Change Report

2a Introduction

During our initial review session we decided on how to handle change management for Assessment 3, and decided that we would initially focus our efforts on code change implementation [1]. This is because we hadn't written the code and would need to understand the workings of the project before we could continue iterating through the development process as much of the required documentation depends on understanding the code.

We decided our software change management [2] should be completed by doing branch management throughout the assessment while we add and fix features by making branches in our Github Repo [3][4] for each feature so that team members can develop the codebase concurrently. We planned promotion and release management to be executed near the end of the assessment, as well as the deployment of a working executable for the client/users and potential developers.

We will make change requests by creating issues on Github using the Zenhub [5] extension and will hold review sessions during scrums in which these change requests will be reviewed. This will involve us comparing the sections of the Faceless Drones' project with the respective sections in our own project and we will decide the best method of implementing the required features with both of our projects in mind. In the cases that we disagree with how the other group have handled a section, we will discuss using a section of our Assessment 2 project instead and potentially completely replace their section. We will make our decisions based on factors such as the level of detail, quality of justification and how much work we can realistically do on sections in our time frame.

When unexpected problems arise such as conflicts when merging branches, urgent change requests will instead be made and we will bypass the team meeting, instead requiring confirmation by only one or two other team members before the change can be made with documentation and other deliverables being updated at a later time.

The team members responsible for the sections being reviewed during previous assessments will lead the discussion on the respective sections and are responsible for the updating of the sections during the assessment.

There was some confusion about whether the documentation and deliverables' change management should be handled differently from the code change management, as we couldn't find any information about it online or in the lecture slides. After clarifying and confirming with stakeholders, we decided to use a similar approach in the change management of documentation and deliverables, and discuss the changes in our scrums, although Github integration will not be used.

2bi GUI Report

We have made several small changes to the GUI that the Faceless Drones implemented; namely we have modified it to accommodate the new features of the scoring, pausing and leaderboard. We also needed to display these options in the Main Menu to fulfil requirement 2.

In the Main Menu, we removed the ‘Settings’ button and ‘Load Game’ button, as these were no longer part of our requirements. We also added a ‘Leaderboard’ button to allow the user to view their local leaderboard, fulfilling requirement 14. We kept the intuitive [6] formatting of the menu, however we rounded off the corners of the buttons to make it look smoother. We also reduced the size of the menu to allow the player to see the background art more clearly, making the game more aesthetically pleasing [6]. To justify this change, we held a discussion as a group and did research on how to make a user interface more enjoyable [7]. This will make the game more immersive, fulfilling requirement 21.

We decided that the user should be able to keep track of their score whilst playing the game and that it must be visible at all times, fulfilling requirement 13e. With the rest of the UI being placed in the corners of the screen, we decided to be consistent and place the score in the upper left corner. The score display is small and simplistic so it does not take up too much room or distract the player from the game.

As our score reduces with time, we added in a ‘Pause’ button to make it obvious to the user how to pause the game, fulfilling requirement 15a. The pause button was placed in the bottom left corner of the screen to maintain consistency and fit with the rest of the UI. Rather than using the word “pause” on a button, we have used an image of the pause symbol. This is to keep the UI simple and aesthetically pleasing [6] for the user. The pause menu is an overlay which appears over the entire screen. This makes it obvious that the game is paused, therefore fulfilling requirement 16. However, besides the panel containing the two buttons on the menu, the overlay is translucent, allowing the user to see the scene and other UI partially. The buttons on the ‘Pause’ menu are ‘Resume’ and ‘Main Menu’. This is to keep the menu simple, and to allow the user to pause and restart their game quickly. We all agreed this display was a good compromise between simplicity and functionality.

The ‘Leaderboard’ feature is a simplistic leaderboard model, fulfilling requirement 14a. The scores and the score ranking are displayed in a vertical list in descending order. We justified our decision to put high scores at the top of the leaderboard because we agreed that having their name at the top of the leaderboard would be a good way to motivate users to engage in the game and strive for a high score. This makes the game more fun, fulfilling requirement 21. These scores are collected from the user at the end of each playthrough. When they have completed the game, they will be told their score, and be requested to enter their name to be presented alongside this score on the leaderboard. The leaderboard text is white on a grey background, as we agreed the monochrome will make the text stand out and easy to read for the user.

When we played the game for the first time, we noticed that character names were not displayed clearly anywhere in the game, but were referenced in some of the verbal clues. After discussion, we agreed this would be confusing for people playing the game for the first time. To resolve this issue, we also added the character name to the interrogation scene to make the storyline more complete and engaging as part of requirement 21.

2bii Testing

2biia Methods

The inherited project used unit testing for the game and, as we did in the previous assessment, they used the Unity Testing Tools [8] from the Asset Store. After adopting the project we looked at the existing tests and refactored them to include "*TestFixtureSetup*" and "*TestFixtureTeardown*" methods to tidy up and remove repeated code all while keeping the existing functionality of the code. Due to us adding a scoring system, the leaderboard and a tutorial we had to add tests to test these. We chose to do black box manual tests for these as the tests only require clicking on something or are far quicker and easier to test this way than with white box unit tests. We continued to use the existing tests for all that didn't need changing, all of which passed except for tests 41 and 42. We did however remove test 13 from the previous group's TestTable [9] as we removed the requirement associated with it due to deciding to remove the 'settings' option. At every point when we added any code, just before committing to the repository we ran the tests to ensure they still pass and the code was still valid. Any changes to the TestTable can be identified in our TestTable [10], where the Test ID for any changed test is highlighted.

2biib Testing Presentation and statistics

Figure 1 shows the complete list of unit tests that have been completed and all of these pass. We were not happy with how the unit tests were organised in the TestTable from the previous group; they were grouped by which script they were in and it was ambiguous which test met which requirement, and their expected results were all grouped together which we found awkward and unsystematic. Resultantly, the TestTable has been updated to make the aim of each test obvious, and outline which requirement they satisfy. We built a new Class *SpeechHandler* that deals with loading in dialogue from JSON files, and relevant tests were added in, which all pass. Test 41 failed and we were unable to create a fix for this, which was also the case for Test 42 which also failed in the Faceless Drones' build.

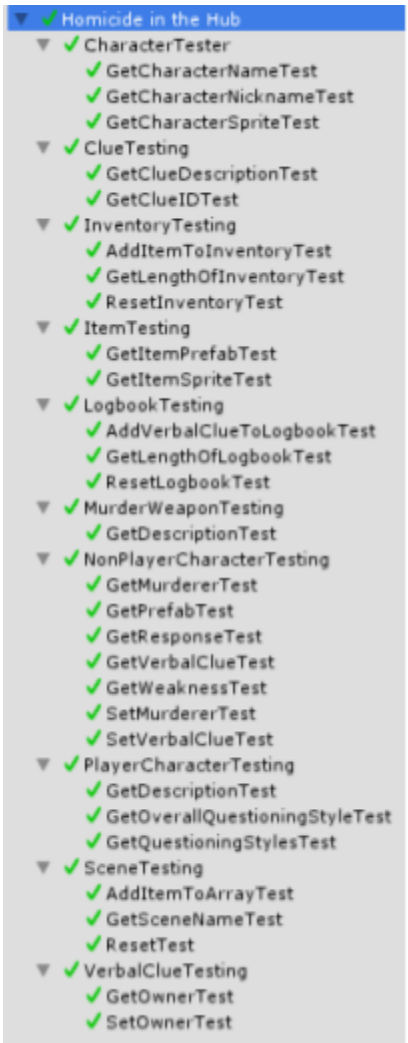

Figure 1

2biii Methods and Plans and Tools

2biiia Chosen Methods

Both ourselves and team Faceless Drones chose the same methods so these will stay the same as we have found them to be perfectly suitable for our group.

2biiib Tools

We have continued using many of the tools that we used for the previous assessments, some of which were used to communicate with the Faceless Drones when we required help. We have found them to be effective so far in organisation and collaboration by our team, particularly Slack, which the Faceless Drones did not use, as we found it useful to have a dedicated chat channel for discussing the code, receiving automated messages when code is committed to the repository and updates when Github issues are managed. This has been a vital tool so far in the project to us, as has Github.

2biiic Team Organisation

As with the plan, due to our group consisting of different people to the Faceless Drones our team dynamic is vastly different so we altered the team's organisation. One big change of our organisation was to switch to working in pairs, as we discovered some inter-group communication problems and attendance issues to group meetings last assessment. This change rectifies our problems by having pairs that frequently communicate to ensure work is being done and to share information, rather than trying to coordinate work between multiple other people. Working around schedules is also much easier due to only having to worry about conflicts with one other person compared to 5 other people previously which constrained our meeting times greatly. We hope this will reduce the lack of attendance to meetings, however we are still having weekly meetings during the practical slots on Thursday mornings as a full group in which we perform scrums.

2biiid Plan

Due to our different dynamic and being a different group of people to the Faceless Drones we have had to assign work in a different way to their plan. We decided to use our gantt chart as it is aimed towards the abilities and interests of the members of our group, however we also needed to update our plan with tasks the other group had not yet completed, as well as with other tasks our team decided were necessary. Such tasks included removing features and fixing bugs. We have updated the plan for Assessment 3 highlighting any changes made from the plan at the end of Assessment 2. We have also updated the Assessment 4 plan in more detail as we now have experience on taking over development of code developed by other people. This means we know what needs to be done to be able to make plans to do it in Assessment 4. All changes made to the plans can be identified by orange highlighting on the rows which have been changed.

Assessment 3 Plan: http://wedunnit.me/webfiles/ass3/Ass3Plan.pdf
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2biv Risks

We have not made any major changes to the risk assessment and table as we thought it was good, covering all areas of risks.

We liked Faceless Drones' classification of risks, specifically their 'Class' and 'Element' columns. This made risks easier to identify and group together, which improved organisation. It also made the ownership allocation easier, as one person would be in charge of a group of related risks, and could take responsibility. We met as a group and discussed each risk to make sure we considered any changes to the Ranking/Mitigation before assigning a team member to the risk. The person assigned is in charge of monitoring for that risk and, if it does occur, putting a procedure in place to counter it.

We kept the Severity and Likelihood columns, as they were similar to the columns we used in our original risk table. In this case, the words "Low", "Medium" and "High" were used in a very similar way to how we used the numbers 1-3 to represent those values respectively. We also kept their ranking system, as it was very similar to ours and we found it to be a good way to organise risks in order of importance. Instead of multiplying the Severity and Likelihood columns, they are now added to one another. This is a minor change to the table, which we decided to keep to maintain simplicity.

See Figure 2 on the Risk register [11] to see how these values relate to the Severity and Likelihood columns.

References

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[11] Cadogan. Henry et al. "Risk Register". N.p., 2017. [Online]. Available: https://github.com/HenryCadogan/HomicideInTheHub [Accessed: 19- Feb- 2017]