

Front-End UI/UX Mini Project

Project Submission Template

1. Title Page

- **Project Title:** Cinematic Cuisine: A Themed, Interactive Recipe Book
- **Submitted By:**
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2. Abstract

This project is the design and development of a fully responsive, single-page web application called "Cinematic Cuisine," an interactive recipe book with a unique movie theme. The primary goal is to create an engaging and visually immersive user experience for discovering and exploring recipes inspired by famous films. The website is built using a combination of HTML5, CSS3, Bootstrap 5, and jQuery. The final outcome is a polished and feature-rich application that includes dynamic filtering, a smart search function, and an innovative "Pantry Pal" feature that suggests recipes based on ingredients the user already has.

3. Objectives

The primary objectives set for this project were:

- To design an immersive, user-friendly interface with a unique and consistent "Cinematic Cuisine" theme.
- To develop a fully responsive layout that functions seamlessly on desktop, tablet, and mobile devices, utilizing the Bootstrap 5 framework.
- To effectively showcase a collection of recipes in a structured, interactive, and visually appealing format.



- To implement dynamic and engaging features, including a "Recipe of the Day," multi-faceted filtering, a smart search, and the "Pantry Pal" ingredient-matching system, using JavaScript and jQuery.
- To ensure the final website is well-structured, maintainable, and hosted publicly on GitHub with professional documentation.

4. Scope of the Project

The project is focused entirely on front-end development. It is a single-page application designed to function as a self-contained, interactive recipe book. The scope includes the implementation of advanced UI/UX features like the movie-inspired theme and the "Pantry Pal" logic. The scope excludes any backend functionality; for instance, there is no server-side integration or database for user accounts or recipe submissions. The project was built using standard web technologies and open-source libraries (Bootstrap, jQuery) and is intended to be viewed across all modern web browsers.

5. Tools & Technologies Used

Tool/Technology	Purpose
HTML5	Markup and content structure.
CSS3	Styling and layout management
VS Code	Code editor
JavaScript / jQuery	Implemented for all DOM manipulation, event handling for filters, the "Pantry Pal" logic, and displaying the recipe detail modals.
Bootstrap 5	Leveraged for its powerful mobile-first responsive grid system, pre-styled components, and utility classes to accelerate development.
Google Fonts	Used for importing the custom web fonts ('Cinzel' and 'Lato') to enhance the project's unique typography.

6. HTML Structure Overview

The index.html document is structured using semantic HTML5 tags to ensure clarity, accessibility, and maintainability.

- **<nav>**: Contains the top navigation bar with the project title.
- **<main>**: Acts as the primary container for all the interactive content sections of the page.

- **<section>**: Each distinct part of the application (Recipe of the Day, Pantry Pal, Filter Controls, Recipe List) is logically grouped.
- **Bootstrap Grid**: The layout heavily relies on Bootstrap's grid system (`<div class="container">`, `<div class="row">`, `<div class="col-...">`) to ensure a robust responsive structure for the recipe cards and filter controls.
- **Modal Container**: A dedicated `<div>` for the Bootstrap modal is included to display detailed recipe information upon user interaction.
- **<footer>**: Contains a simple closing message for the application.

7. CSS Styling Strategy

The styling strategy was to use Bootstrap as a functional foundation and layer a highly customized theme on top to create a unique visual identity.

- **External CSS**: All custom styles are located in a single `styles.css` file to keep them organized and separate from the HTML structure.
- **CSS Variables**: CSS variables (`:root`) are used extensively to define the core color palette (primary, secondary, accent colors) and fonts. This makes the theme consistent and easy to maintain.
- **Bootstrap Overrides**: Custom styles were written to complement and override Bootstrap's defaults for components like cards, modals, and forms, ensuring they fit the unique "Cinematic Cuisine" aesthetic.
- **Responsive Design**: While Bootstrap handles most of the responsiveness, custom media queries and relative units were used to fine-tune typography, spacing, and layout on different screen sizes.

8. Key Features

Feature	Description
Cinematic Cuisine Theme	A unique, visually immersive theme with custom fonts and a dark, elegant color palette inspired by old Hollywood, creating a memorable user experience.
Recipe of the Day	A randomly selected recipe is prominently featured at the top of the page on each visit, encouraging user engagement and discovery.
Pantry Pal	An innovative feature where users can input ingredients they own. The application then

	highlights and sorts recipes they can make, helping to reduce food waste..
Dynamic Filtering & Search	Users can filter recipes by genre, difficulty, and diet. A smart search bar allows searching by title, generic dish name (e.g., "burger"), or by ingredient.
Fully Responsive Design	The site fluidly adapts to all screen sizes, from mobile phones to wide-screen desktops, ensuring a seamless and accessible experience for all users.

9. Challenges Faced & Solutions

Challenge	Solution
Making the "Pantry Pal" ingredient matching effective.	The initial logic failed to match variations (e.g., "Rice" vs. "Basmati Rice"). This was solved by implementing a more robust, case-insensitive matching function in jQuery that checks if one string contains the other, and vice versa.
Integrating a highly custom theme on top of Bootstrap's default styling.	To avoid a generic look, CSS variables were used for all custom colors and fonts. This allowed for global control over the theme and made it easy to override Bootstrap's styles without breaking its core responsive structure.
Ensuring local images loaded correctly after multiple code changes.	Initially, broken image links were a persistent issue. This was solved by standardizing all image filenames to be URL-friendly (lowercase, no spaces) and correcting the JavaScript code to build the correct, simplified file paths.

10. Outcome

The project successfully achieved all its objectives, resulting in a unique, feature-rich, and fully functional interactive recipe book. The integration of HTML, CSS, Bootstrap, and jQuery proved to be an effective technology stack for developing a sophisticated front-end application. The final product is a high-quality, engaging web application that



effectively showcases a curated collection of recipes in an interactive and visually stunning manner.

11. Future Enhancements

- **Persist Pantry Data:** Use the browser's localStorage API to save the user's pantry ingredients, so they are remembered on future visits.
- **User-Submitted Recipes:** Add backend functionality (e.g., using Node.js and a database) to allow users to create accounts and submit their own movie-themed recipes.
- **Performance Optimization:** Compress image files and minify the CSS and JavaScript files to improve the website's initial loading speed.
- **Advanced Animations:** Implement more complex animations on user interaction (e.g., when filtering or adding ingredients) using a library like GreenSock (GSAP) to further enhance the user experience.

12. Sample Code

HTML Snippet: A Recipe Card Generated by JavaScript

This code shows the HTML structure for a single recipe card, which is dynamically created and inserted into the DOM by app.js using Bootstrap's grid and card component

```
recipelist.append(`
  <div class="col-lg-4 col-md-6 mb-4">
    <div class="card h-100 ${cardClass}" data-id="${r.id}">
      
      <div class="badge-container">
        <span class="badge bg-secondary">${r.difficulty}</span>
        <span class="badge" style="background-color: var(--secondary-color); color: var(--accent-color);">${r.category}</span>
      </div>
      <div class="card-body d-flex flex-column">
        <h5 class="card-title">${r.title}</h5>
        <p class="card-text flex-grow-1">${r.description}</p>
      </div>
      ${overlayHtml}
    </div>
  </div>
`)
```

CSS Snippet: Theme Definition using CSS Variables

This snippet from styles.css demonstrates how CSS variables are defined in the :root to establish the "Cinematic Cuisine" theme, making styling consistent and easy to manage.

```
:root {
  --primary-color: #1a1a1a;
  --secondary-color: #2b2b2b;
  --accent-color: #c0a062;
  --text-color: #e0e0e0;
  --text-color-muted: #888;
  --font-heading: 'Cinzel', serif;
  --font-body: 'Lato', sans-serif;
}
```

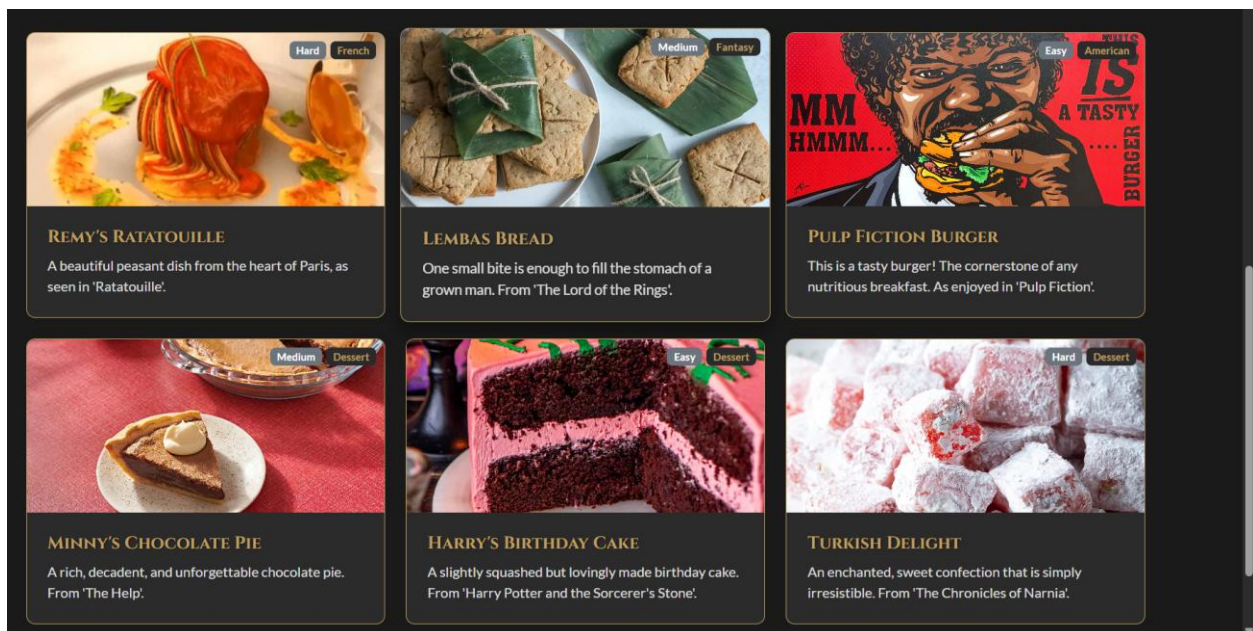
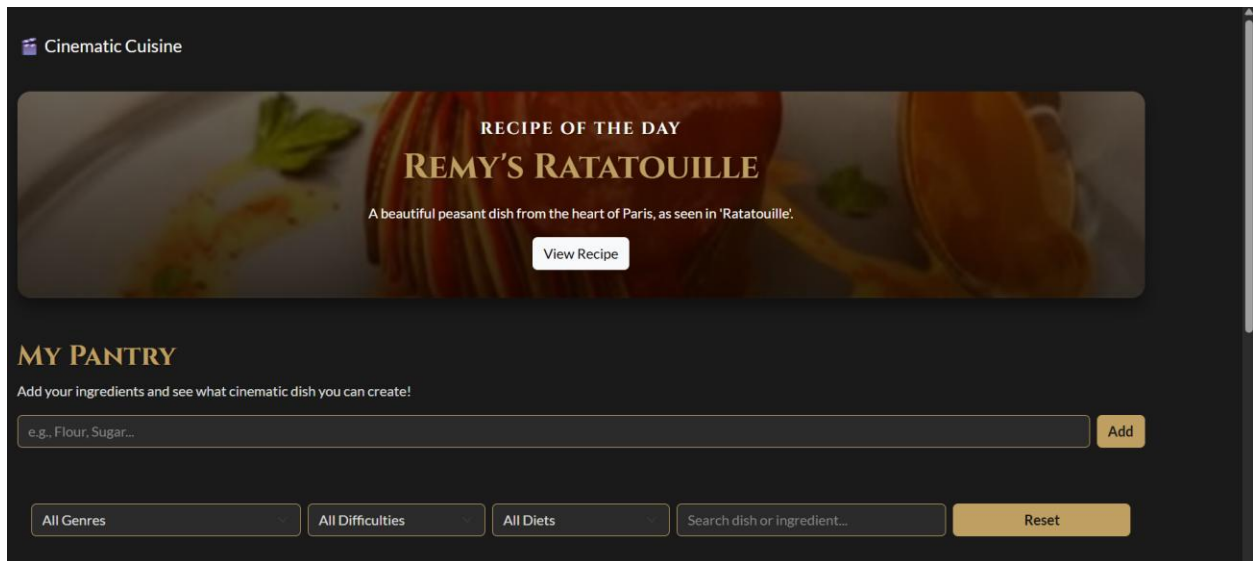
```
body {  
  background-color: var(--primary-color);  
  color: var(--text-color);  
  font-family: var(--font-body);  
  padding-top: 20px;  
  padding-bottom: 20px;  
}
```

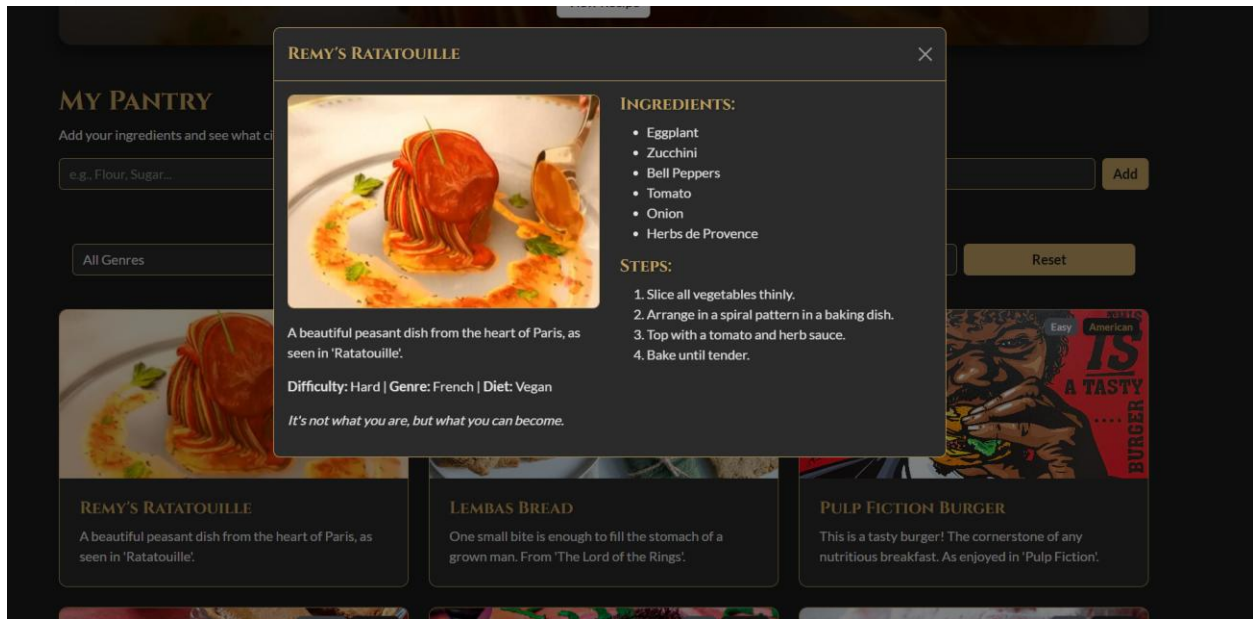
jQuery Snippet: Pantry Pal Ingredient Matching Logic

This jQuery code is the core of the "Pantry Pal" feature. It checks which of the recipe's ingredients are missing from the user's pantry.

```
data.forEach(r => {  
  let cardClass = '';  
  let overlayHtml = '';  
  
  if (pantryIngredients.length > 0) {  
    const recipeIngredientsLower = r.ingredients.map(i => i.toLowerCase());  
    const missingIngredients = recipeIngredientsLower.filter(recipeIng => {  
      return !pantryIngredients.some(pantryIng => recipeIng.includes(pantryIng) || pantryIng.includes(recipeIng));  
    });  
  
    if (missingIngredients.length === 0) {  
      cardClass = 'can-make';  
      overlayHtml = `<div class="card-overlay">You can make this! ✨</div>`;  
    } else {  
      cardClass = 'missing-ingredients';  
      overlayHtml = `<div class="card-overlay">Missing ${missingIngredients.length} ingredient(s)</div>`;  
    }  
  }  
}
```

13. Screenshots of Final Output





11. Conclusion

This project was a comprehensive and practical exercise in modern front-end web development. The primary goal of creating a unique and responsive interactive recipe book was successfully met by leveraging the structural strengths of Bootstrap for layout and the dynamic power of jQuery for interactivity. Through this project, I gained invaluable hands-on experience in structuring a website with semantic HTML, implementing a custom visual theme with advanced CSS, and engineering complex, user-centric features with JavaScript. The project solidified my understanding of responsive design principles and the importance of writing clean, maintainable, and well-documented code.

12. References

- Bootstrap 5.3 Documentation: <https://getbootstrap.com/docs/5.3/>
- jQuery API Documentation: <https://api.jquery.com/>
- MDN Web Docs (for HTML, CSS, JS): <https://developer.mozilla.org/>
- **Google Fonts:** <https://fonts.google.com/>
- L&T Edutech LMS: <https://learn.lntedutech.com/>