Vibr: Vibe Coding Playground PRD

Product Name: Vibe Coding Playground
Version: 1.0
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1. Overview

Enable anyone—technical or non-technical—to create, customize, and play simple 2D games using natural language prompts directly in a browser. The platform provides an intuitive way to build games by describing them in plain English, integrates with an AI backend for code generation, and allows for real-time updates, asset integration, and collaborative sharing.

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2. Goals

- Simple interface for game creation using English prompts.
- AI-assisted code generation and iterative updates.
- Support for custom asset uploads.
- Run games in-browser with minimal latency.
- Account management and game library.
- Game sharing and collaborative editing.

3. Key Features

- Prompt-based game creation.
- Iterative updates with live preview.
- Asset management with tagging.
- Browser execution via WebAssembly.
- Account login (Google OAuth or email/password).
- Game sharing and version history.

4. UI Wireframes (Visual Mockups)

Home/Dashboard (Visual):

- Modern grid layout showing game cards with thumbnails and quick actions (Play, Edit, Share).

- **Create New Game** button prominently displayed.

Game Creation Page (Visual):

- Large text input: `create a game, where [_____]`.

- Generate button with progress animation.

Game Preview Page (Visual):

- Split view: Left (Game canvas), Right (chat box for tweaks).

- Top bar: Game title, Save, Share.

Share Dialog (Visual):

- Modal window with email input and multi-add capability.

- Send Invite button styled with confirmation toast.

Asset Library (Visual):

- Card-based file list with image previews.

- Drag-and-drop upload area.

[Mockup Images Placeholder – High-Fidelity Visuals to Be Designed Using Figma]

5. End-to-End User Flow Diagram

![[User Flow Diagram Placeholder – Final version to include clickable prototype links in Figma]

[Dashboard] → [Create Game] → [AI Code Generation] → [Game Preview] → [Iterative Updates]

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[Share with Friends] → [Shared Game in Both Dashboards]

6. Clickable Prototype

- A prototype will be created in **Figma** linking all major screens:

    - Dashboard → Create Game → Game Preview → Share Dialog → Asset Library.

7. Architecture & Tech Stack

- Frontend: React/Next.js, Tailwind CSS.

- Backend: FastAPI, PostgreSQL.

- Storage: AWS S3 for assets.

- Execution: Sandbox containers + Pyodide/WebAssembly.

- AI: Claude API for code generation.