

Requirements

ENG1 Team 16, 'Team Team'

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Purpose

The project is to design a game where there are several colleges around a lake where the only way of transport is by ships. The User is a privateer for one of the colleges where you travel around the map encountering other ships+ trying to defeat them and their colleges. The object of this game is for the User the defeat the boss college in the game or accumulate enough points.

We will gather our requirements through the analysis of the briefing document and multiple meetings with the customer to discuss the game requirements, following from these conversations with any extra questions over email. The requirements will be split into two main sections User requirements and system requirements. Each User requirement will have a unique ID, A description of the requirement so the client can understand and finally the priority of each requirement to show its importance. The system requirements are broken down into two further sections functional system requirements with a unique ID and description the same as user requirement but also which user requirement it links to. The second section is non-system functional requirements which have the same columns but in addition one criteria with an acceptable range for the requirement.

Audience

As shown in the project brief the audience will be students who are looking to join the University of York computer science department the game to be played on open days. The game shows the ability of current computer science students and the sort of activities that prospective students will do through the course. The product should be easy to use with an object that is obtainable in 5-10 minutes.

Stakeholders

Direct

- The Customer (Tommy Yuan) gave us the design brief from which we got the first requirements. He is the person we check in with during our meetings and discuss the project requirements with to convince of the validity of your assumptions and decisions.
- The University of York Communications Office will use our product during open days so the gameplay must be appropriate for all age ranges.
- Open day-Users are the people who will play the game on the open day so the product must be easy to understand how to use.

Indirect

- The university as the product will be displayed at an official university open day so we are representing the university with our product so the product must be able to be publicly displayed.

User Requirements

The requirements that the program must follow for the user. The users are any of the stakeholders,

Reference ID	Description	Priority
UR_Win	In the program, there is a way for the user to win the game and it to end.	Shall
UR_Loss	There is a way for the user to lose before completing the game	Shall
UR_Operation	The program is simple and easy to use so everyone at the open day can use it.	Should
UR_Game	The program will allow the user to play through the game from being to end.	Shall
UR_Controls	The controls of the game are easy to follow	May
UR_Website	The program and all the files will be on the website	Shall
UR_Colleges	The program will contain at least 3 colleges	Shall
UR_Points	The User can acquire points while playing the game	Shall
UR_Plunder	The user can acquire plunder while playing the game	Shall
UR_UX	The program should have a fun user experience for the open day and show the skill of the CS students. In a reasonable time, frame, 5-10 minutes	Should
UR_Ships	The program will contain ships that can be controlled by the user	Shall

Functional System Requirements

Reference ID	Description	User Requirement
FR_Tasks	The game will have a series of tasks to complete before the final objective. These tasks will be the same for each gameplay <i>As discussed in the customer meeting</i>	UR_Game
FR_Map	The game will show to user a whole map of the game with the position of colleges and ships. <i>As discussed in the customer meeting</i>	UR_Game
FR_Movement	The game will allow the user to navigate themselves around the map. As long as the ship remains on the lake it can move where it wants. <i>As discussed in the customer meeting</i>	UR_Game
FR_Objective	The game will have 1 or 2 objectives, which means the user has won the game when completed. For example, capturing the main college of acquiring enough	UR_Win

	points. <i>As discussed in the customer meeting</i>	
FR_Graphics	The game will use 2D graphics. <i>As discussed in the customer meeting to meet CON_2D</i>	UR_UX
FR_SFX	The game will have sound effects when certain actions are taken. <i>As discussed in the customer meeting</i>	UR_UX
FR_CollegeSelection	The game will allow the user to select the college they want to play with. <i>As discussed in the customer meeting</i>	UR_College
FR_Capture	The game allows the User to capture other colleges. <i>As discussed in the customer meeting linking to FR_tasks</i>	UR_Game
FR_GainPlunder	The game allows users to collect plunder through the capturing of college getting it from water and destroying other ships. <i>As discussed in the customer meeting</i>	UR_Plunder
FR_GainPoints	The game allows users to collect plunder through the capturing of college getting it from water and destroying other ships. <i>As discussed in the customer meeting</i>	UR_Points
FR_NPC	The ships of the other colleges can interact with the user. <i>As discussed in the customer meeting</i>	UR_Game
FR_Destroyed	The user's ship can be destroyed, and this will result in the loss of the game. <i>As discussed in the customer meeting</i>	UR_Loss
FR_Health	The Ship has a certain amount of health a ship starts with. <i>As discussed in the customer meeting</i>	UR_Ships
FR_Speed	The ship has different speeds at which it can travel across the map. <i>As discussed in the customer meeting</i>	UR_ships
FR_Damage	The user ship has a different range of damage. <i>As discussed in the customer meeting</i>	UR_ships

Non - Functional System Requirements

Reference ID	Description	User Requirement	Fit criteria
NFT_inputLatency	Latency of key presses to action should be low	UR_Control	< 100-millisecond delay
NFT_Screen	The game window should fit the screen of the user device	UR_UX	Scales to 360x360

Constrained Requirements

Reference ID	Description	User Requirements
CON_OS	The implementation stage should not retrain the game to a single operating system. <i>As discussed in the customer meeting</i>	UR_Operation
CON_Playtime	The game should be completed in 5-10 minutes to allow the user time to complete at the open day. <i>As discussed in the customer meeting</i>	UR_Game
CON_PG	The game will not include any extreme graphics for example blood and gore. Any age can attend the open day so has to be suitable for all. <i>As discussed in the customer meeting</i>	UR_UX
CON_2D	It was be designed as a 2D game so only using 2D design libraries. <i>As discussed in the customer meeting</i>	UR_UX

Possible Risks of Requirements

-Environmental Assumptions

-Working speakers

-Associated risk: If the system does not have good enough speakers or speakers at all the FR_SFX will not be met

-Alternative to Requirement: making sure FR_SFX is not a vital component of our implementation

-Smaller screen

-Associated risk: A user tries to run the code on a screen that is smaller than the average screen are NFR_Screen means it should be able to scale down to an apple watch screen

-Alternative to Requirement: The implementation tells the user the screen is too small to run code effectively

-Non-Environmental Risks:

-Older Users

-Associated risk: They Users might find the game too childish with the limitation of graphics CON_PG

-Alternative to Requirement: Make the gameplay fun and challenging enough that the graphics don't matter