**Sprint Review 2**

Introduction:

All user stories have been completed.

We have delivered an MVP.

Feedback and Discussion:

The code is not perfectly structured and it definitely can be improved.

Some design principles have been followed i.e breaking down of functionality, most of the classes are short and we have incorporated managers into our scripts for inventory player and audio.

However, some classes are very tightly coupled which inhibits reusability.

Some refactoring work must be done to improve the next sprint.

Review of Sprint Goal:

The sprint goal was achieved as we have fully developed the base game.

There were no deviations, however, we have encountered some challenges with the behavior of bullet holes on collectible items, the logic of enemies’ damage on player and the pickup range of the ammo box collectible item.

This sprint goal was extremely vital to the accomplishment of the overall project as we are now able to understand and determine the core mechanics and structure of our project. This includes spawning of the enemy,

Product Backlog Refinement:

Would like to introduce audio settings.

Refactoring of code to adhere to the SOLID design principles. This includes the ChasingEnemy script and the button/door system.

Discussion of Future work:

Sprint 3 will be focused on making the changes easy for Sprint 4.

Score Database/Performance Database.

Settings UI

* Control sound
* Control brightness
* Saved settings

Conclusion:

Both members of the team are happy with how things have progressed. For the most part the code is of a good quality, some scripts need refactoring which have been established as goals for the next sprint. Other code that has been identified to be of reasonably poor quality is understood to only be temporary e.g the ChasingEnemy script, which both members agree will be obsolete by the end of development.

The team has agreed to focus on refactoring and adding game elements that will build into the main aspects of our project which is PCG and DDA.

**Sprint Retrospective 2**

The team has worked well so far. No major issues in terms of work divide, both members have contributed equally with no team conflicts.

Both team members have attended scheduled meetings on time and maintained constant communication throughout the sprint while working remotely from each other. It’s important this level of communication is maintained to the success of the project.

Both team members are happy and have not raised any concerns.

We had one git error during the sprint which meant James had to revert a commit to correct a conflict. To prevent this in the future better care needs to be taken to avoid working on the same scripts. For the upcoming sprint, both team members may be editing the ChasingEnemy script which means we need to be aware when each other are doing so to avoid future git conflicts.

**Sprint Review 3**

Introduction:

All user stories have been completed.

We have delivered the second base layer of the game.

Feedback and Discussion:

We have focused mainly on refactoring and implementing new features.

Refactoring was done on the enemy states, door system, implementing the event system and using state pattern principle.

New features such as settings menu, main menu and damage pickups have also been implemented.

Review of Sprint Goal:

The sprint goal was achieved as we have fully developed the second layer of the base game.

There were no deviations, however, we have encountered some future challenges with saving the game state and further implementation of tests.

This sprint goal was extremely vital to the accomplishment of the overall project as we are now able to fully get the feel of how the actual game plays and feels.

Product Backlog Refinement:

Some issues have been raised with saving the state of the game. This was attempted in the sprint however, we were faced with challenges as it would require some refactoring work, specifically relating to a PlayerManager class. It would require rewriting some of the existing code and thus needs some detailed planning. This has been added to the user stories and to be addressed later.

Kemi has suggested we introduce a global leaderboard using Kent’s Dragon SQL database. This has been added to the product backlog.

Discussion of Future work:

We will be focusing on the main aspects of the game such as the DDA and PGC for the next sprint.

**Sprint Retrospective 3**

Both team members completed their tasks within the allotted time of the sprint.

Communication has been maintained and all issues have been resolved. No recent git errors.

Project is starting to get sufficiently large and harder to manage with a lot of moving parts.

Both team members acknowledge refactoring work may need to be done.

**Sprint Review 4 - 26 July 2023**

Introduction:

All user stories have been completed.

We have both implemented the two main concepts of the Unity game, Procedurally Generated Content (PCG) and Dynamic Difficulty Adjustment (DDA).

Feedback and Discussion:

We have focused mainly on implementing the two main concepts of the game.

There are currently 4 different Maze Generation algorithms for the first stage of the game. The second stage of the game contains DDA which continuously increases the difficulty of the game based on how much time has progressed and the fitness level for the player.

Review of Sprint Goal:

The sprint goal was to implement the two main features and this has been achieved. The product backlog was adapted throughout the sprint as both team members carried out research on their individual unique game features. This includes implementing multiple PGC algorithms, adding a puzzle to the maze and adapting the implementation of the DDA to work as required for the game.

The goals of this sprint were important as it involved implementing the main features to which makes our game unique. We now have completed all gameplay functionality that was intended upon the beginning of the project.

Product Backlog Refinement:

Added multiple maze algorithms with choice given to the player.

A puzzle was added to the maze as Kemi requested that there be an additional challenge.

DDA user stories were deliberately vague to allow Sheng the freedom to adapt implementation based on research throughout the course of the sprint.

Discussion of Future work:

We will be focusing on tying up the loose ends of the game such as finalizing Continuous Deployment and Continuous Integration, Backend API, Global Leaderboard and miscellaneous features.

**Sprint Retrospective 4 - 8 Aug 2023**

Both team members completed their tasks within the allotted time of the sprint.

Communication has been maintained and there have been no additional issues.

**Sprint Review 5 - 8 Aug 2023**

Introduction:

All user stories have been completed.

We have implemented the DevOps Continuous Deployment and Backend API for the game.

Feedback and Discussion:

Continuous Deployment has been implemented using Github Actions.

The game application communicates correctly with the API to add to and display the global leaderboards.

Review of Sprint Goal:

The sprint goal was to ensure the game implemented continuous deployment and communicates correctly with the Backend API.

All goals have been achieved and the game is fully deployable through WebGL.

Product Backlog Refinement:

Change colour scheme, so it’s more readable - Sheng

Show a complete scrollable leaderboard on the main menu page. Show top 10 scores + user score in the end game.

Add game over text. - Done

About page?

Need to fix negative health value - Done

Save time and health to the database on completion of level 1. - Done

Size of the maze/maze of different sizes?

Resize the start screen. - Done

Unit testing.

Discussion of Future work:

We will be focusing on tying up the loose ends of the game such as the product backlog refinements. These refinements were brought up by Kemi in the last meeting.

**Sprint Retrospective 5 - 8 Aug 2023**

Both team members complete all tasks for the sprint.

Team communicated well. James needed some assistance with his Ruby and his work on the database and Sheng provided a lot of help. The team showed good team work to complete the sprint.