

Project Scope: Online Retail Store

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Project Focus:

- Develop a comprehensive online retail platform with seamless customer and administrative functionalities.
- Offer a wide range of products across various categories (electronics, groceries, etc.)
- Provide users with an intuitive interface for browsing, searching, and purchasing items.
- Implement a robust backend system for managing customer data, orders, inventory, and payments.

Target Audience:

- Customers seeking convenient online shopping with fast delivery options.
- Employees, including delivery personnel, for efficient order fulfilment.

Customer-facing:

- Login/Signup: Create or access existing accounts for personalized shopping experiences.
- Product Navigation & Search: Browse comprehensive product catalogues and utilize search filters for quick product discovery.
- Detailed Product Information: View product descriptions, specifications, reviews, and ratings for informed purchasing decisions.
- Shopping Cart: Add, remove, and manage items in a virtual cart before checkout.
- Multiple Payment Options: Securely pay for purchases through COD, UPI, net banking, debit cards, etc.
- Order Tracking: Monitor order progress and estimated delivery times.
- Best Sellers & Deals: Access special offers and promotions on popular items.
- User Account Management: Update personal information, track order history, and manage saved payment methods.

Admin-facing:

- Login/Signup: Admins can manage access with secure logins: Only admin create new admin accounts and log in using unique usernames and passwords.
- Category Management: Add, edit, or delete product categories.
- Product Management: Add new products, update existing ones, set discounts, and manage inventory levels.

- Deal Management: Create and manage special offers and promotions for specific occasions or product categories.
- Order Management: View, process, and update customer orders.
- Employee Management: Add, remove, and update employee information, assign roles, and manage salaries.
- Delivery Management: Assign delivery personnel to orders and track their progress.
- Sales Analysis: Generate reports on sales performance, customer trends, and inventory levels.

Technical Stack:

- Front-End: HTML, CSS, JavaScript, React.js/Vue.js (optional)
HTML is the standard markup language for creating web applications.
CSS will be used to style the contents and control the visual presentation.
JavaScript will be used to enhance and make the application more dynamic and interactive.
React.js/Vue.js will be used to build the user interfaces more seamlessly and make the UI more appealing.
- Back-End: Node.js/Python, MySQL, SQL.
Both the technologies – Node.js or Python will be used for backend development as these are versatile and easy to integrate. Both are well supported with extensive libraries to develop scalable services.

MySQL will be employed as a DBMS to store and manage the data.
SQL will be used to make operations like: querying, updating, inserting, and deleting data from the Database.

Project Constraints:

- One customer account per email ID or mobile number.
- Single cart per account.
- Delivery Address can't be null.
- A check constraint on the delivery date so as to have a future date.
- Multiple payment methods per account (one-to-many relationship).
- Many-to-many relationships between customers and products, products and sellers.
- Orders placed only after confirmed payment. Emptying cart after order placement.
- Each order can only include up to 3 units of any individual product.

Contributions:

- Vipul (2022576) – Discussed the scope with members and gave the admin and customers related points.
- Nitin Kumar (2022337) – Discussed the scope with members and handled constraints related points.
- Nikhil Kumar (2022322) – Discussed the scope with members and gave the tech stack to be used.