# **Product Blueprint - E-commerce Application**

## **1. Product Overview**

This blueprint defines the core features, user roles, and technology stack for the e-commerce application. It focuses on providing a seamless shopping experience for customers and efficient management for sellers and administrators.

### **1.1 Purpose**

The application aims to connect buyers and sellers, enabling smooth product browsing, purchasing, and order tracking. It supports various roles, including customers, sellers, and admins, ensuring secure and efficient transactions.

### **1.2 Key Objectives**

* Simplify online shopping with intuitive UI
* Optimize product search and discovery
* Secure and fast checkout process
* Comprehensive order management
* Real-time inventory updates

## **2. Key Features**

### **2.1 User Management**

* User registration and login
* Password reset and account recovery
* Role-based access control (Customer, Seller, Admin)

### **2.2 Product Management**

* Product listing and categorization
* Product images, descriptions, and specifications
* Stock management and pricing

### **2.3 Shopping Cart**

* Add to cart, update quantities, remove items
* Cart total calculation
* Wishlist and save for later options

### **2.4 Checkout and Payment**

* Order summary and confirmation
* Multiple payment methods (credit card, UPI, net banking)
* Address management and delivery options

### **2.5 Order Management**

* Order tracking and status updates
* Order history and reordering options
* Cancellation and refund processing

### **2.6 Reviews and Ratings**

* Customer reviews and star ratings
* Review moderation for quality control

### **2.7 Notifications**

* Order confirmation, delivery updates, promotions
* Real-time alerts for low stock or new products

## **3. Technology Stack**

* Frontend: Angular, NgRx, Bootstrap
* Backend: Node.js, Express.js
* Database: MongoDB
* Authentication: JWT, bcrypt
* Payment Integration: Stripe, PayPal

## **4. Integrations**

* Payment gateways (Stripe, PayPal)
* Shipping services (FedEx, Blue Dart)
* Analytics tools (Google Analytics, Mixpanel)

## **5. Scalability and Performance**

* Caching for faster load times
* Load balancing for high traffic
* Database optimization for faster queries

## **6. Future Enhancements**

* AI-based product recommendations
* Personalized promotions
* Multi-language and multi-currency support
* Mobile app integration