E-commerce Website Requirements Document

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1. Project Overview

The objective of this project is to develop an e-commerce website that provides a seamless and intuitive shopping experience for users. The website should cater to both retail customers and administrators, supporting multiple product categories, personalized recommendations, secure payments, and integration with logistics for order tracking and fulfillment.

The website should be built with scalability, security, and usability in mind, ensuring high availability, fast response times, and data privacy compliance.

2. Functional Requirements

2.1 User Management

- User Registration: Users should be able to register using their email address, social media accounts, or mobile number. The system should support up to 1 million user accounts.
- Login and Authentication: Users can log in with a password or OTP. Support for multi-factor authentication (MFA) should be included, with a requirement that at least 50% of users should be enrolled in MFA for enhanced security.
- Profile Management: Users should be able to update personal information, manage up to 10 addresses, and change passwords.

- Account Recovery: Implement password recovery using email or mobile verification, with recovery success rates tracked to ensure 90% recovery rate within 30 minutes.

2.2 Product Catalog

- Product Listings: Display multiple categories of products with detailed descriptions, images, prices, and availability. The catalog should support up to 100,000 products, each with at least 3 images.
- Product Search and Filtering: Allow users to search for products by keywords, categories, price range, brand, etc. Search results should be displayed within 2 seconds for 95% of queries.
- Product Variants: Support different variants of a product (e.g., size, color) with real-time availability. Ensure at least 90% accuracy in showing real-time inventory.
- Product Reviews and Ratings: Users should be able to leave reviews and ratings for purchased products. Ratings should support 1 to 5 stars, and reviews must be moderated to comply with content guidelines.
- Product Comparison: Allow users to compare up to 5 products based on features, pricing, and reviews.

2.3 Shopping Cart and Wishlist

- Add to Cart: Users should be able to add items to their shopping cart, modify quantities, or remove items. The system should support up to 500 items in a single cart.
- Save for Later: Users should have the option to save items to a wishlist for future purchases, with each user allowed up to 100 wishlist items.
- Persistent Cart: The cart should be persistent across sessions for logged-in users, with a retention period of 30 days.
- Promotional Codes: Allow users to apply discount codes or vouchers during checkout. Support for

multiple code types (e.g., percentage discount, fixed amount, free shipping).

2.4 Checkout and Payments

- Checkout Process: Implement a seamless checkout process with guest checkout options. Ensure that 95% of successful checkouts complete in under 2 minutes.
- Payment Methods: Support multiple payment options including credit/debit cards, digital wallets, net banking, and cash on delivery. Ensure at least 3 digital wallets are supported.
- Payment Gateway Integration: Integrate with popular payment gateways (e.g., Stripe, PayPal) for secure transactions. Payment gateway response times should not exceed 5 seconds.
- Order Confirmation: Send order confirmation details via email and SMS within 1 minute of order placement.
- Tax Calculation: Automatically calculate taxes based on user location and applicable laws, ensuring compliance for at least 5 different regions.

2.5 Order Management

- Order Tracking: Users should be able to track the status of their orders in real-time, with tracking updates available every 2 hours.
- Order History: Provide users with a detailed view of their past orders, including invoices for up to 2 years.
- Returns and Cancellations: Allow users to request returns, replacements, or cancellations with clear policies. Ensure that 80% of returns are processed within 5 business days.
- Order Notifications: Send real-time notifications to users regarding order status updates (e.g., shipped, out for delivery) with a 95% delivery success rate.

2.6 Personalized Recommendations

- Recommendation Engine: Display personalized product recommendations based on user behavior and purchase history, ensuring at least 20% click-through rate on recommendations.
- Recently Viewed: Show users their recently viewed products for easier navigation, retaining up to 20 products per user.
- Frequently Bought Together: Suggest products frequently bought together with items in the user's cart, with a 10% increase in average order value as a goal.

2.7 Admin Management

- Product Management: Admins should be able to add, update, or remove products, including images, pricing, and inventory. Ensure inventory updates are reflected within 5 minutes.
- User Management: Admins should be able to manage users, view user activity, and handle account-related issues. User issues should be resolved within 24 hours.
- Order Fulfillment: Manage orders, returns, and refunds. Integrate with logistics partners for shipping and delivery, ensuring 95% on-time shipment.
- Promotional Campaigns: Admins should be able to create and manage promotional campaigns, discount codes, and flash sales. Campaigns should be activated within 10 minutes of setup.
- Inventory Alerts: Send alerts to admins when inventory levels are low for a particular product, with thresholds set based on sales trends.

2.8 Customer Support

- Live Chat Support: Provide live chat support for users to get assistance in real-time, with a target response time of under 30 seconds.

- Help Center: Include a comprehensive help center with FAQs, guides, and support articles, covering at least 100 common questions.
- Ticket Management: Allow users to create support tickets for unresolved issues, with admins having tools to manage and respond to these tickets. 90% of tickets should be resolved within 48 hours.

2.9 Loyalty Program

- Reward Points: Implement a loyalty program that rewards users with points for purchases. Users should be able to redeem points for discounts, with a goal of increasing repeat purchases by 15%.
- Membership Tiers: Introduce membership tiers (e.g., Bronze, Silver, Gold) based on user spending, with each tier offering additional perks (e.g., free shipping, early access to sales).

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