E-Commerce Platform with Multi-Vendor

- ◆ **Functional Requirements**

1. Authentication & Roles

- **Super Admin** → Manages vendors, products, categories, users, and payments.
- **Vendor (Seller)** → Registers, submits KYC documents, uploads products, tracks sales.
- **Customer (Buyer)** → Registers, browses products, places orders, makes payments.

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2. Vendor Registration & Verification

- Vendor signs up → fills registration form (name, business name, GST/PAN, contact).
- Uploads **KYC documents** (GST, Aadhaar, PAN, Business License).
- Admin reviews & **approves/rejects vendor**.
- Only verified vendors can list products.
- Vendors get **dashboard access** after approval.

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3. Product Management

- Vendors can:
  - Add/edit/delete products.
  - Set price, stock, discounts, category.
  - Upload product images/videos.
- Admin can monitor and approve products before publishing (optional).
- Product categorization & search filters.

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4. Order Management

- Customers add products to **cart** and place orders.
- Vendors receive **order notifications**.
- Vendors update order status (Processing → Shipped → Delivered).
- Customers can track order status.
- Option for order cancellation/return/refund.

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5. Payment Module (Razorpay ✅)

- Customers can pay using **UPI, Cards, Netbanking, Wallets**.

- Payment Flow:
  - Customer places order → Backend generates **Razorpay Order ID**.
  - Razorpay Checkout opens → Payment processed.
  - On success:
    - Order marked as "Paid".
    - Vendor notified.
    - Invoice generated.
    - Email/SMS confirmation sent.
  - On failure: retry option.
- **Revenue Split (Optional Advanced Feature)**
  - Razorpay **Route API** to auto-split payments between admin & vendor.
  - Example: Admin keeps 10% commission, vendor gets 90%.

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6. Vendor Dashboard

- Manage products.
- View orders & sales.
- Track earnings (with Razorpay settlements).
- Withdraw balance (if not using auto-split).

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7. Customer Dashboard

- View order history.
- Track live orders.
- Manage profile & addresses.
- Download invoices.

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8. Admin Dashboard

- Approve/reject vendors.
- Monitor all products & orders.
- Manage categories, discounts, banners.
- Track overall revenue & vendor earnings.
- Handle refunds/returns.

9. Reports & Analytics

- Sales reports (vendor-wise, category-wise).

- Revenue reports.

- Order statistics (daily/weekly/monthly).

- Top-selling products/vendors.

10. Notifications & Communication

- Email/SMS/Push notifications for order status, payment confirmation.

- In-app chat between customer & vendor (optional).

◆ Non-Functional Requirements

- **Security** → Secure vendor KYC docs, encrypted passwords, Razorpay signature verification.

- **Performance** → Fast product search, optimized image loading.

- **Scalability** → Support thousands of products/vendors.

- **Reliability** → Razorpay webhooks for payment status verification.

- **Usability** → Mobile-first design, responsive UI.