

Group 14 - User Interface Specification

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1. INTRODUCTION

1.1. PURPOSE OF THIS DOCUMENT

The purpose of this document is to explore the use cases, typical users and error conditions for this project.

1.2. SCOPE

This document will go through the typical users for this program and will describe the particular needs each has. Along with this it will also go through the use cases and what tasks each will be getting out of the software. Finally we will also go through the error conditions for each use case and, working with an online presentation to demonstrate, will write down what could possibly go wrong in each case.

1.3. OBJECTIVES

The objective of this document is to lay out the main users of this game and explain what each user will need from it.

2. TYPICAL USERS

2.1. GENERAL USERS

This game will have a wide range of users, with our intention being anyone who is 8+ and is able to use a computer to be able to play[1][3].

School children

- Children in secondary school who want to play with friends
- Children in primary who need interesting visuals to stay entertained

Adults

- Adults who work lots and don't have much free time
- Elderly people who have bad eyesight

People who play games

- Competitive players who want long games
- People who already know the game
- Board game enthusiasts

2.2. EXAMPLE USERS

- 2.2.1. Reef is a teenager who enjoys being outdoors and near the sea but being in the UK it is rarely good enough weather for surfing and skating. When the weather is bad he likes to play games with his friends that remind him of being at the sea and outdoors. He doesn't have a lot of patience with games unless they are constantly engaging and interesting.
- 2.2.2. Kieth is a man in his 60s who played buccaneer in the 1970s when it was available for purchase. He wants to play some games that remind him of his childhood but is finding it hard to get the original copies and when they are available they are expensive. He also doesn't have the best eyesight and because of this sometimes struggles to read information on screens.
- 2.2.3. Eloise is a mother with 2 children and struggles to keep them entertained. When she has the time she tries to play games with them but hasn't found one to keep them engaged. One of her children likes pirates and the other one likes computer games.

3. USE CASES

Use cases for players:

1 Main Menu

Use Case 1.1 Launching game

After opening the program the player will see a main menu page. When a player wishes to launch the game they must click on the play button which takes them to a page that asks them to enter the name of each player. The player will type in all the names and once ready to start will click on the play game button, taking them to the game board.

Use Case 1.2 Viewing instructions

On the main menu the player may choose to view the instructions of the game before launching (see use case 1.1 for how to launch the game). To do this the player will click on the instructions button, taking them to a page which holds the instructions. To look at each instruction the player will click through them using arrows on the bottom of the screen. Once the player is done they can press the back button in the top left to return to the main menu.

2 Game Board

2.1 Tabs

Use Case 2.1.1 Switch between tabs

Once the player has started the game (see use case 1.1 for how to launch the game) they will notice three tabs in the top right corner of the screen. These tabs once clicked will take the player to their respective menus, move, inventory and instructions. When the game starts the tab which will open by default is the move tab. These will be functional throughout the entire game.

Use Case 2.1.2 Move ship

To move the ship the player must first make sure they are on the move tab (see use case 2.1.1 for how to use the game tabs). Once on the move tab, the player will be given the option of moving their ship forwards or rotating it. These options are displayed on the right hand side of the screen, along with how far the player is allowed to move. If the player presses move they will be given a grid of squares in which they are allowed to move forward depending on their crew cards (see use case 2.2 for how to get crew cards). Once the player clicks on a square their boat will move to that position and will not be allowed to operate the ship any more. If the player decides to rotate their ship they must click on the compass direction they wish to face (e.g. North, North east). After the player is happy with their direction they can end their turn (see use case 2.10 for how to end a turn) to lock it in place.

Use Case 2.1.3 View inventory

If a player wants to see their inventory they must first click on the inventory tab (see use case 2.1.1 for how to use the game tabs). Once on the inventory screen the player will see their crew cards and the treasure they have collected (see use case 2.2 for how to collect crew cards and treasure). They will also be able to see their attacking power next to their cards making it easier for the player.

Use Case 2.1.4 View in-game instructions

If a player wants to see the instructions whilst in-game they must first click on the instructions tab (see use case 2.1.1 for how to use the game tabs). Once on this screen they will be shown the instructions which are traversed the same way as the main menu instructions (see use case 1.2 for how to traverse the instructions).

Use Case 2.2 Getting crew cards and treasure

For a player to get crew cards and treasure they must do one of the following actions. They must go to Treasure Island and pull a chance card (see use case 2.3 for how to pull chance cards), go to a port and trade (see use case 2.6 for how to trade at ports) or attack another player (see use case 2.8 for how to attack players).

Use Case 2.3 Pulling a chance card

If a player decides to sail to Treasure Island (see use case 2.1.2 for how to move a ship) they will be given a chance card once they make contact with the island. The chance card can give the player, crew cards, treasure, a tradable card (see use case 2.4 on what to do with a tradable card) or an action card (see use case 2.5 on what to do with an action card). If the player pulls crew cards or treasure then their inventory will be updated with their new items (see use case 2.1.3 for how to access inventory).

Use Case 2.4 Pulling a tradable card

After a player pulls a chance card (see use case 2.3 for how to pull a chance card), there is a chance they will receive a tradable card. These cards will act as currency for when the player goes to trade at ports (see use case 2.6 for how to trade at ports). The player will be informed how much the card is worth after getting it and can remind themselves by going to their inventory and looking at it (see use case 2.1.3 for how to access inventory).

Use Case 2.5 Pulling an action card

After a player pulls a chance card (see use case 2.3 for how to pull a chance card), there is a chance they will receive an action card. These cards will often ask the player to do something such as move their ship to the other side of the board to receive treasure. After the player completes the action they are given their reward and the card is returned to the deck.

Use Case 2.6 Trading at a port

If a player moves to a trading port which isn't their own (see use case 2.1.2 for how to move a ship) then they will be given the option for trading any goods they have on their ship with the port (see use case 2.2 for how to get crew cards and treasure). A player must trade items of equal value and must not exceed the ships capacity of two items of treasure. Once the player is done trading they will be able to close the trading window and return to the board.

Use Case 2.7 Visiting home port

If a player wants to deposit or pick up treasure (see use case 2.2 for how to get treasure) they must do it at their home port. This is the player's starting location and they can't be attacked once in it (see use case 2.8 for how to attack). A port can only be entered through the front meaning the player must line themselves up to enter (see use case 2.1.2 for how to move a ship).

Use Case 2.8 Attacking another player

If a player wants to attack another player they must move onto the same square as them on the board (see use case 2.1.2 for how to move a ship). Once the players have entered combat a visual will appear on the board showing who is attacking who and who wins. The ship with the biggest attack power wins which is based on their crew cards (see use case 2.2 for how to get crew cards). Whichever player wins is awarded the other players treasure. If they don't have any treasure they are given the players two lowest valued crew cards.

Use Case 2.9 Zooming in on the board

When playing the player may wish to zoom into the board to have a closer look at what's going on. If the player presses the plus button then the board will become larger around their ship. If the player presses the minus button then the board will return to normal.

Use Case 2.10 Ending a turn

After the player has completed every action they wish to, they can press the end turn button to move over to the next player's turn. If this button is pressed before the player has done something there will be a warning, informing the player they are going to skip their turn without having done something.

Use Case 2.11 Winning the game

For a player to win the game they must have collected twenty pieces of treasure (see use case 2.2 for how to collect treasure) and put them in their home port (see use case 2.7 for how to interact with a home port). Once a player reaches this milestone a message will appear on the screen informing everyone that this player has won and if they'd like to play again.

4. ERROR CONDITIONS

ER1 - User tries to zoom out beyond the size of the board

- Only allow the user to zoom out to the full size of the game board

ER2 - User attempts to move the ship outside the valid squares

- Only allow the user to move to highlighted squares
- Show an error message if they try to make an illegal move, meaning away from the squares that are in the ships current direction and within range of the current players crew card total

ER3 - User attempts to jump the ship over island

- Add a check to the movement function to make sure that even if the space the user clicks on is within the right distance and direction it can't go over or onto an island.

ER4 - User attempts to attack another player in a port

- Add a check before the battle functions are called to see if the users are in a place where a battle is allowed

ER5 - User skips next player's turn

- Put a delay on the end turn button in order to avoid players accidentally double clicking and skipping over other turns
- Make it clear in the instructions that each turn only requires pressing the end turn button once at the end
- Create the option for users to revert a turn if theirs was skipped

ER6 - User Moves their ship and change direction in one turn

- As soon as the user picks one of the options for their turn the other options are disabled until the next player's turn

ER7 - User adds too much treasure to their ship at once

- Check for the amount of treasure on a user's ship before any trades or additions can be made to be sure there is less than 2 items of treasure
- If there isn't room for the new treasure, give the user a pop up menu to select which to keep.

ER8 - User excessively and rapidly clicking a button

- Add a delay after a button is pressed before its function can be activated again

ER9 - User enters a name that is invalid

- Check the name is within the character limit before accepting it
- Validate that all the characters in the name are in a set of acceptable characters

5. REFERENCES

- [1] SE.QA.RS-CS22120 - Requirements Specification for Buccaneer Online Board Game
- [2] QA Document SE.QA.02 - General Documentation Standards
- [3] QA Document SE.QA.04 - User interface Specification Standards

6. DOCUMENT CHANGE HISTORY

Version	Issue No.	Date	Changes made to document	Changed by
0.1	N/A	11/02/2022	New Document	TJW21
0.2	N/A	13/02/2022	Improved document structure, Drafted Introduction	TJW21
0.3	N/A	19/02/2022	Added typical users	TJW21
0.4	N/A	21/02/2022	Added use cases	JAS130
0.5	N/A	22/02/2022	Improved document structure	JAS130
0.6	N/A	25/02/2022	Added Ideas for error conditions	JAS130
1.0	9	25/02/2022	Worked on suggestions for solutions to the error conditions	TJW21
1.1	8	08/03/2022	Reworked the use cases after feedback	JAS130
1.2	9	11/03/2022	Restructured error conditions and improved detail	TJW21
1.3	7	12/03/2022	Added the issue no. column to the table and made the first release 1.0 and everything before that start with 0.	TJW21