

Step 1: Identify Key Components and Requirements

- User authentication and management
- Product Catalog
- Shopping cart
- Order processing
- Payment gateway integration
- User reviews and ratings
- Admin dashboard

Step 2: Define Use Cases

[functionality of the system from the user's perspective]

- User registration and login
- Browsing products
- Adding products to the cart
- Placing an order
- Making a payment
- Viewing order history
- Managing products (admin)
- Processing orders (admin)

Step 3: Create Use Case Diagrams

Identify Actors and Use Cases

Actors:

- Customer: A user who browses products, adds items to the cart, and makes purchases.
- Admin: A user who manages the product catalog, processes orders, and handles other administrative tasks.
- Payment Gateway: An external system that handles payment processing.

Use Cases:

- Register: Customer registers an account.
- Login: Customer logs into the system.

- Browse Products: Customer views the product catalog.
- View Product Details: Customer views details of a specific product.
- Add to Cart: Customer adds a product to the shopping cart.
- View Cart: Customer views the items in the shopping cart.
- Checkout: Customer initiates the checkout process.
- Make Payment: Customer completes the payment for an order.
- View Order History: Customer views past orders.
- Manage Products: Admin adds, updates, or deletes products from the catalog.
- Process Orders: Admin processes and updates the status of orders.
- Manage Users: Admin manages customer accounts.

Relations

Inheritance:

Customer and Admin inherit from User.

Associations:

Cart has a relationship with Product (items in the cart).

Order has a relationship with Customer and Product (items in the order).

Payment is associated with Order.

Review is associated with Customer and Product.

