Software Engineering Group Project
End-of-Project Report

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Config Ref:	SE.G02.EOP-Report
Date:	10th May 2022
Version:	1.0
Status:	Release

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CONTENTS

1. INTRODUCTION 3
1.1 Purpose of this Document 3
1.2 Scope 3
1.3 Objectives 3
2. ITEMS IN THE REPORT 3
2.1 Management Summary 3
2.1.1 Project Achievements 3
2.1.2 Difficulties 3
2.2 Historical Account of Project 4
2.3 Final State of Project 5
2.4 Team Performance 5
2.4 Team and Project Evaluation 6
REFERENCES 6
DOCUMENT HISTORY 8

1. INTRODUCTION

This document is to describe how much of the project has been completed.

1.1 Purpose of this Document

The purpose of the document is to show the markers how much our group has accomplished in order for them to evaluate how well we have done. [1]

1.2 Scope

This document enables the markers to evaluate our group's work by providing a management summary, historical account of the project, final state of the project, performances of the team members and an evaluation of the team and project.

This document is produced in accordance with SE.QA.10. [1]

1.3 Objectives

The aim of this document is to show the progress the team has made, our efforts and explain the process of achieving our end result.

2. ITEMS IN THE REPORT

2.1 Management Summary

2.1.1 Project Achievements

We as a group have successfully implemented most parts of the project. We have covered all the functional requirements (FR1 - FR17) except for FR16 Anchor Bay.

We were able to implement all of the main features of the game such as Taking turns, Sailing, Attacking, Trading, Treasures, Crew Cards, Chance Cards and Winning the game.

We did not implement FR16 Anchor Bay because it mentions that this is only an issue if Chance Cards 25 and 26 (Kidd's chart) are implemented [2]. We made the decision to not implement these two chance cards and two replace them with ones we came up with. These two chance cards required us to come up with a way to hold chance cards and we thought that trying to implement this would be difficult considering the time constraint and submission of code deadline.

We have addressed all the comments in the feedback regarding all our documents so we believe they are all in a good state and should meet all the requirements.

2.1.2 Difficulties

During integration week, we came across a lot of bugs when trying to implement the features of the game. We found it difficult to address and fix all of them because we were limited on time and had other things to implement.
However we have different people with different skill sets in our group and by assigning the right team members to different problems appropriately, we managed to tackle the problems efficiently and successfully overcome them. For example, some of our team members are skilled in technical terms and they are good at figuring out the main algorithms needed to implement the features of the game. Others are skilled with JavaFX

and were assigned the tasks to make the graphical parts of the game interact well with the logical parts. There are also members who were well versed with the documents and that helped with figuring out what is needed.

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2.2 Historical Account of Project

Date	Historical Account	Details
01.02.2022 - 28.02.2022	User Interface Planning	The user interface of the program was planned using powerpoint screens to get an idea of the layout of the final product. Possible users were identified to further narrow down the possible screens and UI elements needed. The user interface specifications were then written. This allowed the team to know what elements were necessary in the next step of planning the design and taking design action.
01.02.2022 - 02.03.2022	Test Specifications Planning	The project functional requirements where used to draft repeatable tests and write the test specifications
15.02.2022	Role Selection	The team voted on the roles of project leader, deputy project leader, QA manager, and deputy QA manager.
22.02.2022 - 23.03.2022	Design Planning	The design specifications were written based on the requirements and the results of the UI planning phase. This helped planning the necessary steps to be taken in the design process. This included identifying the major classes and algorithms that needed to be coded as well as mapping functional requirements to classes to make sure none were left out. Needs of the user were further identified by creating sequence diagrams.
22.02.2022 - 22.03.2022	Graphic Design Action	The required assets for the program were designed according to the plan set up in the user interface specifications and partially using the design spec. Elements such as the ships, ports, islands, and the background were created along with any other textures needed for the main menu, trade screen, battle screen, and end screen were designed using graphic design software.
22.02.2022 08.03.2022	Coding Planning	Coding was planned using mind maps to plan and organise the necessary steps needed to fulfil the requirements according to our design and UI specifications.
01.03.2022 - 01.04.2022	Prototype Coding	Prototypes representing most major elements of the project were developed. The main game mechanics prototype with player movement was completed first to give a base to build upon. After this prototypes for the trade screen and battle screen were coded followed by prototypes for the main menu and rules screen. These allowed us to get a better idea of how to distribute our upcoming tasks and what elements of the project needed to be focused on.
25.04.2022 - 01.05.2022	Integration and Testing Week Planning	All functional requirements were reviewed as ITW was upcoming and any major missing algorithms and methods were identified. This included chance card management, island management, battle mechanics, saving and loading, etc. Brainstorming took place to develop plans and

		mindmaps on how to develop solutions for these algorithms
02.05.2022 - 06.05.2022	Integration and Testing Week	During integration and testing week the final product was created. Various prototypes created during the initial phase were combined to create a project with basic functionality. This was then continuously developed according to the design and user interface specification standards created during planning. Missing game mechanics such as interactions with islands and other players as well as battle mechanics and saving and loading where implemented. The test specifications were used to code unit tests and system testing was conducted according to the test report. The integrity and stability of the final product was assessed through this and it allowed for any errors to be revealed and fixed before the end of the week.

2.3 Final State of Project

In the Buccaneer online board game program, the team has correctly implemented the use cases from navigating in the main menu to create a new game, continuing the previous game, quitting the game and viewing the rules and useful information about the game. The team managed to implement all the functional requirements and uses-cases, except FR16 and chance cards that involved holding them (21, 23, 24, 25, 26) and 22 was also changed. For example, the team correctly implemented moving the ships around, trading, attacking, all the Islands effects, mud bay, anchor bay, cliff creek, and the endscreen where the players are shown the winner and they can end the game.
All the documents have followed the templates and suggestions from the feedback given to the team and to the best of our knowledge since the last feedback, they are all correct, except the component diagram which might not be what was expected. The only missing thing from our project is the implementation of the chance cards that involved holding them, so we replaced them with more common cards to complete the game. Furthermore, Anchor bay effects were not implemented as they related to chance cards that had to be held by players.

2.4 Team Performance

add32 (Project Leader): Since he was appointed the new Project Leader sometime during phase 1, Adrian has led the team in the right direction. He was the most technically skilled team member and he was always coming up with algorithms and creating prototypes during the first 10 weeks, which was a big help for the team when putting things together in the ITW. During the ITW, he worked well as a Project Leader. He had created a mind map of all the tasks we needed to complete each day, in order for us to stay on the right track. He was assigning different team members to many different tasks and was always fixing the bugs whenever the team ran into them. Overall, he was a great project leader. Blogs: https://gitlab.dcs.aber.ac.uk/mub11/g02-repository/-/tree/main/config/blogs/add32

alf56: For the first part of the group project Alvaro was working on the Test Spec and Use Cases. He also helped with the background controller, to implement animation in the main menu. He was responsible for the `Interface Description` section of the Design Spec. During the integration week he was working on the Unit Tests. He also made appropriate CSS stylesheets for the nickname scene. Overall, he did the testing well during ITW. Blogs: https://gitlab.dcs.aber.ac.uk/mub11/g02-repository/-/tree/main/config/blogs/alf56

alg68: During the tutorial weeks Alex was working on the UI Spec. He made the prototype of the trading screen and integrated it with the actual game. He also designed all the Islands assets. During the integration week he was a part of my coding team, so he was responsible for solving all the algorithmic problems or javaFX problems that I assigned to him e.g. displaying treasures in the UI, implementing Islands or Safe Zone and

working on the save/load class. Overall, he was a reliable team member. Blogs: https://gitlab.dcs.aber.ac.uk/mub11/g02-repository/-/tree/main/config/blogs/alg68

all49: At the beginning Alessandro was working alongside Alvaro on the Testing Specification. His part of the Design Spec was creating the UML component diagrams.. During the ITW he began with fixing the documentation as well as designing unit tests. He later went on to implement some JUnit tests and at the very end of the week before the coding deadline he and Alvaro ran the system tests. Overall, he did the tasks he was assigned well. Blogs: https://gitlab.dcs.aber.ac.uk/mub11/g02-repository/-/tree/main/config/blogs/all49

dah73 (Deputy Project Leader): David was involved in work on each of the documents. He provided a typical use case doc. During the tutorial weeks he designed the main menu screen, assets for ports, ships and most of the bays, scrolls for the UI. He also did research about working with JSON files in Java. During the ITW he was involved in filling the documents and he was helping with saving/loading class. Overall, he was a great deputy project leader. Blogs: https://gitlab.dcs.aber.ac.uk/mub11/g02-repository/-/tree/main/config/blogs/dah73

kha9 (Deputy QA Manager): Khalid was one of the main authors of UI Spec and also contributed to the Design Spec document. He laid the foundations for the design of all the game screens and from this design the game was created. Beside this he was working on the UI part of the game (fxml files). During the ITW he merged all CSS files together and reorganised the UI layout. https://gitlab.dcs.aber.ac.uk/mub11/g02-repository/-/tree/main/config/blogs/kha9

mub11(QA Manager): He was responsible for all things QA related such as documentation quality for example. He was in charge of the repository as well and made sure to set up the repo in the proper structure. He had to make sure all the documents were produced in accordance with the general documentation standard. He was running all the formal reviews before releasing them in the repository and was booking rooms for the internal meetings. During the ITW he was working on fixing all the documents and designing the end game screen. He was splitting the QA tasks between team members during the ITW as well. He was helping me a lot with the final report. Overall, I believe he did his QA job well and worked through. Blogs: https://gitlab.dcs.aber.ac.uk/mub11/g02-repository/-/tree/main/config/blogs/mub11

via8: During the tutorial weeks he was working on the main menu screen. He managed to implement all the scenes (nickname, rules, menu). His part of the Design Spec was the Sequence Diagram. During the ITW he was working on various algorithmic problems as well as fixing bugs. We were working together on the implementation of chance cards. Overall, he was a great help to the coding team and was very dependable. Blogs: https://gitlab.dcs.aber.ac.uk/mub11/g02-repository/-/tree/main/config/blogs/via8

xad1: During the tutorial weeks he was working on the battle screen prototype and he successfully integrated it with the main game screen . He designed most of the treasures' assets and the Cliff Creek. During the integration week he was working on programming problems that I was assigning to him. With some guidance he produced the algorithm to detect the nearest port on the board. He also was working on implementing an end game controller. Overall, he was a great help when creating some of the screens and creating algorithms with some guidance. Blogs: https://gitlab.dcs.aber.ac.uk/mub11/g02-repository/-/tree/main/config/blogs/xad1

2.4 Team and Project Evaluation

Overall, I think the team performed well and everyone held their own weight. I believe that each of the team members worked well with each other. For the most part, there were more agreements than disagreements. I think what would have been better was if there was a better distribution of tasks amongst the team members and everyone was more in. It would probably have been more enjoyable if everyone tried things out of their skillsets.

REFERENCES

[1] Software Engineering Group Projects: Producing the Final Report. C.W. Loftus. SE.QA.10. 2.4 Release

[2] 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	09/05/2022	N/A - Helped start writing the introduction and Management Summary.	mub11
0.2	N/A	09/05/2022	N/A - addedFinal state of project	dah73
0.3	N/A	10/05/2022	N/A - added Historical Account	alg68
0.4	N/A	10/05/2022	N/A - Added 2.4, Team performance	add32
1.0	N/A	10/05/2022	N/A - Final check before releasing. changed version to 1.0	mub11