**Functional Requirements Specification (FRS)**

**Project:** E-Commerce Application  
**Version:** 1.0  
**Prepared By:** [Insert Name]  
**Date:** [Insert Date]

**1️⃣ Document Purpose**

To detail the functional requirements necessary for the successful development and deployment of the E-Commerce Application.

**2️⃣ System Overview**

The E-Commerce Application will allow end-users to browse products, manage carts, make payments, track orders, and administrators to manage inventory and view reports.

**3️⃣ Functional Requirements**

**3.1 User Management**

| **Requirement ID** | **Requirement Description** | **Priority** |
| --- | --- | --- |
| FR-001 | Users must be able to register using email/mobile. | High |
| FR-002 | Login functionality using password or OTP. | High |
| FR-003 | Forgot password/reset password capability. | High |
| FR-004 | User profile management (name, address, contact). | Medium |

**3.2 Product Catalog**

| **Requirement ID** | **Requirement Description** | **Priority** |
| --- | --- | --- |
| FR-005 | Display product list with images, name, price, and availability status. | High |
| FR-006 | Search functionality using keywords. | High |
| FR-007 | Filter products by categories, price range, brand, etc. | High |
| FR-008 | Sort products (e.g., by price, popularity, newest). | Medium |
| FR-009 | View detailed product description with images and specifications. | High |

**3.3 Shopping Cart & Checkout**

| **Requirement ID** | **Requirement Description** | **Priority** |
| --- | --- | --- |
| FR-010 | Add items to shopping cart. | High |
| FR-011 | Update item quantities or remove items from cart. | High |
| FR-012 | View total price including taxes and discounts. | High |
| FR-013 | Apply promo codes at checkout. | Medium |
| FR-014 | Place order with shipping and billing address input. | High |

**3.4 Payment Processing**

| **Requirement ID** | **Requirement Description** | **Priority** |
| --- | --- | --- |
| FR-015 | Integration with payment gateways (Credit Card, UPI, Wallets, NetBanking). | High |
| FR-016 | Handle payment success and failure gracefully with notifications. | High |
| FR-017 | Generate order confirmation after successful payment. | High |

**3.5 Order Management**

| **Requirement ID** | **Requirement Description** | **Priority** |
| --- | --- | --- |
| FR-018 | Order summary page displaying all customer orders. | Medium |
| FR-019 | Real-time order tracking (status: Confirmed, Shipped, Delivered). | Medium |
| FR-020 | Allow users to cancel orders before shipping. | Medium |

**3.6 Notifications**

| **Requirement ID** | **Requirement Description** | **Priority** |
| --- | --- | --- |
| FR-021 | Send order confirmation via email/SMS. | High |
| FR-022 | Notify users on shipping, delivery, and order updates. | Medium |

**3.7 Admin Panel**

| **Requirement ID** | **Requirement Description** | **Priority** |
| --- | --- | --- |
| FR-023 | Admin login and authentication. | High |
| FR-024 | Manage products (add/edit/delete), categories, and inventory. | High |
| FR-025 | View and manage customer orders and payment statuses. | High |
| FR-026 | Generate reports (sales, revenue, inventory stock). | Medium |
| FR-027 | Manage discount codes and promotional offers. | Medium |

**3.8 Security Requirements**

| **Requirement ID** | **Requirement Description** | **Priority** |
| --- | --- | --- |
| FR-028 | Encrypt sensitive data (e.g., passwords, payment data). | High |
| FR-029 | Ensure secure transactions via HTTPS. | High |
| FR-030 | Role-based access control for admin panel. | High |

**3.9 Reporting Requirements**

| **Requirement ID** | **Requirement Description** | **Priority** |
| --- | --- | --- |
| FR-031 | Sales and revenue reports. | Medium |
| FR-032 | Inventory stock reports. | Medium |
| FR-033 | Order and payment status reports. | Medium |

**4️⃣ Non-Functional Requirements (Summary)**

* **Performance:** Application should load product pages within 3 seconds.
* **Scalability:** System should support up to 10,000 concurrent users.
* **Security:** Must comply with PCI-DSS guidelines.
* **Availability:** 99.9% uptime required.

**5️⃣ Assumptions and Dependencies**

* Payment gateway APIs (e.g., Razorpay, PayU) will be available.
* SMS/Email service providers are pre-selected.
* Hosting infrastructure (AWS/Azure) will be provisioned prior to deployment.

**6️⃣ Approval**

| **Name** | **Role** | **Signature** | **Date** |
| --- | --- | --- | --- |
| [Project Sponsor] | Sponsor |  |  |
| [Product Owner] | Business Lead |  |  |
| [Project Manager] | PM |  |  |