Simulated Concurrency Programming Game

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# Sprint Backlog:

## Sprint 1: Thursday 02/02/2023 – 09/02/2023

As the first sprint of the project, one of the main focuses is getting the project set up. This involved creating a git repository, setting up a unity project and collecting some of the required packages, such as Antlr4. Another key focus for this sprint is getting the core functionality of creating, editing, and deleting scripts.

### User Requirements:

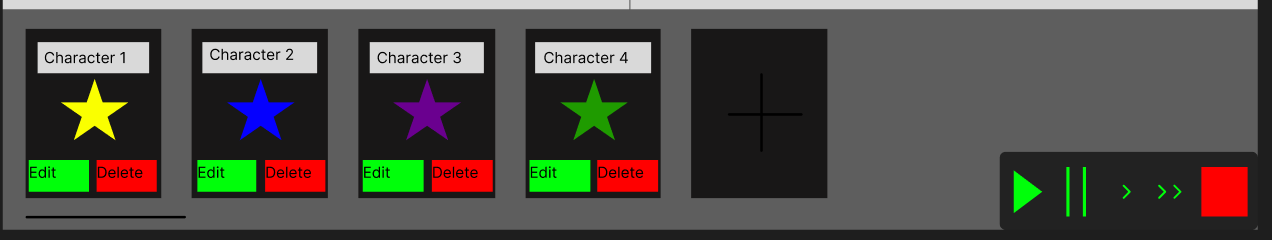
|  |  |
| --- | --- |
| **Story ID:** | **Description:** |
| 15 | As a player, I want to be able to access all options through a main menu and campaign map so that I can navigate to all features of the game |
| 1 | As a player I want to be able to create a new character script so that I can define the behaviour of the players on my team |
| 2 | As a player I want to be able to Edit/ Delete scripts so I can change that behaviour to optimise my team’s chance of victory |

Story 15 does include the concept of the campaign map, for this sprint, the menu system will be simplified to only include a sample play scene for development, a settings button (to be fleshed out later), and a ‘quit game’ option.

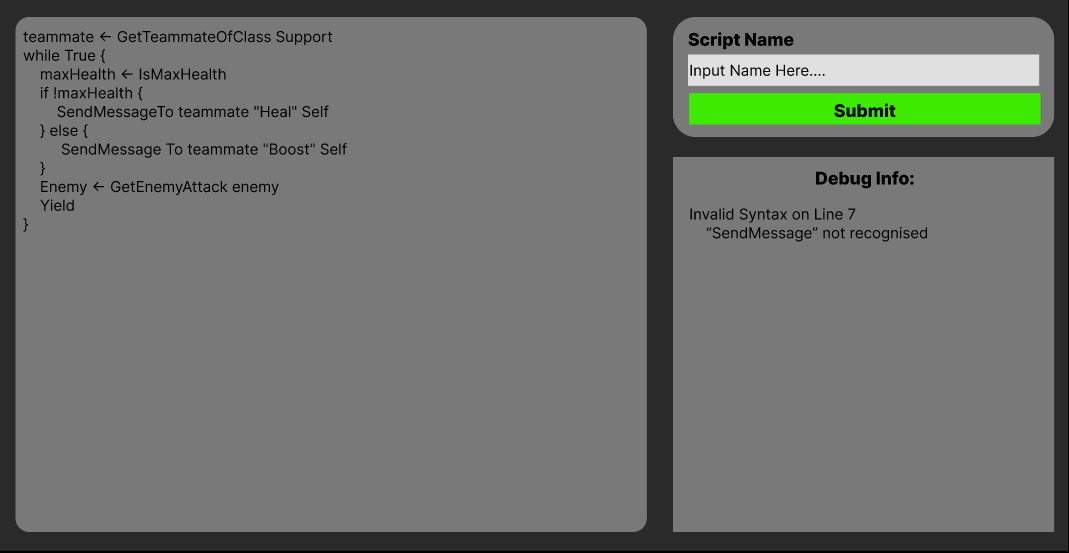
### Design Choices:

Since this sprint I will be implementing the lexer and parser for the language, I have already made some design choices from the original specification. The first of which is to do with iteration. In the early development stage of the language, iteration was designed to work in 2 ways; conditional loops and non-conditional loops (e.g., loop 5 times). I have decided to remove the functionality for non-conditional loops and only have ‘while <condition>’ as a feature. This is for two reasons, firstly, non-conditional loops don’t add any expressive power to the language, and only serve to add more choices to the user. By removing them, I will make the language simpler, and therefore more user-friendly for amateur programmers, which is the main goal of the game. Secondly, for complexity reasons. The language is already surprisingly complex for a small language and removing this feature now will serve to reduce my workload in later sprints.

### Low Fidelity Prototypes:



Referring back to the low fidelity prototype presented in the progress report, the aim of this sprint is to have a functioning version of the character management UI. This includes a box for each of the characters, as well as an Edit and Delete button for each one. By clicking on the ‘+’ button at the end of the list, a new box should appear allowing the user to choose from either an existing script, or to create a new one.



Here is an example prototype for the IDE. It uses a very simple design, with a textbox for entering the code, another for entering the name of the script (which is also the name of the character on the previous screen, and a box for potential debug info. The scope of debugging information is still to be decided. The submit button is used to save and close the script editor. When the button is clicked, the script is passed through a lexer and parser, if it has any errors, then the script will not be saved, and an error will appear in the debug box. Otherwise, the script will save, and the IDE will close.

### Evidence of Progress:

This is the early prototype of the main Menu:



For enhanced user feedback, each of the buttons changes colour when highlighted and clicked. The settings page is not currently implemented as that isn’t one of the core features of the game. Both the Campaign and Skirmish buttons currently lead to the same testing development scene as no other scenes have been implemented yet. Furthermore, the title and background are subject to change, as they are only placeholders for now.