Project Proposal

PIDDZ Delivery App
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Purpose

The goal of this project is to build a **customizable, web-based food delivery application** tailored for small to medium-sized pizza businesses. Unlike generic e-commerce or food delivery platforms, this application is designed specifically for independent pizza shops that may not have the resources to invest in large-scale solutions like Uber Eats, Grubhub, or Domino's proprietary systems.

Our purpose is twofold:

1. **Business Value** – Provide small businesses with an affordable and easily deployable online ordering solution that reduces dependency on third-party services (which often take high commission fees).

2. **Customer Value** – Give customers a smooth, pizza-specific online ordering experience with an intuitive menu system, real-time customization (toppings, crust, etc.), and a simplified checkout process.

By focusing on the pizza industry niche, PIDDZ goes beyond being a generic "e-commerce site" by offering **industry-specific features** such as customizable pizza options, preset combo deals, and real-time store availability.

Benefits

- **For Customers:**

  - Convenience of browsing, customizing, and ordering pizzas online.

  - A streamlined checkout process with minimal steps, optimized for both desktop and mobile.

  - Order tracking and confirmation for improved satisfaction.

- **For Business Owners:**

  - Lower operating costs compared to using third-party platforms.

  - Increased efficiency by automating menu updates, order management, and customer interactions.

- A customizable system that reflects the branding of the pizza shop.

- Ability to collect useful sales data (popular menu items, order frequency, peak times).

- **Differentiation from Existing Solutions:**
  Unlike generic shopping carts, our app will include **pizza-specific customization** (size, crust type, toppings, sides, combo offers), quick reordering for returning customers, and optional local hosting for shops that want full control of their customer data.

Major Functionality

1. **Menu Browsing and Item Selection**

   - Interactive pizza menu with options for customization (size, crust, toppings).

   - Category filtering (pizzas, sides, drinks, desserts).

2. **Shopping Cart Functionality**

   - Add, remove, and update items with live price calculations.

   - Customizable items saved in cart with all modifications (toppings, etc.).

   - Real-time cart preview across the site.

3. **Order Submission Flow**

   - Secure checkout with customer info (name, address, phone, payment method [demo: cash on delivery or mock payment]).

   - Confirmation page with summary of order and estimated prep time.

4. **Order Management (Business View)**

   - Business dashboard to view incoming orders.

   - Ability for staff to update order status (e.g., "preparing," "ready," "out for delivery").

Target Users

- **Primary Users:** Small to medium-sized pizza restaurants that lack a dedicated online ordering platform.

- **Secondary Users:** Customers who prefer simple, direct ordering from local pizza shops rather than through third-party apps.

Technologies

The application will be developed as a **web-based platform**, using the following technologies:

- **HTML:** Provides semantic structure and accessibility.

- **CSS (Flexbox, Grid, Responsive Design):** Ensures a clean, mobile-friendly layout across devices.

- **JavaScript:** Implements client-side interactions (dynamic cart updates, menu customization, form validation).

- **React (optional, scope-permitting):** For reusable UI components, state management, and smooth user experience.

- **Python**: For debugging and testing our code using selenium (a browser automation library).

- **Firebase (recommended):** Database to store menu items, user carts, and orders; also provides authentication and hosting.

- **Version Control (Git/GitHub):** For collaboration, version tracking, and issue management.

- **Development Tools:** VS Code, npm/Vite for build management, browser dev tools for debugging.

- **Deployment/Hosting:** Demonstrated locally from laptops

Testing and Documentation

- **Testing Plan:**

  - Unit testing of components (menu, cart, checkout) using **Selenium**.

  - Integration testing to ensure smooth navigation between features.

  - User testing with sample orders to evaluate usability and performance.

- **Documentation:**

  - Developer documentation (code structure, setup instructions).

  - User documentation (step-by-step guide for restaurant staff to manage menus/orders).

  - Final report summarizing purpose, design decisions, challenges, and results.

Team Members and Roles

All team members will share responsibilities to gain experience across the development cycle.

- **Project Manager (Rotational):** Oversees coordination, ensures milestones are met.

- **Ishrak – Menu Developer**

  o Develops the interactive menu browsing page.

  o Builds UI for browsing, filtering, and customizing pizza items.

- **Prachish – Shopping Cart Developer**

  o Implements cart functionality (add/update/remove items).

  o Manages application state within the cart.

  o Designs intuitive, real-time cart interactions.

- **Zeyu – Checkout Flow Developer**

  o Builds the checkout process (review cart, enter user details, confirm order).

  o Designs summary/confirmation page with estimated prep/delivery time.

  o Focuses on secure and user-friendly checkout experience.

- **Djoulie – UI/Styling Specialist**

  o Ensures consistent CSS styling and responsive design.

  o Applies design principles to make the app mobile-first.

  o Maintains brand customization options for businesses.

- **Daniel – Integration & Navigation Developer**

  o Integrates features from all developers into a unified app.

  o Implements smooth navigation and page transitions.

  o Ensures cross-component consistency.

- **UX Designer (All Members Contribute):**
  Each member designs the UI for their feature with usability in mind, collaborating to maintain a consistent overall experience.