

Project Journey: Building and Deploying FoodTuck Marketplace

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Introduction

This document summarizes the entire journey of building and deploying the FoodTuck marketplace. The project started with planning and design, progressed through development and testing, and concluded with deployment to a live staging environment on Vercel.

Project Journey

Day 1: Project Planning and Setup

- **Tasks Completed:**
 - Defined project objectives and key features, such as product listing, cart functionality, and user profiles.
 - Set up the project environment using Next.js and connected it to Sanity CMS for dynamic content management.
 - Organized the project folder structure with directories like `src/`, `public/`, and `components/`.
- **Tools Used:** Visual Studio Code, GitHub, Sanity CMS.

Day 2: Backend Integration

- **Tasks Completed:**
 - Integrated APIs to fetch data for products, categories, and user profiles.
 - Designed data schemas in Sanity CMS for managing dynamic content.
 - Implemented error handling for API calls using `try-catch` blocks.
- **Challenges Faced:**
 - Initial issues with API authentication resolved by updating tokens.

Day 3: Building Core Features

- **Tasks Completed:**
 - Created reusable components for the product listing, search bar, and filter panel.
 - Designed dynamic routing for individual product detail pages.
 - Implemented state management using React Context API.
- **Best Practices Followed:** Modular component design and reusable logic.

Day 4: Dynamic Frontend Development

- **Tasks Completed:**
 - Built responsive UI components, ensuring compatibility across devices.
 - Enhanced user experience with features like pagination and a wishlist.
 - Tested components using mock data to ensure proper functionality.
- **Performance Optimization:** Lazy-loaded images and reduced unused CSS.

Day 5: Testing and Refinement

- **Tasks Completed:**
 - Conducted functional, performance, and security testing.
 - Used Lighthouse and GTmetrix for performance analysis.
 - Fixed issues related to responsiveness and API error handling.
- **Results:**
 - Improved load time to under 2 seconds.
 - Resolved search bar issue for irrelevant queries.

Day 6: Deployment Preparation and Staging Setup

- **Tasks Completed:**
 - Selected Vercel as the hosting platform.
 - Connected the GitHub repository to Vercel for automated builds and deployments.
 - Configured environment variables securely within Vercel.
 - Deployed the application to a staging environment for final testing.
- **Testing in Staging:**
 - Verified workflows like product search, cart operations, and checkout.
 - Conducted cross-browser testing on Chrome, Firefox, and Microsoft Edge.

Deployment Process

1. **Hosting Platform:**
 - Used Vercel for its simplicity and seamless Next.js integration.
2. **Repository Setup:**
 - Organized project files into logical directories.
3. **Environment Variables:**
 - Configured sensitive data like API keys in the Vercel dashboard.
 - Ensured security by excluding `.env` files from the repository.
4. **Deployment Steps:**
 - Pushed the latest code to the `main` branch on GitHub.
 - Vercel automatically triggered a build and deployed the site to a live staging URL.
5. **Validation:**

- Tested the deployed site for functionality, responsiveness, and performance.
 - Confirmed that all features worked as intended in the staging environment.
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Conclusion

The FoodTuck marketplace project was successfully built and deployed, following best practices in development, testing, and deployment. The staging environment on Vercel provides a production-like setting for further testing and refinement. This journey demonstrated the importance of planning, and attention to detail in delivering a high-quality application.
