

DAC- GROUP D1

ECOMMERCE PLATFORM

ANUPAM SINGH (87065) | AYUSH KUSHWAHA (87261)

ASIM MULLA (86875) | HRISHIKESH JADHAV (87260)

Functional Requirements

1. User Management

- a. Users must be able to register with email and password
- b. Users must be able to login/logout
- c. System must differentiate between admin and regular users
- d. Users must be able to view/edit their profile
- e. Users must be able to reset their password

2. Product Management

- a. Admin must be able to add/edit/delete products
- b. Admin must be able to manage product categories
- c. Admin must be able to manage product inventory
- d. System must display products with details (name, price, description, image)
- e. System must support product categorization
- f. Users must be able to search for products
- g. Users must be able to filter products by category, price
- h. Users must be able to sort products by price, name, date

3. Shopping Cart

- a. Users must be able to add/remove items

- b. Users must be able to modify quantities
- c. System must calculate total price including any taxes
- d. System must save cart items for returning users
- e. System must validate stock availability

4. Order Processing

- a. Users must be able to enter shipping information
- b. Users must be able to select payment method
- c. System must generate order confirmation
- d. Users must be able to view order history
- e. Admin must be able to view and manage orders

5. Admin Dashboard

- a. Admin must be able to view basic analytics
- b. Admin must be able to manage users
- c. Admin must be able to manage orders
- d. Admin must be able to view inventory status

Non-Functional Requirements

1. Performance

- a. Page load time should not exceed 3 seconds
- b. System should handle multiple concurrent users
- c. Search results should appear within 2 seconds
- d. Shopping cart updates should be immediate

2. Security

- a. User passwords must be encrypted
- b. Admin access must be restricted
- c. Payment information must be handled securely
- d. Session management must be implemented
- e. System must prevent SQL injection
- f. System must prevent cross-site scripting (XSS)

3. Usability

- a. Interface must be intuitive and easy to navigate
- b. System must be responsive across devices
- c. Error messages must be clear and helpful
- d. Forms must have proper validation
- e. System must provide feedback for user actions

4. Maintainability

- a. Code must be well-documented
- b. System must follow modular design
- c. System should be easy to update
- d. Database schema should be properly structured

5. Data Management

- a. Regular database backups
- b. Efficient data retrieval
- c. Data integrity maintenance
- d. Proper error logging

Must-Have Features (Core)

1. User Authentication & Management

- a. User registration and login
- b. Role-based access (Admin/Customer)
- c. Basic profile management
- d. Password reset functionality

2. Product Management & Display

- a. Product listing page with grid/list view
- b. Product details page with images, description, price
- c. Search functionality
- d. Sorting (price high/low, newest, alphabetical)
- e. Filters (category, price range, availability)

3. Shopping Cart

- a. Add/remove products
- b. Update quantities
- c. Cart total calculation
- d. Save cart items for returning users

4. Checkout Process

- a. Shipping address input
- b. Basic payment form (simulation is fine)
- c. Order confirmation
- d. Order history

5. Admin Panel

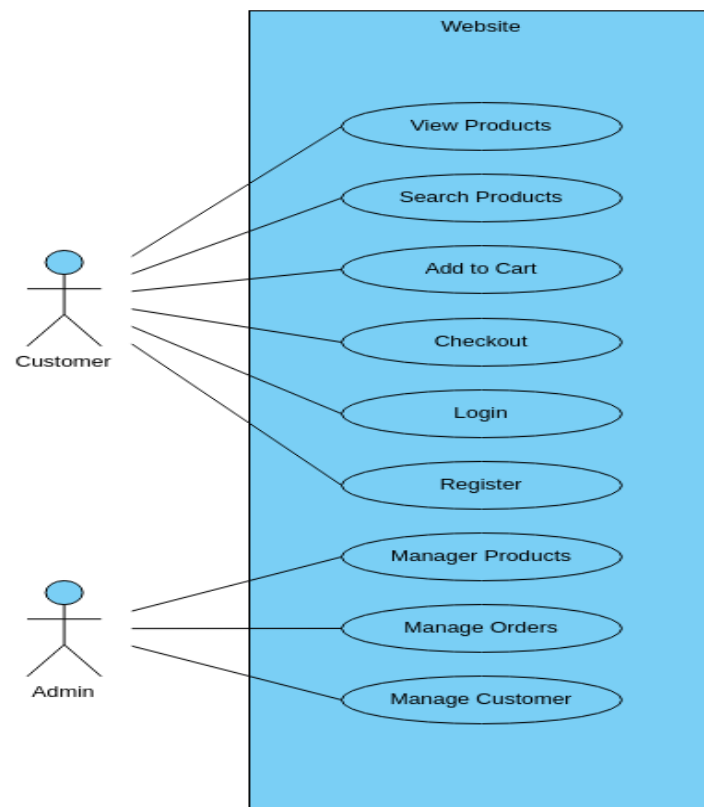
- a. Dashboard overview
- b. Product management (CRUD operations)
- c. Order management/tracking
- d. User management
- e. Basic inventory tracking
- f. Category management

Implementation order

1. Start with user authentication and admin setup
2. Implement product management through admin panel
3. Build product listing with sorting and filters

4. Add shopping cart functionality
5. Create checkout process
6. Finally, polish the user interface and add any secondary features if time permits

USE CASE DIAGRAM



Customer Facing Use cases:

1-View Products:

Customers can view products on home screen.

2-Search for products:

Customers can search for their desired products from the provided search box.

3-Add to Cart:

Customers can add the desired product to a shopping cart.

4-Checkout:

Customers can checkout for payments for their added products.

5-Login:

Registered user can login in with id and password.

6-Register:

New users have the option to register on the website.

Business Facing Use Cases:

1-Manage Customers:

Admin can manage the customers on the platform, add customers, delete customers etc.

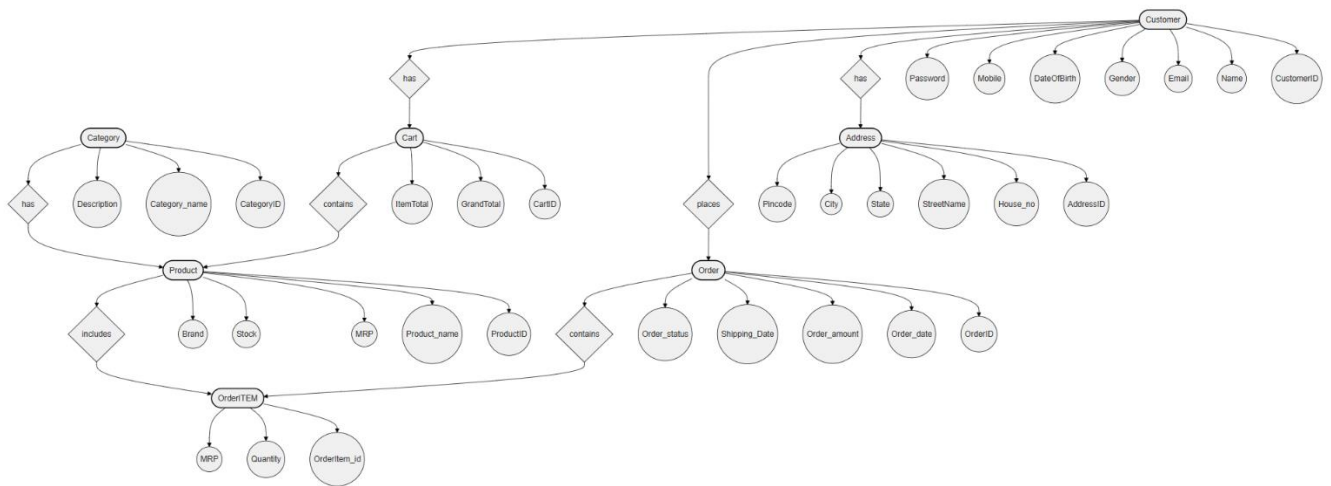
2-Manage Orders:

Admin can view all the orders placed on the platform.

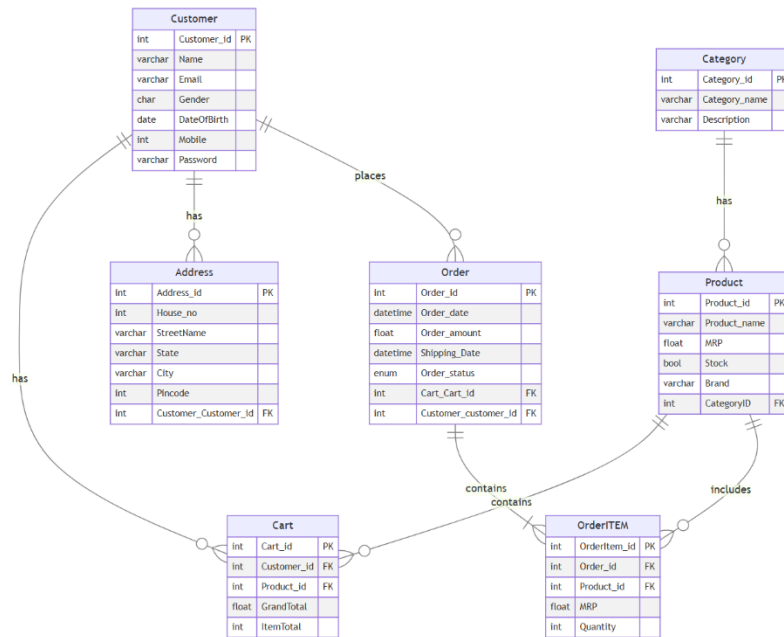
3-Manage Products:

Inventory can be managed, restocking of sold out products, etc.

ER DIAGRAM

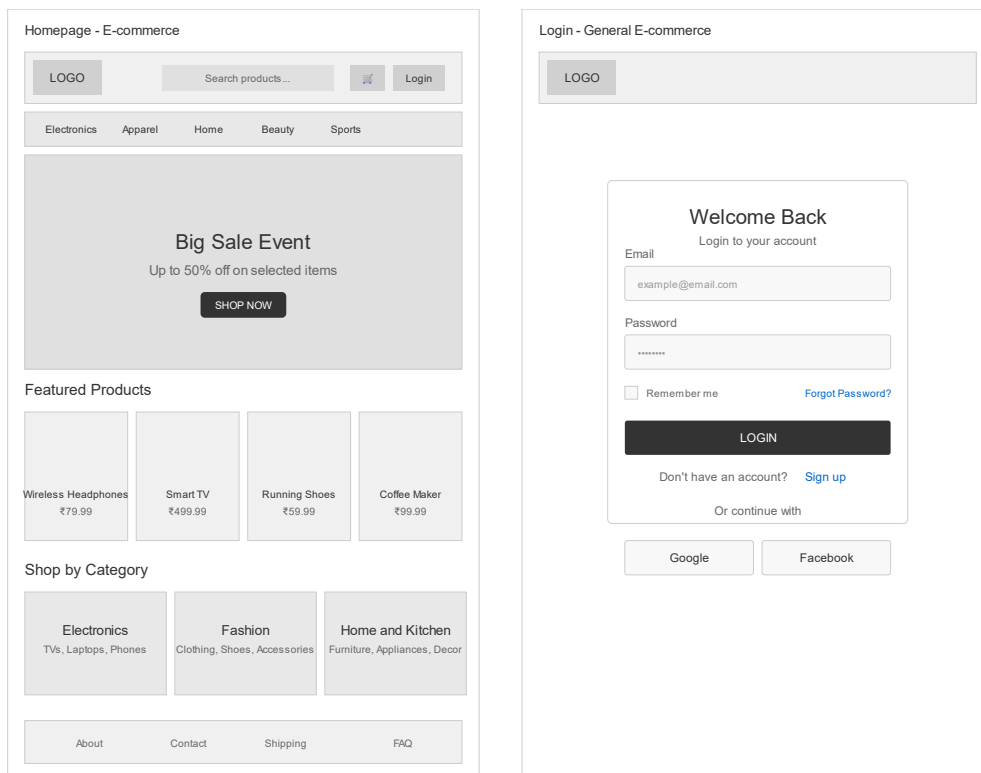


DATA BASE DIAGRAM



UI Interactions

1- Main UI and LOGIN Page



2- Sign UP UI

Signup - General E-commerce

LOGO

Create an Account

Sign up for a new account

Full Name

John Doe

Email

example@email.com

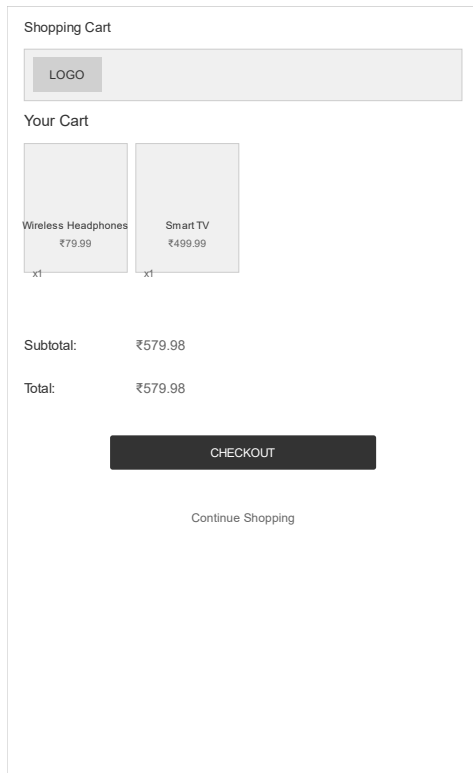
Password

Confirm Password

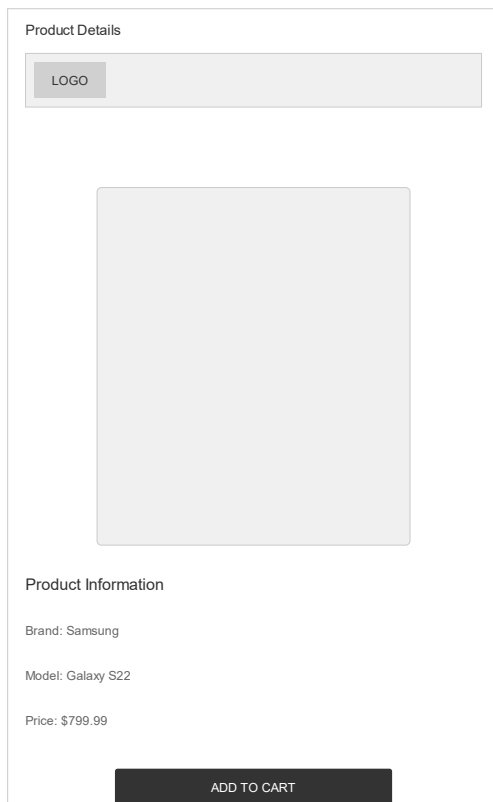
SIGN UP

Already have an account? [Login](#)

3-Cart UI



4-Product Page UI



5-Category UI

Categories

LOGO

Categories

Electronics

TVs, Laptops, Phones

Fashion

Clothing, Shoes, Accessories

Home & Kitchen

Furniture, Appliances, Decor

Subcategories: Electronics

Smartphones

iPhone, Samsung
Google, OnePlus

Laptops

MacBook, Dell
HP, Lenovo

Tablets

iPad, Samsung
Lenovo, Amazon

Accessories

Headphones
Chargers