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Day - 2 Hackathon - 3 18-01-2025

General E-commerce Marketplace Technical

Foundation

Prepared Date: January 16, 2025 by: Azmat Ali

Technical Plan Aligned with Business Goals

Business Objective

- Create a scalable e-commerce platfom
- Provide seamless shopping experiene

Enablefficient product management
Ensure secure payment processing
Implement order tracking and management
Technical Requirement
Frontend Requirements
Next.js-based responsive web application
Server-side rendering for improve
SEO
Client-side state management using React Context / Redux
Progressive Web App (PWA) capabilities
 Responsive design breakpoints: Mobile (< 768px), Tablet (76px -1024px), Desktop (> 104px)
Backend Requirements (SanitCMS)
Content management for products, categories, and orders
Real-time inventory tacking

Order management system
Customer data man gement
Role-based access control
Third-party Interations
Payment Gateway (Stripe)
• Email Service (endGrid)
• Image CDN (Cludinary)
Analytics (Google Aalytics)
Search Implementation
Implementation Roadmap
Phase 1: Setup & Basic Structure
Initialize Next.js project
• Set up Sanity CMS
Implement basic routing
Create core components

Phase 2: Core Features

- Product listing and details
- Shopping cart functionality
- User authentication
- Basic checkout process
- **Phase 3: Integration & Testing**
- Payment gateway integration
- Order management
- Email notifications
- Testing and bug ixes

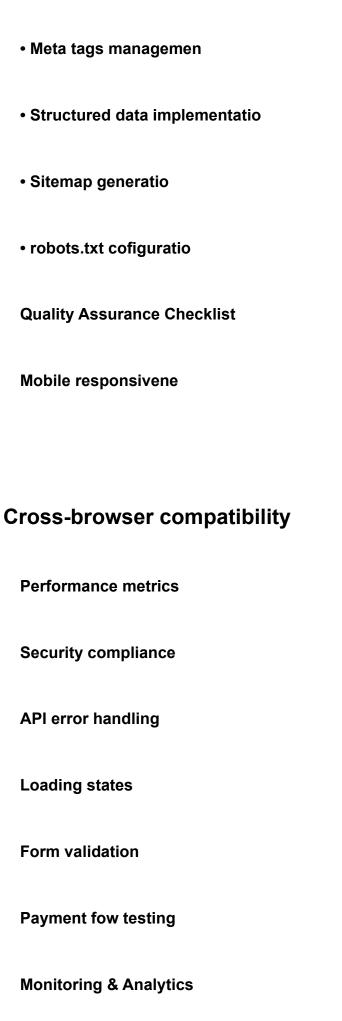
Best Practices Implementation
Performance Optimization
Image optimization using next/image

- Lazy loading for product listing
- API response caching
- Code splitting for route-based chunkin

Security Measure

- Input validatio
- XSS protectio
- CSRF token
- Secure payment handlin

SEO Consideration



- Implement error tracking (Sentry)
- Set up performance monitoring
- Track user behavior
- Monitor API performance
- Track conversion rates

This documentation serves as a comprehensive guide for implementing the ecommerce marketplace, focusing on maintainability, scalability, and user experience.

Prepared By: Azmat Ali