Task 08 - Spike Summary Report

Spike: Task_08
Title: Game State Management
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Goals & Deliverables

Aim: To implement Zorkish Phase I, as described in the specification document.

Deliverables:

- Design Documentation
- Functional Zorkish Phase I Solution
- Spike Summary Report
- Git Commit History

Technology, Tools and Resources

Tech and Tools

The project was scripted in C++ 20 using Visual Studio Community 2022.

UML's and charts are made with *www.Lucidchart.com*

Source control is handled using Git.

Resources

- Lecture *"Game States and Stages"*
- Lecture *"Design Patterns Introduction"*

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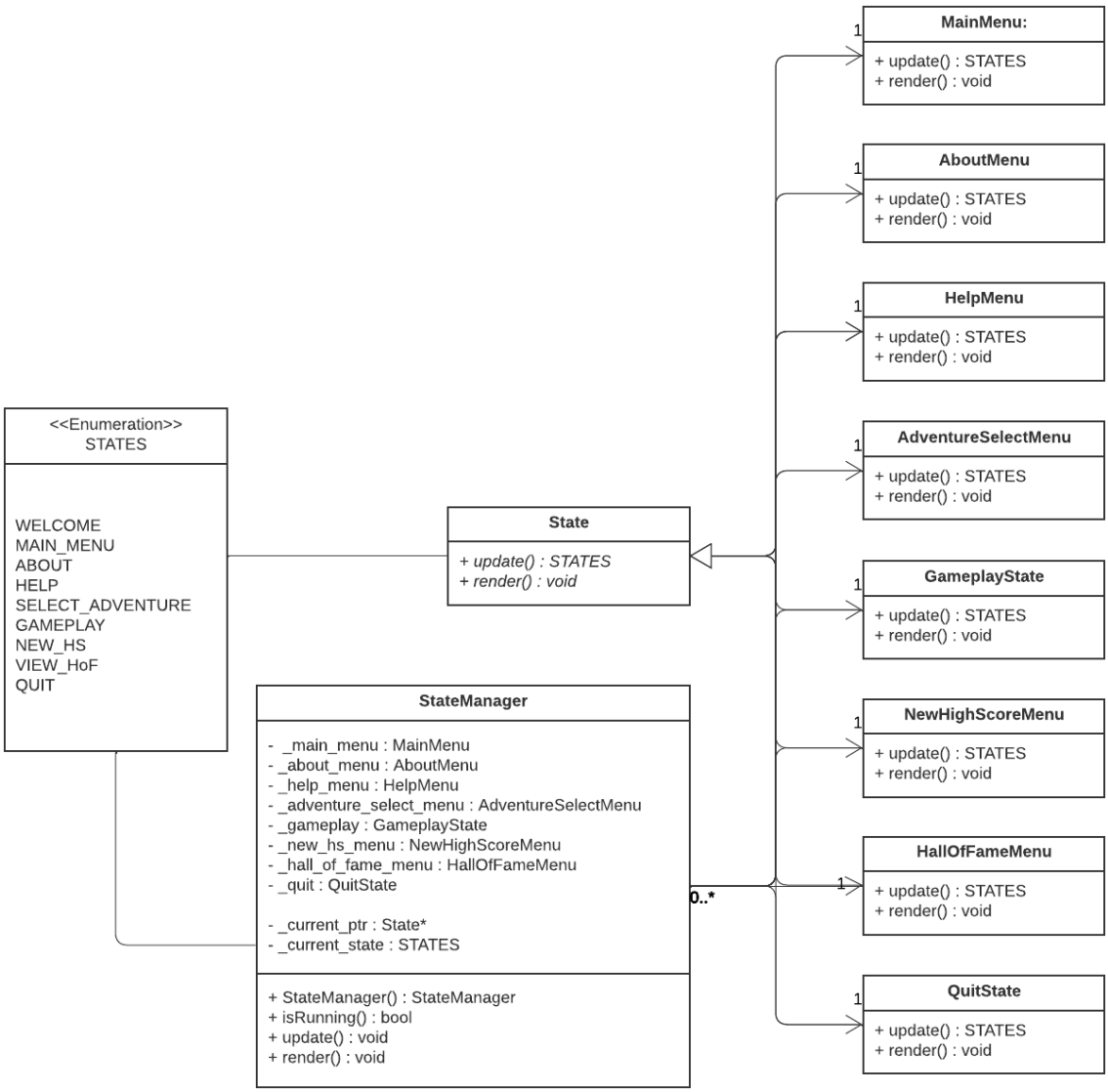
Tasks Undertaken

Planning

Diagrams and Charts



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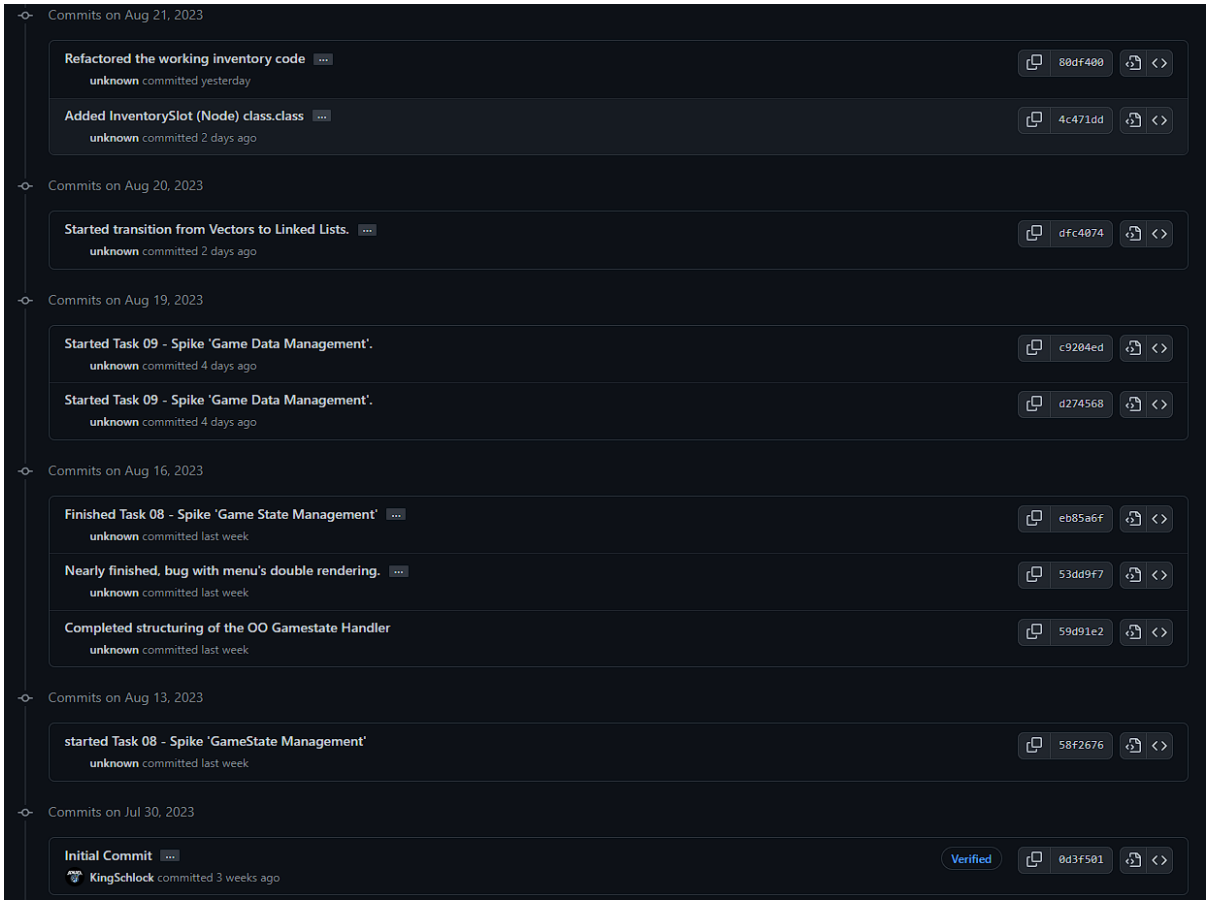
Class Descriptions and Notes

The Zorkish StateManager class was implemented using the state management pattern. An enum of states is contained within the StateManager header, each of which correlates with a State Object child class containing the relevant state functionality.

The StateManager will construct a single instance of each State child and (depending on the value of _current_state) will wrap the appropriate state functionality within it's own *update( )* and *render( )* methods before presenting this to the *main( )* method.

Implementation

Git Commit History



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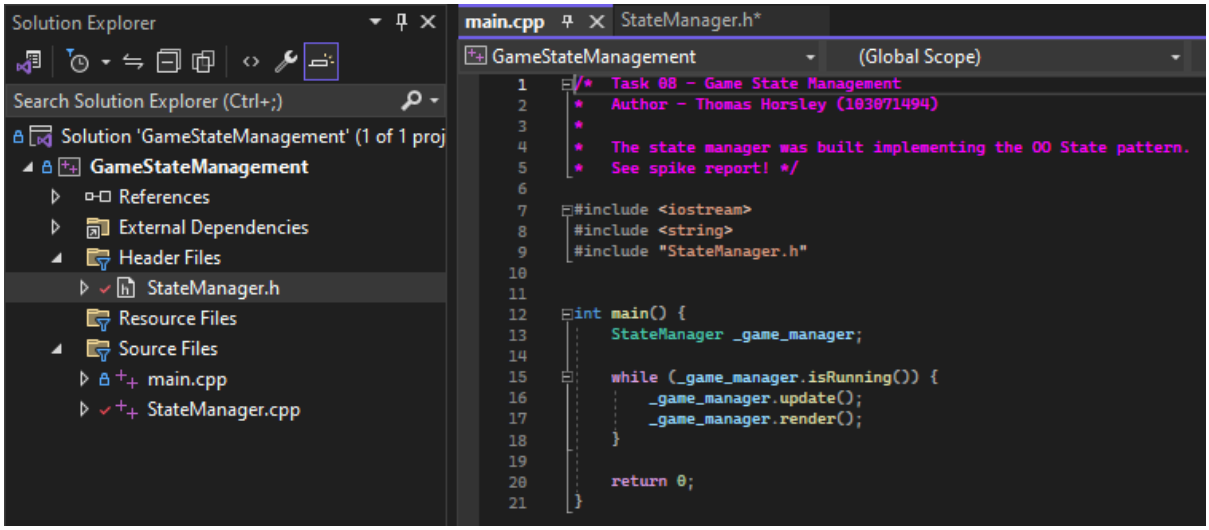
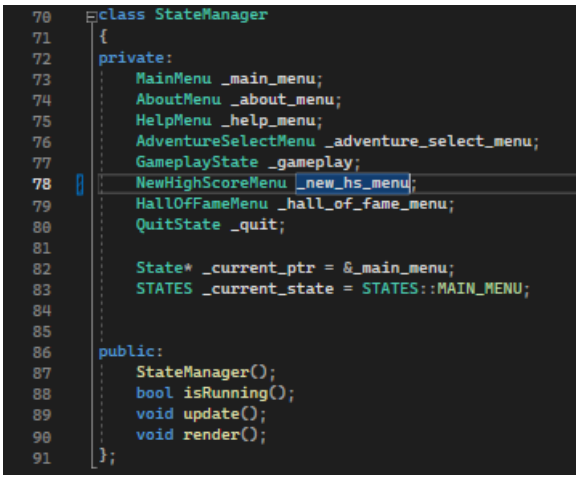
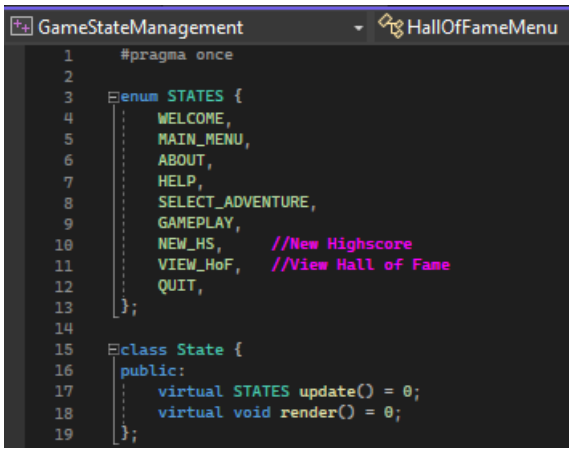
Code Snippets



main( )with an instantiated StateManager object



StateManager definitions



STATES enum and State class definitions

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What was Learned?

This task involved creating a scalable state management system for the Zorkish Phase I prototype. The Spike involved manipulating custom classes and return types to effectively manage a state driven game loop. Additionally, a state driven design allows the developer to encapsulate specific state functionality within a manager object, further abstracting the management system from the user.