

## E-commerce Product Catalog Application Requirements

### User Management

- User Registration & Authentication:
  - - Users can sign up, log in, and manage their accounts.
  - - Admin and customer roles to differentiate privileges.

### Product Management

- CRUD Operations for Products:
  - - Admins can add, edit, update, and delete products.
  - - Product details include title, description, price, stock status, SKU, and product images.
  - - Support for multiple images per product.
- Product Categorization:
  - - Admins can create and manage product categories and subcategories.
  - - Products can be assigned to one or more categories.
- Product Variants:
  - - Support for product variations (e.g., size, color) with individual SKU and stock levels.

### Inventory Management\*

- Stock Tracking:
  - - Track product stock levels, and show availability status (In Stock, Out of Stock).
  - - Admins can set stock alerts to notify when inventory is low.
- Bulk Upload:
  - - Option for admins to upload products in bulk using a CSV file.

### Shopping Cart & Checkout

- Shopping Cart:
  - - Users can add products to the cart, adjust quantities, and remove items.
  - - Persistent cart, so items are saved even after users log out.
- Checkout Process:
  - - Secure checkout process with multiple steps (Shipping Details, Payment, Review Order).

### Order Management

- Order Processing:
  - - Admins can view and manage orders, including order statuses (Pending, Processing, Shipped, Delivered).
  - - Customers can view their order history.
- Order Notifications:

- - Send email notifications to customers upon order placement, shipment, and delivery.

### **Product Search & Filtering**

- Advanced Search:
  - - Users can search for products by name, category, or keyword.
- Product Filters:
  - - Filter products by categories, price range, brand, and other attributes.
  - - Sorting options (e.g., by price, popularity, rating).

### **Additional Features\***

- Wishlist:
  - - Users can save products to a wishlist for later purchase.
- Admin Notifications:
  - - Notify admins for important events (e.g., low stock, new orders).
- SEO-Friendly URLs:
  - - Generate SEO-friendly URLs for products and categories.
  - - Meta tags and descriptions for product pages to improve search engine rankings.

*\* Will be done in phase 2, if required*