

UNIVERSITY OF YORK
DEPARTMENT OF COMPUTER SCIENCE

ENG 1 Team Assessment 1 Group 18

REQUIREMENTS

Group Members:

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2.a - Introduction:

Detailed within this section are the requirements derived from the product brief provided, as well as the subsequent team-customer meetings.

The product developed will be a single player video game themed around the University Campus lake, and fictional pirates which reside on it. The game itself will be played in a two dimensional top down view, in which the user controls a playable ship exploring and traversing a map, designed after the Campus Lake. Users will be able to attack other colleges, defeating ships and taking over colleges, accumulating rewards and currency which they can later spend.

Through the team-customer meeting we narrowed down that the primary user base will be incoming prospective students attending University and Department open days. To make the game accommodating and accessible to this user base, it must have a short 5 - 10 min game time, intuitive design/controls, be fairly simple with not many complex parts and to have no gore/violence.

The following section, "1.2 Statement of Requirements", presents a group of tables listing the requirements we have obtained in a clear unambiguous manner. Within each record of the table you will find an ID allocated to the requirement, a brief description of the requirement, its importance on a scale of 1 - 3, and any notes pertaining to it.

2.b - Statement of requirements

Constraint Requirements

ID	Description	Notes
CR_OS	The system must run on a minimum of Linux and Windows, preferably platform independent.	This will be achieved through the use of LibGDX.
CR_SIZING	The system must scale to fit on any size screen.	Customer intends to execute the game on a number of different machines with different screens.

User Requirements:

ID	Description	Priority (1 low, 3 high)	Notes
UR_MOVEMENT	Players must be able to control the ship's movement.	3	WASD will be used to control the ships movement.
UR_COMBAT	Players must be able to engage in combat with other colleges.	3	The ability to fire cannonballs at colleges is a vital part of the game and is important that it gets implemented.
UR_DIFFICULTY	The game must not be too difficult due to the large range of potential users of different skill levels.	2	Customer explicitly stated difficulty ratings should not be included, as it should be a quick and accessible game.
UR_USER_EXPERIENCE	The player must have fun playing the game, and the game must be made accessible to everyone.	3	Customers stated that the game must be accessible for a wide range of people attending open days and should be an enjoyable experience.
UR_GAME_TIME	Gameplay time must be short, lasting between 5-10 minutes.	2	Game length was a specific requirement set out by the customer for the target audience.
UR_GAMEOVER	The game must end when all colleges have been defeated, or health = 0, or the game is quit.	3	The requirements for Game Over and completion must be clear to a user.
UR_MENU	The game must include a menu which allows the user to	2	As the game is intended for open days, it allows a game to be easily restarted

	pause/go to the main menu.		when someone new wants to play.
UR_MAP	The map must be in the shape of the campus lake, as well as providing the user with a mini map.	2	Requirement set out by customer to give additional/contextual information about the university to prospective students.
UR_SCORE	The game should keep a running score which increases as time accumulates or by defeating enemy forces.	2	Requirement laid out within the product brief. Points must be accumulated through combat and passage of time. Possible scoreboard.

Functional Requirements:

ID	Description	User Requirement
FR_INPUT	The system must be able detect user inputs such as keystrokes and mouse clicks.	UR_MOVEMENT UR_COMBAT
FR_MOVEMENT	The system must take these inputs from a user (e.g. WASD to move), and act accordingly.	UR_MOVEMENT
FR_FIRING	The system must take the input from a user (Mouse clicks) and fire cannonballs accordingly.	UR_COMBAT
FR_COLLEGE_FIRING	The colleges must intelligently fire cannonballs towards the player when they come into attacking range.	UR_COMBAT
FR_PLAYER_COLLISION	The system must detect when a college's cannonball collides with the player and reduce their health accordingly.	UR_COMBAT
FR_COLLEGE_COLLISION	The system should detect when a cannonball collides with a college's port.	UR_COMBAT
FR_COLLEGE_CAPTURE	The system should detect when a college's health is reduced to zero, and then neutralise it (capture).	UR_COMBAT
FR_MAP_COLLISION	The system should detect when a ship collides with the map barrier (land) and prevent them from moving past it.	UR_MAP UR_MOVEMENT
FR_SHIP_COLLISION	The system should be able to detect when the player collides with an enemy ship, and prevent it from driving through.	UR_MOVEMENT
FR_MINIMAP	The mini map will be displayed in the top right and show the player their relative location in regard to the rest of the map.	UR_MAP

FR_SCORE	The system should detect when a college is defeated and add points to the users score, as well as adding points as time progresses.	UR_SCORE
FR_SCOREBOARD	Once a game is complete, the system will save the players score on a scoreboard.	UR_SCORE
FR_CAMERA	The camera should be adaptive to screen size to accommodate customers' requests for flexible resolution.	CR_SIZING

Non-Functional Requirements:

ID	Description	User Requirement	Fit Criteria
NFR_MOVEMENT_TUTORIAL	System must tell the user what the controls are.	UR_USER_EXPERIENCE	At the beginning of the game a prompt will appear stating the movement keys.
NFR_SUITABLE	The game must be suitable for a younger audience, excluding violence and blood.	UR_USER_EXPERIENCE	The game will contain no violent animations or graphics.
NFR_OBJECTIVES	The system must inform users of the objectives and rules of the game.	UR_USER_EXPERIENCE	The game will prompt the user of the objectives at the beginning of the game.
NFR_ENDSCREEN	Once the game is over, an end screen must be shown to the user displaying the relevant statement. (Loss or Win)	UR_GAMEOVER	After health is taken to 0, or when the ship passes a specific end location and has completed all objectives.
NFR_MINIMAP	The system should inform the user where they are on the mini map to make it easier to understand their location.	UR_USER_EXPERIENCE	The player's position will continue being checked and then displayed relatively on the mini map.