**SPRINT DOCUMENTATION Week 4 (Ollama Integration & Refinement)**

| **1) Summary data** | |
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| **Sprint start date** | **20 Oct 2025** |
| **Sprint end date** | **26 Oct 2025** |

**2) User stories/task cards**

*Based on the meeting on Oct 16th, a key decision was made to pivot the focus of the sprint. Heavy coding was deprioritised to allow for a deep dive into academic literature to support the interim report. This ensures the project is grounded in solid research before further implementation.*

- *Sprint goal: The primary goal was to advance the interim report, focusing on the literature review and methodology.*
- *A secondary goal was to integrate the Ollama local AI service, refactor the existing AI manager for better extensibility, and fix critical bugs.*

*[Completed] Dedicated Literature Review:*

- *Focused on academic sources for Game Design, AI in Games, and AI Content Generation.*

*[Completed] Drafted Interim Report Sections:*

- *Wrote initial drafts for the Context, Problem, Literature Review, and Methodology sections.*

*[Completed] Add Ollama Integration:*

*Integrated the Ollama local AI service, allowing the game to use local language models.*

- *Implemented a UI for configuring the Ollama connection (host, port, model).*
- *Added health checks to verify the Ollama service is running and the specified model is available.*
- *Implemented progress reporting for Ollama requests, providing real-time feedback to the user.*

*[Completed] Refactor AI Manager and Live API Client:*

- *Improved the robustness and error handling of the LiveAPIClient for the Gemini Live API.*

*[Completed] UI Improvements:*

- *Improved the AI settings menu with clearer instructions and better error messages.*
- *Added icons to the stats display in the story scene.*

**3) Requirements analysis**

*Documentation:*

- *The interim report shall include a substantive literature review.*
- *The interim report shall focus on the project's context, problem, and methodology.*

*Functional (shall):*

- *The system shall support using a local AI model via Ollama.*
- *The system shall provide a way for the user to configure the Ollama connection.*
- *The system shall give feedback to the user about the status of Ollama requests.*
- *The AI integration shall be robust and handle errors gracefully.*

**4) Design**

- Ollama Integration:

A new OllamaClient was created to handle communication with the Ollama API. The ai_settings_menu.gd was extended to include UI elements for Ollama configuration.

- AI Manager Refactoring:

The AIManager was refactored to use a more modular approach, making it easier to add new AI providers in the future.

**5) Test plan and evidence of testing**

The Ollama integration was tested with a local Ollama instance to ensure it was working correctly.
The AI settings menu was tested to ensure that the configuration options were saved and loaded correctly.

**6) Summary of the sprint**

*Objectives achieved: All objectives for this sprint were achieved.*

*Working prototype: The prototype now has a major new feature (Ollama integration) and is more stable and robust.*