Week 4 Process and Decision Document

Name: Fintan Sharpe

Role(s): N/a

Primary responsibility for this work:

Goal of Work Session

Side Quest Week 4

Decision Points & Trade-offs

I made the trade-off to use Gen-Ai to help me write the code for this assignment and used its guidance to help make design decisions for colour, how many levels to swap through, etc.

Verification & Judgement

N/a

Limitations, Dead Ends, or Open Questions

Gen AI: Gen AI was used in this assignment.

Appendix:

Tool Used: ChatGPT

Purpose of Using AI

I used ChatGPT to help me understand how to meet the assignment requirement of generating a game level using arrays or JSON data and loops, instead of manually placing platforms. I also used it to help rewrite my project files so that they followed this structure correctly.

Description of Interaction

I first shared my existing levels.json file and WorldLevel.js file with ChatGPT. My original setup used manually written platform coordinates, which did not meet the requirement for procedural or data-driven generation.

ChatGPT explained that I could use a tile map system stored in JSON, where each character represents a tile. It showed me how to replace my manual platform data with a map array and a tileSize value. It also helped me modify my WorldLevelclass to use nested loops to scan the map and automatically generate platform objects.

Later, I asked ChatGPT to provide complete versions of all the main project files so I could copy and paste them. It provided updated versions of:

- levels.json
- WorldLevel.js
- Platform.js
- sketch.js
- BlobPlayer.js

These files were rewritten to support tile-based level generation using loops.

Key Decisions Made

1. **Switching to Tile Maps**
   I decided to replace manually positioned platforms with a tile map system using strings and arrays in JSON. Each #represents a platform, and . represents empty space.
2. **Using Nested Loops**
   I chose to use nested for loops in WorldLevel.js to read the map and generate platforms dynamically. This directly meets the assignment requirement.
3. **Keeping Backward Compatibility**
   The updated WorldLevel class still supports manual platforms if needed, but prioritizes map-based generation when available.
4. **Creating Multiple Levels**
   I decided to include multiple levels in levels.json to demonstrate that the system is scalable and reusable.
5. **Full File Replacement**
   Instead of editing individual lines, I chose to replace entire files with corrected versions to avoid syntax errors and compatibility issues.

ChatGPT helped me:

- Understand how to represent levels using arrays in JSON
- Learn how to convert map data into game objects using loops
- Structure my files properly
- Debug potential issues before running the program
- Organize my project in a clear and logical way

The AI acted as a technical assistant and tutor by explaining concepts and providing examples. However, I still reviewed the code, implemented it in my project, and tested it myself.

My Contribution

- Provided my original files and explained my situation
- Decided which solutions to use
- Implemented the suggested changes in my project
- Tested the game to make sure it worked correctly
- Adjusted values like tile size, gravity, and level layout

Changed Code Proof: