

# Team 14

# Change Report

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## 1 Change Management - Part A

We have opted to follow an 'Agile' Change Management process explained by Brad Appleton, Steve Berczurk and Steve Konieczka [1] as we believed it would best fit alongside our SCRUM methodology. This approach focuses on shorter cycles focussing on the smallest possible amount of work to ensure frequent implementations and testing as well as being more responsive to change. We considered the cost of the changes made to the deliverables, documentation and code to be the estimated amount of work to be done in terms of hours, as we have a tight deadline it was imperative to focus on implementing the most changes as possible and being aware of how long different tasks may take us.

To get specifics on how the game has to be changed, we have arranged a meeting with the client for the 29th February 2021.

We will continue to have weekly meetings to discuss implemented features as well as to organise new features for the next sprint. We also plan on utilising Discord to report any bugs in the game's code or any other problems so that we can coordinate better. Alongside the weekly meetings, we have decided to implement a Change Log (for each edited deliverable) that will help us to keep track of any changes in progress throughout the sprint, which will also help us recognise what changes haven't been started yet. The Change Log will indicate what change was made, when, the justification for the change, it's cost and it's status (whether the change is 'Fully Implemented' or 'In Progress'). This is intended to help us keep track of what features have already been implemented alongside helping coordinate work between the team and is an easy way to check changes between deliverables. All new additions in the deliverables will be highlighted in blue, this is so the changes we have made stand out against the original teams work.

An example Change Log would be:

Date	Change Made	Justification	Cost	Status

### References:

[1] B. Appleton, S. Berczurk and S. Konieczka, ""Agile" Change Management: From First Principles to Best Practices", CMCrossroads, 2006. [Online]. Available: <https://www.cmcrossroads.com/article/agile-change-management-first-principles-best-practices>. [Accessed: 23- Jan- 2021].

## 2 Implemented Changes - Part B

### 2.1 Requirements Documentation

URL: [https://xychic.github.io/assessment\\_2](https://xychic.github.io/assessment_2)

#### Change Log for Requirements Documentation:

Date	Change Made	Justification	Cost	Status
26/01/2021	Added information on meeting with client on the: 29th February 2021	This new meeting is involved as part of the requirements elicitation process and so should be recorded in the documentation	<1 Hour	Complete
26/01/2021	Added justification on why table format to display requirements was used	It is important to consider why a format has been chosen compared to others and provides more detail on the method chosen	<1 Hour	Complete
26/01/2021	Updated the User Requirement: UR_DIFFICULTY_BEFORE_GAME to include the difficulty options, easy, normal and hard	A requirement to include difficulties was suggested but had not been implemented. Since it will now be implemented, included the different levels for further clarification	<1 Hour	Complete
26/01/2021	New User Requirement: UR_SAVE_RELOAD	To satisfy a save and reloading requirement, a new user requirement has been included	<1 Hour	Complete
26/01/2021	Updated User Requirement: UR_POWERUPS	Original documentation proposed the idea of power-ups but was not implemented. Altered requirement to match power-up's chosen and set to 'shall' be implemented	<1 Hour	Complete
27/01/2021	Removed Functional Requirement: FR_MOVEMENT	Very similar to Functional Requirement: FR_INPUT_DETECTION. So have decided to merge the two requirements	<1 Hour	Complete
27/01/2021	Merged Functional Requirements: FR_MOVEMENT and FR_INPUT_DETECTION	As they were very similar requirements, decided to merge them into one	<1 Hour	Complete

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27/01/2021	Updated Functional Requirement: FR_OBSTACLE_RATE to FR_OBSTACLE_POWERUP_RATE	Both obstacles and power-ups should be spawned appropriately. So rather than have them separate, it made more sense to merge the two	<1 Hour	Completed
27/01/2021	Deleted Functional Requirement: FR_POWERUP_RATE	Referring to above, the two Functional Requirements detailed the same thing so made more sense to merge the two requirements	<1 Hour	Completed
27/01/2021	Updated Functional Requirement: FR_COLLISION_DETECTION to include power-ups	Both obstacles and power-ups need to be detected by the system in a similar way (but with differing effects) so it was better to include them in the same requirement	<1 Hour	Completed
27/01/2021	Created new Functional Requirement: FR_POWERUP_EFFECTS	To keep with the User Requirement: UR_POWERUPS, the system needs to be able to influence the game accordingly so this needs to be included as a requirement	<1 Hour	Completed
27/01/2021	Created new Functional Requirement: FR_SAVE_RELOAD	For the User Requirement: UR_SAVE_RELOAD, the system needs to be able to save the games current state and then reload it	<1 Hour	Completed
27/01/2021	Updated Functional Requirement: FR_DIFFICULTY_SELECTION from 'middle' difficulty to 'normal' difficulty	The names of the levels we have chosen are: easy, normal and hard. Therefore this requirement was updated to reflect that	<1 Hour	Completed
27/01/2021	New User Requirement: UR_SCREEN	To be able to detail adequate information about the game to the user, different screens should be shown	<1 Hour	Completed
27/01/2021	New Functional Requirement: FR_SCREEN_DISPLAY	To fit the User Requirement: UR_SCREEN, the system needs to accurately display the different screens	<1 Hour	Complete
27/01/	Deleted Non-Functional	Doesn't appear to fit as a	<1 Hour	Completed

2021	Requirement: NFR_END_SCREEN	non-functional requirement so has been deleted and replaced with a user and functional requirement: UR_SCREEN and FR_SCREEN_DISPLAY		
27/01/ 2021	New Functional Requirement: FR_INFORMATION_DISPLAY	The system should ensure that enough information is displayed to the user for them to play the game	<1 Hour	Completed
27/01/ 2021	Deleted Functional Requirements: NFR_MOVEMENT_EXPLANATION, NFR_RULES_EXPLANATION, NFR_ATTRIBUTES	All of these requirements do not detail attributes of the system and have similar information so has been merged into the Functional Requirement: FR_INFORMATION_DISPLAY	<1 Hour	Completed
27/01/ 2021	New Non-Functional Requirement: NFR_QUICK_RESPONSE	Quick response times have not been listed by the previous team. We consider it vital as the game centres around the player dodging obstacles so a quick reaction time is necessary	<1 Hour	Completed
27/01/ 2021	New Non-Functional Requirement: NFR_RELIABILITY	The system now needs to be able to save the game, so it can't constantly crash or inaccurately save	<1 Hour	Completed
27/01/ 2021	Merged Functional Requirements: FR_BOUNDARY_DETECTION and FR_AWARD_PENALTY	Both they're topics relate to each other so made more sense to merge them	<1 Hour	Completed

## 2.2 Abstract and Concrete Architecture Documentation

URL: [https://xychic.github.io/assessment\\_2](https://xychic.github.io/assessment_2)

### Change Log for Abstract and Concrete Architecture Documentation

Date	Change Made	Justification	Cost	Status
08/02/ 2021	Removed version edits from Preface	Due to the scale of the UML diagrams, we needed the extra space	<1 Hour	Completed
08/02/ 2021	Adjusted size of Headings and moved position of justification of	This was once again a size issue for adjusting the size of the headings but also it	<1 Hour	Completed

	tools used to top of section	felt more practical to have a reason why certain tools were used before displaying the diagrams		
08/02/2021	Deleted old Tools used section and replaced with the tools we used	We used a different tool to develop our abstract architecture and, considering we deleted their diagram, needed to replace their explanations with our own	<1 Hour	Completed
08/02/2021	Replaced Old Architecture Diagrams with new ones	Since there are different classes and requirements, we needed different architecture structures to accommodate them	<1 Hour	Completed
09/02/2021	Changed Justification of Abstract Architecture	We have a different abstract diagram and so it needs a different justification	<1 Hour	Completed
09/02/2021	Added section on how Concrete Architecture builds on Abstract Architecture	We have two different diagrams but similar methods were used, so the only section that needed to change in the initial Justification of Concrete Architecture is that explanation	<1 Hour	Completed
09/02/2021	Edited format and included more details on how concrete architecture links to requirements	We have new requirements and a new concrete architecture structure so more details need to be included	<1 Hour	Completed

### 2.3 Method Selection and Planning Documentation

URL: [https://xychic.github.io/assessment\\_2](https://xychic.github.io/assessment_2)

#### Change Log for Method Selection and Planning Documentation

Date	Change Made	Justification	Cost	Status
27/01/2021	Deleted brackets containing extra information in 'Software Engineering Methods' section	Only really contained examples of what is meant that didn't feel necessary nor added any extra detail	<1 Hour	Completed
27/01/2021	Included information on PlantUML in 'Development and	Tools used for different designs weren't mentioned, and, since they would be	<1 Hour	Completed

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	Collaboration Tools' section	used by our team, seemed important to mention		
27/01 /2021	Included information on our team structure in 'Team Organisation' section	Since we are a different team, we thought it was necessary to include how we operated in this section	<1 Hour	Completed
27/01 /2021	Updated Website Work Breakdown in 'Project Breakdown' section	The website needs to contain different things than before	<1 Hour	Completed
27/01 /2021	Included information on 'Change Report' in 'Project Breakdown'	As the Change Report requires several bits of information, it is important to recognise what parts need to be completed	<1 Hour	Completed
27/01 /2021	Deleted 'Requirements', 'Architecture', 'Method Selection and Planning', 'Risk Assessment and Mitigation' and 'Implementation' parts of 'Project Breakdown'	These sections have already been completed and so don't need to be included as part of our current project breakdown	<1 Hour	Completed
28/01 /2021	Included information on 'Implementation' in 'Project Breakdown'	The implementation requires new information so it is important to recognise what parts need to be completed	<1 Hour	Completed
28/01 /2021	Included information on 'Software Testing Report' in 'Project Breakdown'	New information was required for the software testing report, so to help with planning it was broken down	<1 Hour	Completed
28/01 /2021	Included information on 'Continuous Integration Report' in 'Project Breakdown'	New information was required on how to split the tasks of the 'Continuous Integration Report'	<1 Hour	Completed
04/02 /2021	Included new Gantt Chart	Previous Gantt Chart did not cover the new deliverables	<1 Hour	Completed
04/02 /2021	Deleted old 'High Priority' task list	Since the old tasks have already been completed, they are no longer of high priority	<1 Hour	Completed
04/02 /2021	Updated 'High Priority' and 'Dependent' tasks to match new Gantt chart and process	As there are new deliverables to complete, it is important to consider which tasks are high priority	<1 Hour	Completed

		and dependent		
04/02 /2021	Updated Critical Path to include new tasks	Since there are more tasks, we need to be aware of which ones may take the most amount of time so we can stick to the deadline	<1 Hour	Completed
08/02 /2021	Updated weekly sprints on website	The weekly sprints were updated as to cover the full extent of our project	<1 Hour	Completed

## 2.4 Risk assessment and mitigation

URL: [https://xychic.github.io/assessment\\_2](https://xychic.github.io/assessment_2)

### Change Log for Risk Assessment and Mitigation:

Date	Change Made	Justification	Cost	Status
27/01 /2021	Add reason/cause to the risk register table for explaining why those risks are in different levels of severity.	Only a description of the risk is given, but there is no explanation of the possible consequences of the risk	<1 Hour	Completed
27/01 /2021	Adjusted the font size of the text in the table	In the risk document, it is explicitly required to be no longer than 6 pages , so in order not to change other necessary content, the font size had to be adjusted to ensure that the requirements were met	<1 Hour	Completed
04/02 /2021	Added to Risk 'R6' about risks regarding a players computer being able to handle multiple boats, power-ups and the save-reload feature	Whilst this risk may not be as likely as others, it could severely damage a players experience	<1 Hour	Completed

Team 15's Risk Assessment is comprehensive and complete, we did not add any further risks as we felt that what they had covered was satisfactory and covered all the risks we were concerned about.