**Documentation for the Little Paws Cafe(CPS1015 Assignment)**

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***1.Introduction***

As part of the CPS1015 Web Development Foundations assignment, the web-based idle game “Little Paws Cafe” was made. The project seeks to demonstrate expertise in back-end implementation through the use of Node.js, as well as front-end programming by using HTML, CSS and JavaScript.

An overview of the choices taken during development, include those pertaining to the games dynamics, technical server and client connection settings, user interface design (UI), is provided in this documentation. Additionally, the documentation starts with briefing on how to test and run the game locally.

The Little Paws Cafe is a light-hearted idle clicker game that invites players into a cozy, animal-themed cafe where the goal is to brew and serve as much coffee as possible. The game blends simple mechanics with charming visuals and playful sound design to offer a relaxing yet engaging experience. While the gameplay is straightforward the design embraces whimsy and warmth, making each cup served feel like a step deeper into the world of the furry baristas.

***2.Running and testing the game***

Provided below are the steps required as to run and test the game for yourself.

**1. Clone the Repository from GitHub:**

Open the terminal and run the command mentioned below to clone the repository from Github:

git clone <https://github.com/Ryan-Libreri/Web-Dev-project.git>

This will then create a folder called game 2.0 containing all of the games files.

**2. Change the directory into the Games Folder**

Navigate to the folder that was created after cloning the repository:

Cd little-paws-cafe-backend

**3. Install Dependencies**

Run:

*npm install*

This command will install any necessary packages for the game

If Node.js Package Manager is not installed a prompt will appear asking you to instal it. For this you answer y(yes) to proceed. After it is done re-run npm install.

**4. Start the Server and game:**

After installing dependencies, you can then run the server with the following command:

*node server.js*

the terminal should then display:

Server running on <http://localhost:3000>

This means that the server is successfully running. The game should now be accessible through you web browser by using the link.

***3. UI Design***

***Overall Design choices***

The user interface for The Little Paws Cafe was designed to be simple, intuitive and visually appealing, with a warm and cozy aesthetic that reflects the Cafe’s theme. It utilizes a menu-based structure that keeps the main screen clean while offering depth through accessible submenus. The core interface includes a visually central click button, while upgrades, prestige, and achievements are each accessible through dedicated buttons that open up their own separate menus.

This design allows the player to focus on the core gameplay loop without being overwhelmed by information. When needed the players can dive into the upgrades menu to enhance their cafe’s productivity, check achievements for progress milestones, or open the prestige menu to reset for long-term gains. This structured approach makes the gameplay scalable and keeps the interface intuitive as more features added over time. The aesthetic reflects a friendly, cozy cafe atmosphere, using soft visuals and clear typography to ensure a welcoming experience. Responsive UI elements and feedback, like real-time number updates and maintain player engagement throughout the game.

A screenshot of a computer

AI-generated content may be incorrect.

Figure 1: Games UI

The layout prioritizes both clarity and ease of navigation including:

* Key stats like Coffee count and Coffee per second are visible at the middle of the screen.
* Panel Navigation is at the bottom, allowing players to toggle between the upgrades, prestige, achievements and black-market menus.

This modular system keeps the screen uncluttered while still allowing full access to every feature present in the game.

**Semantic HTML Usage and Accessibility**

To maintain a clean structure and improve accessibility, the game implements semantic HTML throughout the entire project. This ensures better compatibility with screen readers and enhances the maintainability of the code.

* <button> is used to make interactive actions when clicking on the menu buttons etc.
* <h2> is used to emphasize the sections’ headings
* <main> is utilized to wrap the central playable area of the game
* <header> was implemented for the title

***4. Game Mechanics***

**Core game-play Idea**

The core gameplay idea is centred around the player clicking the “Serve Coffee” button as to generate coffee. These cups act as the primary in-game currency and are used to purchase upgrades and unlock achievements. As the players progress, passive income through upgrades enhances resource generation, creating a satisfying feedback loop of constant growth and reward.

**Primary Resource: Coffee Cups**

* Generated manually through clicks and passive income generators like grinders and baristas
* It is used for purchasing grinders and baristas to automate income
* Displays real-time counters that track total cups and cups per second.

**Secondary Resource: Coffee Beans**

* It is generated through prestige resets and grants 3 beans per prestige.
* It is used in the black market menu to buy exclusive upgrades
* Beans grant advantages like doubling passive generation or halving the price of upgrades.

**Upgrades and Generators**

* Grinders: They increase the passive coffee production by +1 per second
* Baristas: increase passive coffee production by +2 per second
* Upgrade costs scale progressively, encouraging strategic resource allocation when choosing your upgrades.

**Timed event**

* - Coffee rush event is a timed bonus that doubles coffee earned per click for 10 seconds
* - Trigger frequency: the event occurs every 30-60 seconds and keeps the game dynamic and rewards active engagement to the player

**Achievements**

* - Milestone-based achievements reward players for their progression, and these include rewards for cup milestones, grinder/barista upgrades, and serving thresholds.
* Unlocking achievements triggers sound effect and is then displayed in the achievements table.

**Black Market**

* Special upgrades that are only purchasable with beans
* Designed as a reward hub for dedicated players that utilize the prestige system

***5. Conclusion***

Working on this project was enjoyable, and it really increased my understanding of both Web and game development. My grasp of how user interfaces, interactive features and game logic all work together has massively improved as a result of turning the idea of the little paws cafe into a fully functional browser-based game.

In addition to honing my programming abilities, turning a simple gameplay loop into a refined experience with currency, upgrades system, and a prestige mechanic improved my capacity to organize projects with scalability in mind. It also made me more conscious of the importance of accessibility and user experience in developing inclusive and captivating applications

Although The Little Paws Cafe is a simple idle clicker game, I hope that players will find enjoyment in the whimsical gameplay and soothing graphics, as well as the appeal of managing their own small animal cafe.