay so he can get 3 more crew cards and make sure he can win this battle. After getting the crew cards Marcus chases the enemy ship and engages in combat, wining all the other player's treasure. Then, Marcos sails back to his port and puts his treasure in the safe zone adding up to 20 points and winning the game.

2.2 Use cases

Use case for Players [1][2][3]

UC1	Interacting with the Main menu	The player starts the Buccaneer online board game, the main menu window is displayed, showing Continue, New Game, Rules and Quit buttons. The user then clicks on one of the buttons.
UC2 [FR1] [FR2] [FR10]	Interacting with the New game screen	The player starts the game through the main menu (see use case UC1). When the player selects a new game, the screen will contain 4 text fields for 4 players to enter their nicknames they will use during the game. The players then fill each of the text fields for the nicknames. They will be able to start the game as soon as they have all entered their in-game names. Then through FR10 the game will be set up.
UC3 [FR3] [FR4] [FR5] [FR8] [FR9] [FR12] [FR13] [FR14] [FR15]	Interacting with the Rule Book	The player looks at the rule book through the main menu (see use case UC1). When the player selects the rules button, he will be redirected to a screen with the Game rules and the Icons. The player can select the Game rules or the Icons headers to view them. The player can view the rules following the requirements for: attacking (FR12), trading (FR15), treasure (FR5), cards (FR3 and FR4), game board (FR9) and Islands (FR13, FR14 and FR8), by clicking the next and back buttons in the Game rule window. The player can return to the main menu by clicking the menu button.
UC4 [FR17]	Interacting with Quit button	The player can quit the game through the main menu (see use case UC1). The quit button is available and when the player selects the quit button the game stops running.
UC5 [DC2]	Interact with continue button	The player can continue the game that has been saved through the main menu (see use case UC1). When the players select the Continue button, they will continue the saved game.

UC6 [FR11] [FR6] [FR7]	Interact with the game screen	When the game starts (UC2), the player is shown the game board and the information regarding the current player. The buttons to move, rotate, and end turn are displayed.
UC7[FR11]	Sailing	After UC6 the player can chose to move their ship. The player can see the number of tiles in a different colour if he clicks the move button. The player can sail the number of boxes that the value of his crew cards gives when added together.
UC8[FR11]	Rotating	After UC6 or UC7 the player can choose to rotate their ship. The player can see the directions they can rotate to in a different colour. The player can click the direction they want to rotate to and then the direction that they chose will be shown with an arrow.
UC9 [FR11]	End Turn	After UC7 and UC8 the player must select the End Turn button. The next players will be shown UC6.
UC10 [FR12]	Attack	If a player reaches the same square another player, he can select "Ready to attack" and engage in combat. The winner is the player with the highest combat value. The losing player must give away all his treasure on the ship or two crew cards to the winner. The player cannot have more than two treasures so any extra would go to flat island.
UC11 [FR15]	Trade	If a player has Treasure or crew cards on his ship, he can sail (UC7) towards one of the six harbours that is not the players own harbour. There he can exchange the treasure or the crew cards from his ship of equal value with the one is in the harbour.
UC12 [FR4] [FR13]	Draw from a chance card	If the player has sailed to Treasure Island, he is dealt one chance card. This will be from the top of the deck of cards. The game will then do what is written on the chance card. The details of the card will be displayed on the screen. When the player uses the card, it is placed back at the bottom of the pack.

UC13 [chance cards: 1, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 27, 28] [FR4] [FR13]	Chance cards: taking/giving crew cards from/to island, ports, and bays	The player is dealt a chance card that instructs them to take/give the specified amount of crew cards from/to an island. Then, the consequences are implemented. C1 applies.
UC14 [chance card: 2, 6, 7, 20] [FR4] [FR13]	Chance cards: taking/giving crew cards interaction from/to other players	The player is dealt a chance card that allows them to take/give crew cards from/ to others. The player follows the instructions and takes/gives the specified amount of crew cards from/to the other player. C1 applies.
UC15 [Chance card: 8, 9, 11, 12, 13, 14, 16, 17, 18, 23, 24, 25, 26, 27] [FR4] [FR13] [FR16]	Chance cards: taking/giving treasure from/to islands, ports, and bays	The player is dealt a chance card that will allow them to take/give treasure from/to the specified place. They will follow the rules stated on the card.
UC16 [Chance cards: 7] [FR4] [FR13]	Chance cards: taking/giving treasure interaction from/to other players	The player is dealt a chance card that allows them to take/give treasure from/ to others. The player follows the instructions and takes/gives the specified amount of treasure from/to the other player.
UC17 [Chance card: 21] [FR4] [FR13]	Chance card 21: Long John Silver	When the player is dealt this card to keep, he may exchange it for 5 crew in value. Once used the card is returned to the bottom of the pack.
UC18 [FR6] [FR7]	Place treasure or/and crew cards on own harbour	If a player has obtained three identical treasures, he may sail back to his own harbour and place the three treasures in the safe zone, where no other player can steal the treasure. The player may also leave other treasure in his harbour in hopes that other players might trade, and he might get the treasure necessary to earn more points by placing the treasure in the safe zone.
UC19 [FR14] [FR8]	Interact with Flat Island	When a player sails next to the coast of the Flat Island, they will be given any treasure there if there is space in the players ship. In the case of there being only space for one treasure the player is given the treasure with the most points).
UC20 [FR17]	Exit or restart	When a player has accumulated 20 points, a victory screen that shows who has won the game will be displayed. The users will be prompted to select either exit the

		game or restart the game and play again.

2.3   Error conditions

Error conditions in the use cases [1][2][3]

EC1	Unrecognisable characters	In UC2, when logging in some characters like (~# [] {}; =+-_`¬) may not be recognised or will not be accepted as characters for a player's name.  The error that will pop up will say "The characters: (~# [] {}; =+-_`¬, etc.) cannot be used for the players in game name".
EC2	Repeated in game name	In UC2, another error that may occur when logging in, is when multiple players want to use the same in game name, the error displayed will say "In game name already in use, please use another one". Then, the player would be redirected to the logging page again and asked to enter their in-game name.
EC3	Sailing limits	In UC7, when Sailing if a player tries to sail further than his crew cards allow, the square where he is trying to sail to will change colour to read or an error can be displayed notifying the player that he cannot move to that square.
EC4	Treasure island errors	In UC13, UC14, UC15, UC16 and UC17 if a player draws from the treasure island's chance card, the player might find that there is no treasure in treasure island, or crew cards in the pirate island, or that the player does not have enough crew card points. All these scenarios can be solved by firstly announcing each scenario and informing the player that the drawing of the chance card will have no effect.
EC5	Trading error	In UC18, when trading, players might try and trade treasure or crew cards of unequal value, in

		those cases there will be an error warning reminding the player to trade treasure or crew cards of equal value.
EC6	Saving players treasure error	In UC18, when a player wishes to place treasure in their safe zone, they might try place the wrong treasure. In these cases, an error warning would pop up, like: "Error: this treasure could not be placed in the safe zone because you do not possess three of the same treasure", to inform the player and the redirect him to trying to place another treasure.
EC7	Flat Island error	In UC19, when a player gets to flat island and the player has no space in the ship, they will be prompted with an error message saying, "Turn back and be weary of pirates!".
EC8	Chance card: Pirate Island error	In UC13, if there are not enough cards available in the pirate island the player will be informed with an error message saying, "The pirates have all found a crew".
EC9	Wrong controls in Game screen	In UC6, if a player inputs the wrong controls the game will recognise it and inform the player of the controls with a small pop-up window.

REFERENCES

[1] Software Engineering Group Projects: General Documentation Standards. C. J. Price, N. W. Hardy, B.P. Tiddeman. SE.QA.03. 1.8 Release

[2] Software Engineering Group Project – User Interface Specification Standards. C.W. Loftus. SE.QA.04. 1.3 Release.

[3] Software Engineering Group Projects Buccaneer Online Board Game Requirements Specification. C.W. Loftus. SE.QA.RS-CS22120.1.2.Release.

DOCUMENT HISTORY

Version	Issue No.	Date	Changes made to document	Changed by
0.1	N/A	07/02/22	N/A - original version	dah73
0.2	N/A	15/02/22	N/A - added use cases and error conditions	dah73
0.3	N/A	22/02/22	N/A - minor changes and two use cases	dah73
0.4	N/A	01/03/22	N/A – added use cases, changed typical user and error conditions	mub11, dah73 and alg68
1.0	N/A	01/03/22	N/A – fixed page numbers in the contents section, changed to version 1.0 and changed status for release.	mub11
1.1	N/A	23/03/22	N/A – Added and fixed use cases as well as error conditions. Went through the document and fixed grammar and spelling mistakes.	kha9
1.2	#1	27/03/22	Included all authors' full names. Fixed copyright year to 2022. Changed from CCF No. to Issue No.	mub11
1.3	N/A	29/03/2022	linked the error conditions to the use cases in the EC table.	dah73
1.4	N/A	02/05/2022	Corrected use cases, added new ones, and put them all in a table. Specifically added chance cards. Edited typical users.	dah73 mub11
1.5	N/A	03/05/2022	Corrected Error conditions use case references.	dah73 mub11