Project Plan for 2D Game Developed Using Phaser.js

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Section 1: Context

Company

Project X

Stakeholders

Maikel Putman

Reason

To explore and experiment with the Phaser.js framework by developing a simple 2D game. This will serve as a learning experience while also providing a functional time-killer game.

Assignment

Develop a simple 2D shoot-'em-up game using Phaser.js. The game should demonstrate fundamental features of the framework, such as sprite manipulation, basic animations, collision detection, and score tracking.

Objectives

1. Create a functional 2D shoot-'em-up game using Phaser.js.

- Player-controlled character.
- Enemies that move and attack.
- Projectiles and collision mechanics.

Section 2: Problem Statement and Methodology

Problem Statement

Learning a new game development framework like Phaser.js can be challenging without a practical, hands-on project. Developing a 2D game allows for direct exploration of key features such as sprite handling, physics, and interaction design while creating something fun and functional.

Main Research Question

How can Phaser.js be effectively utilized to create a simple and engaging 2D shoot-'em-up game?

Subresearch Questions

1. What are the essential components of a 2D shoot-'em-up game?
2. How can Phaser.js be used to handle game mechanics like movement, shooting, and collisions?
3. What are the best practices for designing simple, visually appealing game assets?
4. How can AI help me developing this game?

Methodology

1. Research and Framework Exploration:
    - Study Phaser.js documentation and tutorials to understand core functionality.
    - Analyze similar 2D shoot-'em-up games for inspiration.
2. Game Design:
    - Define basic gameplay mechanics and features (e.g., player movement, enemy AI, scoring).
    - Create a simple game design document to outline objectives and flow.
3. Development:
    - Implement game mechanics iteratively, starting with basic player controls.
    - Add enemy behaviors, projectile mechanics, and collision detection.
4. Testing and Feedback:
    - Test the game for bugs, balance issues, and performance.
    - Gather feedback from stakeholders and users and make improvements.
5. Deployment:
    - Optimize the game for web browsers and deploy it for play.

Section 3: Delivery

Scope

Deliverables

1. A functional 2D shoot-'em-up game, including:

- Player-controlled character with movement and shooting mechanics.
- Enemies with basic attack patterns.
- Projectiles, collisions, and a scoring system.

2. Simple but visually appealing game assets, including sprites and backgrounds.

3. Basic documentation of game features and code.

Non-Deliverables

1. Advanced animations or complex game levels.

2. Monetization features or third-party integrations.

3. Post-launch updates or maintenance services.

Planning (13.12.2024 - 17.01.2025)

Week 1 (13.12.2024 - 19.12.2024): Research and Framework Exploration

- Study Phaser.js documentation.
- Create a simple design document and plan gameplay features.

Week 2-3 (20.12.2024 - 02.01.2025): Development Phase 1

- Implement player controls, basic enemy behavior, and shooting mechanics.

Week 4 (03.01.2025 - 09.01.2025): Development Phase 2

- Add collision mechanics, scoring, and finalize game loop.

Week 5 (10.01.2025 - 16.01.2025): Testing and Polishing

- Test the game for bugs and performance issues.
- Refine gameplay mechanics and visual elements.

Week 6 (17.01.2025): Final Delivery

- Present the completed game and hand over documentation.