

Module: ENG1/ASSESSMENT2

Title: Change Report

- 1. Charles Stubbs**
- 2. Annabelle Partis**
- 3. Kieran Ashton**
- 4. Yu Li**
- 5. George Tassou**
- 6. Alex Shore**

Part A

Whenever a request for a change to our implementation is suggested by our stakeholders, or internally by our developers, we will produce a change request that documents the source of the request, the request itself, the components of the software or documents that will have to be modified to implement this change, a change priority, and the estimated time required to make the change. This is also done for the bug reports. We have chosen not to use an external tool to host our reports given that these can take a long time to install and to learn. They are also somewhat unnecessary for such a small development team.

In professional software development environments, there would normally be a change control board that would decide which changes to approve. Again, we are a small team working on a short deadline, and so we will act as our own change control board, though we will ensure that the person who reviews the change is not the same person who suggested the change. Any changes that are not valid (i.e. are not problems, or that have already been implemented) will be rejected. Otherwise, the effort and time required to make the change will be weighed against the benefits of the change and a decision made on whether to act on it. This decision, and its rationale, will be documented.

Part B

Link to revised requirements:

<https://raw.githubusercontent.com/stubbs774/runtimeerrors-two/main/website/deliverables/CI2.pdf>

Link to revised architecture

<https://raw.githubusercontent.com/stubbs774/runtimeerrors-two/main/website/extradocs/Arc h2.pdf>

Link to revised methods and planning:

<https://raw.githubusercontent.com/stubbs774/runtimeerrors-two/main/website/extradocs/Plan 2.pdf>

Link to revised code:

<https://github.com/stubbs774/runtimeerrors-two/tree/main/game/core/src/com/team5/game>

Requirements

Deliverable And ID	Request source	Suggested Change	Document/ Code Modules Affected	Change Priority (?/4)	Estimated Change Time (hrs)
Requirements (002)	Stakeholders	Requirement to provide multiple levels of difficulty for the user to select between.	MainGame & Game	4	0.1
Requirements (003)	Stakeholders	Provide five power-ups for Auber that the user can activate.	InfiltratorAIBehaviour, Infiltrator, Player, Trap, GameController	4	0.1
Requirements (004)	Stakeholders	Implement two power-ups for the infiltrators.	Infiltrator, InfiltratorAIBehaviour & NpcAIBehaviour. Architecture (1&2)	4	0.1
Requirements (005)	Stakeholders	Allow the player to save the game at any point, and reload it later.	PlayScreen, LoadScreen, PauseMenu, GameController	4	5
Requirements (006)	Charles Stubbs	The previous development team also included NFR_WEBSITE, which recommended the creation of a website to link to the setup guide. This should be removed.	Requirements	3	0.1
Requirements (007)	Annabelle Partis	NFR_FEEDBACK recommended implementing in-game stimulus other than colour and sound. This should be removed.	Requirements	3	0.1

Requirements (008)	George Tassou	NFR_SETTINGS recommended settings for mouse sensitivity and controls. This is unnecessary and should be removed.	Requirements	3	0.1
Requirements (009)	Annabelle Partis	A requirement UR_SOUND_MUTABLE should be added as the original brief required any sound to be mutable, but the previous development team disregarded this.	Changes to any class involving sound E.g. MainMenu and Constants	4	0.1
Requirements (010)	Annabelle Partis	The user requirements of the previous team never translated UR_INFILTRATORS_ABILITY into a functional requirement, thus we should include an FR_INFILTRATORS_ABILITY.	Requirements	3	0.1

ID	Reviewed By	Valid ?	Accepted?	Justification
002	Annabelle Partis	Yes	Yes	The stakeholders were adamant that this feature was necessary because it made the game more accessible to beginner users.
003	Charles Stubbs	Yes	Yes	The stakeholders insisted this was necessary because it would make the game more interactive.
004	George Tassu	Yes	Yes	This was requested by the stakeholders in the first brief, but the previous team neglected to implement it.
005	Kieren Ashon	Yes	Yes	As the final game will be in executable form, a setup guide is unnecessary work, and we are on a short deadline.
006	Annabelle Partis	Yes	Yes	As we are scrapping the setup guide (see requirement above) we do not need to link to it.
007	Yu Li	Yes	Yes	Stimulating other senses is unnecessary and difficult
008	Charles Stubbs	Yes	Yes	The users won't be playing the game for long in the usage context, so won't care to change the controls.
009	George Tassu	Yes	Yes	Not including a mute button would violate a requirement that the client insisted was very important.
010	Charlie	Yes	Yes	If we wish to add infiltrator abilities into the game, as

	Stubbs			requested by the stakeholders, we should document this first as a functional requirement to guide our implementation.
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Abstract and Concrete Architecture

Deliverable And ID	Request source	Suggested Change	Document / Code Modules Affected	Change Priority (?/4)	Estimated Change Time (hrs)
A1	Yu Li	The general phrasing of the document should be changed, at some times it reads poorly and may be difficult to interpret.	Arch1.pdf Arch2.pdf	3	1
A2	Kieran Ashton	Explain the use of Abstract and Concrete representations in further detail to make it completely clear to stakeholders as to why they have been made.	Arch1.pdf Arch2.pdf	2	1
A3	Annabelle Partis	The Abstract and Concrete representations will need to be changed in relation to what has been changed in the implementation of the game.	Arch1.pdf Arch2.pdf	3	2

ID	Reviewed By	Valid ?	Accepted?	Justification
A1	Charlie Stubbs	Yes	Yes	Making sure the document is concise as well as cohesive is important as whoever is reading the document must be able to interpret what is being written about.
A2	George Tassou	Yes	Yes	A full explanation of the architecture of our game in two different representations will allow for a clear structure of the game's code to be defined.
A3	Charlie Stubbs	Yes	Yes	Ensuring the architectures are as up to date as possible will contribute to the clear structure

				mentioned in A2 as well as making sure stakeholders are aware of how the game is being developed.
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Methods and Planning

Deliverable And ID	Request source	Suggested Change	Document / Code Modules Affected	Change Priority (?/4)	Estimated Change Time (hrs)
MP1	Annabelle Partis	Remove Messenger from the document and replace it with Slack.	Methods and planning	2	0.1
MP2	Kieren Ashton	Remove roles assignment section from document (including names of past developers).	Methods and planning	4	0.2
MP3	Annabelle Partis	Change the task list to be relevant to our process.	Methods and planning	3	1
MP4	Yu Li	Add Gantt charts for our work.	Methods and planning	4	3
MP5	Annabelle Partis	Switch Gantt chart format in the future to be more in depth.	Methods and planning	2	2

ID	Reviewed By	Valid ?	Accepted ?	Justification
MP 1	Kieran Ashton	Yes	Yes	We didn't use messenger, so not changing this would make the document inaccurate.
MP 2	Annabelle Partis	Yes	Yes	This section contains the names of the past developers, so should be changed to be relevant to us.
MP 3	Charlie Stubbs	Yes	Yes	Needs to be changed to be relevant to our process, otherwise is inaccurate.
MP	Annabelle	Yes	Yes	We need to detail our work process.

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MP 5	George Tassu	Yes	Yes	The format used by our predecessors lacked detail, and was not split into development cycles. We should use a different format to more accurately match our work process.

Implementation

Deliverable And ID	Request source	Suggested Change	Document/ Code Modules Affected	Change Priority (?/4)	Estimated Change Time (hrs)
Implementation (001)	Stakeholders	Allow the player to save the game at any point, and reload it later.	PlayScreen, LoadScreen, PauseMenu, GameController	4	5
Implementation (002)	Stakeholders	Provide multiple levels of difficulty for the user to select between.	LevelScreen MainMenuScreen	4	1
Implementation (003)	Stakeholders	Provide five power-ups for Auber that the user can activate.	InfiltratorAIBehaviour, Infiltrator, Player, Trap, GameController. Architecture(1&2)	4	5
Implementation (004)	Annabelle Partis	Implement two power-ups for the infiltrators.	nfiltrator, InfiltratorAIBehaviour & NPCAIBehaviour. Architecture (1&2)	4	3
Implementation (005)	Annabelle Partis	We should add a mute button in order to comply with the requirement FR_MUTABLE_SOUND.	Architecture (1&2) Changes to any class involving sound E.g. MainMenu and Constants	4	1

ID	Reviewed By	Valid ?	Accepted?	Justification
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001	Annabelle Partis	Yes	Yes	The stakeholders emphasised the importance of this feature and we did not argue with them as it will allow users to save their progress, improving their experience of the game.
002	Annabelle Partis	Yes	Yes	The stakeholders were adamant that this feature was necessary because it made the game more accessible to beginner users.
003	Charlie Stubbs	Yes	Yes	The stakeholders insisted this was necessary because it would make the game more interactive.
004	George Tassou	Yes	Yes	This was requested by the stakeholders in the first brief, but the previous team neglected to implement it.
005	Charlie Stubbs	Yes	Yes	Neglecting this would result in the product disobeying the requirements in a distracting way.

Risk Assessment and Mitigation Changes

As a team we have decided there are changes needed to the Risk assessment and mitigation part of the project. We do not believe that the changes are drastic, but rather minor improvements of the previous team's iteration.

With reference to the the previous iteration's Id from the "Risk1.pdf" Risk Register table:

Changes Table

ID	Risk Register ID	Request source	Suggested Change	Document/ Code Modules Affected	Change Priority (?/4)	Estimated Change Time (hrs)
RI1	R5	Charles Stubbs	R5 description should be a to-do after each meeting in order of priority rather than a log	Risk1	3	1/2
RI2	R9	Yu Li	Change the facebook group to a Slack server	Risk1	3	1/4
RI3	R10	Kieran Ashton	Meeting days have changed to Sundays and Thursdays	Risk1	3	1/2
RI4	R11	Charles Stubbs	Change likelihood from L to M	Risk1	1	1/2
RI5	R13	Charles Stubbs	Change the severity to H	Risk1	4	1/2

ID	Reviewed By	Valid?	Accepted?	Justification
RI1	Annabelle Partis	Yes	Yes	A meeting log could be convoluted whereas a bullet point list of what we have to do along with who is assigned to what and when it has to be done by means there is no room for confusion.
RI2	George T	Yes	Yes	Channels for different topics within Slack means it is more powerful than Facebook Groups.
RI3	Charles Stubbs	Yes	Yes	We don't meet on the same days as the previous team.
RI4	George Tassu	Yes	No	We assign two people to each task so if one person doesn't turn up then someone takes over. There is no therefore no need to change the severity as if someone is absent someone just takes over.
RI5	Yu Li	Yes	Yes	Severity would be catastrophic if we had an error such as two people committing different versions of the same code at the same time. If github did not catch clashes we would have a huge problem.

Unchanged Table

Risk Register ID	Justification to no change
R1	We believe this is accurate as testing after each sprint is important to ensure that the code is working throughout or development.
R2	Pushing code regularly to git and allowing other members to test the code will help mitigate long term bugs and identify errors quickly.
R3	Our requirements are a change/addition to the previous team's so we have to implement this using the KISS principle.
R4	We believe the severity and likelihood of this is accurate and a divide and conquer strategy means that team members can ask questions easily.
R6	This is accurate, at the end of every meeting one the maker of the to-do list, asks everyone what they have to do and if they have any questions.
R7	Our team uses weekly/sprintly Gantt charts in order to make sure we stick to deadlines or change them if we have to.
R8	Any changes/ addition to the architecture would be thoroughly checked and KISS principles are implemented when changing anything to do with our documents..
R12	Kieran is assigned to regular checks of the website and repo. This check happens regularly (whenever a document is changed), so the mitigation is accurate.