Front-End UI/UX Mini Project

RECIPE BOOK

Submitted By:

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Course: L&T FrontEnd UI/UX

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Abstract:

This project is a web-based Recipe Book portal designed to showcase recipes with search and filtering functionality. The primary goal is to provide a simple, interactive, and user-friendly platform where users can explore different cuisines, difficulty levels, and view detailed recipes. Developed using HTML, CSS, Bootstrap, and JavaScript (with jQuery), the portal displays recipes in card layouts with a modal popup for detailed instructions. A responsive design and engaging UI ensure accessibility across devices, making the project both functional and visually appealing. The final outcome is an attractive and easy-to-use recipe portal that helps users discover and learn new dishes conveniently.

Objectives:

- Design a visually engaging and easy-to-use recipe portal

- Implement a responsive layout compatible with desktop, tablet, and mobile

- Provide recipe search functionality by name or ingredients

- Add filtering by cuisine category and difficulty level

- Display recipes in card format with a detail modal for steps and ingredients

- Enhance user interaction with hover effects, badges, and smooth transitions

Scope of the Project:

- Focused on front-end development using HTML, CSS, Bootstrap, and JavaScript

- Includes interactive features such as search, filter, and modal popups

- Designed for cross-device usability (mobile, tablet, desktop)

- Covers recipe listing, detail view, and filtering only

- No server-side or database integration included (recipes are stored statically)

Tools & Technologies Used

Tool/Technology	Purpose
HTML5	Markup and structure of the recipe book
CSS3 + Bootstrap	Styling, responsive design, and grid layout
JavaScript (jQuery)	Search, filtering, and modal functionality
VS Code	Code editor

HTML Structure Overview:

- Used semantic tags: <header>, <main>, <section>, <footer>

- Structured into sections: Title, Filters, Recipe Cards, Modal Detail View

- Navigation simulated with filter dropdowns and search input

- Recipe cards generated dynamically inside a <div class="row"> container

CSS Styling Strategy:

- Custom inline <style> block + Bootstrap for core styling

- Techniques used:

  o Grid & Flexbox (via Bootstrap) for responsive card layout

  o Hover effects & scaling for interactive recipe cards

  o Badges & colors for category and difficulty highlights

  o Background customization for an attractive UI

- Media queries ensure compatibility across devices

Key Features:

Feature	Description
Responsive Design	Recipes adapt seamlessly across devices
Search Functionality	Users can search by recipe name or ingredient
Filters	Dropdown filters for cuisine and difficulty
Recipe Cards	Displayed with image, title, description, and badges

Modal Detail View	Shows ingredients and step-by-step instructions

Challenges Faced & Solutions:

Challenge	Solution
Dynamic filtering errors	Used Array.filter() logic in JavaScript
Modal data not displaying	Linked card click to recipe ID to load data
Layout issues on small screens	Bootstrap grid + media queries fixed scaling

Outcome:

- Successfully developed a clean, interactive recipe portal

- Implemented search, filters, and modal recipe details effectively

- Designed a visually attractive and responsive interface

- Ensured smooth navigation and ease of use for all users

- Gained experience integrating HTML, CSS, Bootstrap, and JavaScript for front-end development

Future Enhancements:

- Add backend/database integration for dynamic recipe storage

- Enable user-uploaded recipes with images

- Implement favorite/like feature for recipes
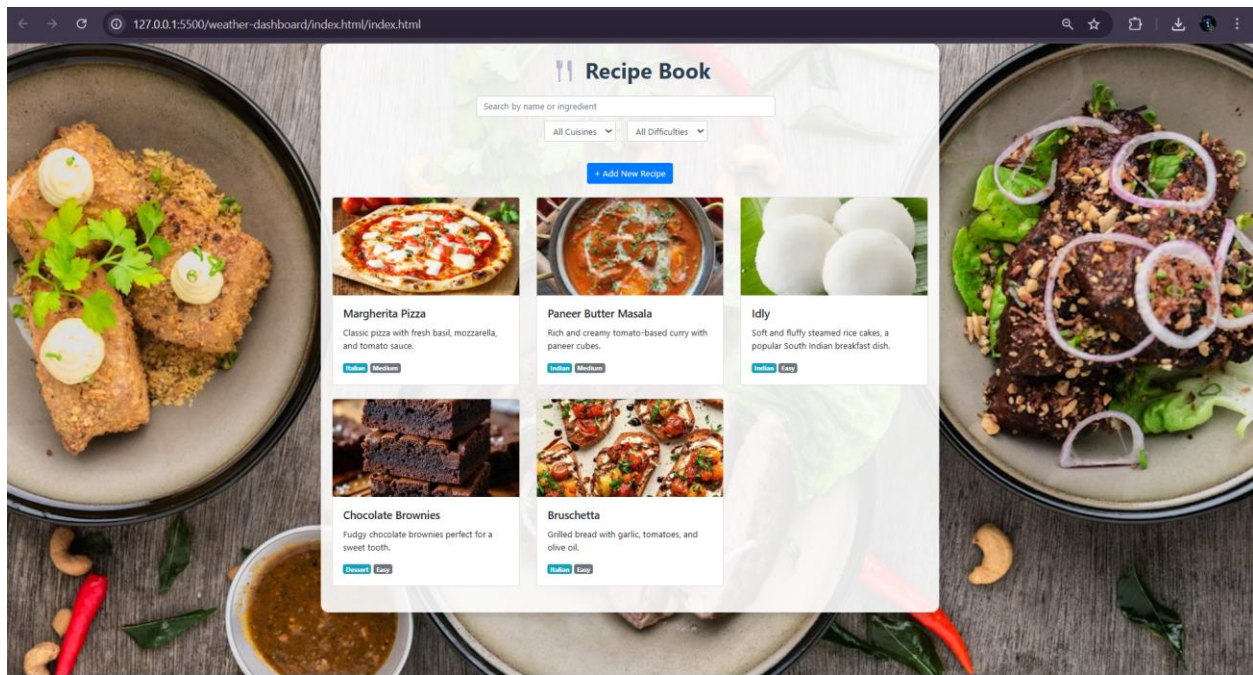
- Add pagination for large recipe collections

- Include nutrition info and cooking time in recipe details

- Add dark/light theme toggle for better personalization

Sample Code:

```html
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1">
6   <title>Recipe Book</title>
7
8   <!-- Bootstrap CSS -->
9   <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap@4.6.2/dist/css/bootstrap.min.css">
10
11  <style>
12    body {
13      background: url("https://images.unsplash.com/photo-1504674900247-0877df9cc836?auto=format&fit=crop&w=1500&q=80") no-repeat center center fixed;
14      background-size: cover;
15      font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
16    }
17    .container {
18      background: ▪rgba(255, 255, 255, 0.9);
19      border-radius: 15px;
20      padding: 20px;
21      box-shadow: 0px 4px 20px ▫rgba(0,0,0,0.2);
22    }
23    .recipe-card img {
24      height: 180px;
25      object-fit: cover;
26      border-top-left-radius: .25rem;
27      border-top-right-radius: .25rem;
28    }
29    .recipe-card {
30      transition: transform .2s, box-shadow .2s;
31      cursor: pointer;
32    }
33    .recipe-card:hover {
34      transform: scale(1.05);
35      box-shadow: 0 6px 20px ▫rgba(0,0,0,0.3);
36    }
37    .filters select, .filters input {
38      margin-right: 1rem;
39      margin-bottom: 1rem;
40    }
41    h1 {
42      font-weight: bold;
43      color: ▫#2c3e50;
44      text-shadow: 1px 1px 2px ▪white;
45    }
46  </style>
47  </head>
48  <body>
49  <div class="container py-4">
50
51    <h1 class="text-center mb-4">🍴 Recipe Book</h1>
52
53    <!-- Filter Section -->
54    <div class="filters text-center mb-4">
55      <input type="text" id="searchInput" class="form-control d-inline-block w-50 mb-2" placeholder="Search by name or ingredient">
56      <div>
57        <select id="categoryFilter" class="form-control d-inline-block w-auto">
58          <option value="">All Cuisines</option>
59          <option value="Italian">Italian</option>
```

```html
2   <html lang="en">
48  <body>
161 <script>
162 $(function(){
240   function renderRecipes(){
256           <div class="card recipe-card" data-id="${r.id}">
257             <img src="${r.image}" class="card-img-top" alt="${r.title}">
258             <div class="card-body">
259               <h5 class="card-title">${r.title}</h5>
260               <p class="card-text">${r.description}</p>
261               <span class="badge badge-info">${r.category}</span>
262               <span class="badge badge-secondary">${r.difficulty}</span>
263             </div>
264           </div>
265         </div>
266       `);
267     });
268   }
269
270   renderRecipes();
271
272   // Event listeners
273   $("#searchInput, #categoryFilter, #difficultyFilter").on("input change", renderRecipes);
274
275   // Show modal with recipe details
276   $("#recipeList").on("click", ".recipe-card", function(){
277     const recipe = recipes.find(r => r.id == $(this).data("id"));
278     $("#recipeModalLabel").text(recipe.title);
279     $("#recipeImage").attr("src", recipe.image);
280     $("#recipeDescription").text(recipe.description);
281     $("#recipeIngredients").html(recipe.ingredients.map(i => `<li>${i}</li>`).join(""));
282     $("#recipeSteps").html(recipe.steps.map(s => `<li>${s}</li>`).join(""));
283     $("#recipeModal").modal("show");
284   });
285
286   // Handle adding new recipe
287   $("#addRecipeForm").on("submit", function(e){
288     e.preventDefault();
289
290     const newRecipe = {
291       id: recipes.length + 1,
292       title: $("#newTitle").val(),
293       category: $("#newCategory").val(),
294       difficulty: $("#newDifficulty").val(),
295       description: $("#newDescription").val(),
296       ingredients: $("#newIngredients").val().split(",").map(i => i.trim()),
297       steps: $("#newSteps").val().split(";").map(s => s.trim()),
298       image: $("#newImage").val()
299     };
300
301     recipes.push(newRecipe);
302     renderRecipes();
303     $("#addRecipeModal").modal("hide");
304     this.reset();
305   });
306 });
307 </script>
308 </body>
309 </html>
```

Screenshots of Final Output:

Conclusion:

The Recipe Book project successfully achieved its goal of creating a user-friendly, visually appealing, and interactive web application for exploring recipes. By combining HTML, CSS, Bootstrap, and JavaScript, the project demonstrates how front-end technologies can be integrated to build a responsive and engaging platform. Features such as search, filtering, and detailed modal views ensure smooth navigation and improved user experience.

Overall, the project not only highlights the importance of clean design and usability but also provides a foundation that can be extended with backend integration and advanced features in the future. It has enhanced practical knowledge of web development concepts while delivering a functional and attractive recipe portal.

References:

- L&T LMS : https://learn.lntedutech.com/Landing/MyCourse

- W3Schools: https://www.w3schools.com/