USE CASE 1 — E-Commerce: Place Order

1. Use Case ID

EC-UC-01

2. Use Case Name

Place Order

3. Actors

Primary Actor:

- ❖ Customer

Supporting Actors:

- ❖ Payment Gateway
- ❖ Inventory System
- ❖ Delivery Partner System
- ❖ Notification System

4. Description

This use case describes how a customer places an order for products through the e-commerce platform, completes payment, and receives order confirmation.

5. Pre-Conditions

- ❖ Customer is logged in.
- ❖ Cart contains at least one item.
- ❖ Items are available in inventory.

6. Post-Conditions

- ❖ Order is created with a unique Order ID.
- ❖ Payment status is updated.
- ❖ Notifications are sent to the customer.

7. Basic Flow

1. Customer selects "Checkout".

2. System displays order summary.

3. Customer selects or adds payment method.

4. System sends payment request to Payment Gateway.

5. Payment Gateway returns approval.

6. System updates inventory levels.

7. System generates Order ID.

8. System assigns a delivery partner.

9. System sends confirmation notification to customer.

8. Alternate Flows

A1: Promo Code Applied

1. Customer enters promo code.

2. System validates the code.

3. System applies discount.

4. Continue Basic Flow Step 3.

A2: Customer Changes Address

1. Customer selects a different delivery address.

2. System updates order summary.

3. Continue Basic Flow Step 3.

9. Exception Flows

E1: Payment Failure

1. Payment Gateway returns failure.

2. System displays "Payment Failed".

3. Customer can retry payment.

E2: Item Out of Stock

1. Inventory System indicates stock shortage.

2. System shows "Item Out of Stock".

3. Order cannot proceed.

10. Business Rules

- ❖ Promo codes must be valid and non-expired.
- ❖ Payment must be approved before order creation.

11. Assumptions

- ❖ Customer has a stable internet connection.

USE CASE 2 — E-Commerce: Track Order

1. Use Case ID

EC-UC-02

2. Use Case Name

Track Order

3. Actors

Primary Actor:

- ❖ Customer

Supporting Actors:

- ❖ Order Management System
- ❖ Delivery Partner Tracking API

4. Description

Allows the customer to check real-time status and location updates of an active order.

5. Pre-Conditions

- ❖ Customer is logged in.
- ❖ Order has been placed and is in progress.

6. Post-Conditions

- ❖ Order status is displayed to the customer.

7. Basic Flow (Main Success Scenario)

1. Customer opens "Track Order".

2. System retrieves order status from Order Management System.

3. System fetches delivery updates from Delivery Partner API.

4. System displays updated delivery status and ETA.

8. Alternate Flows

A1: Customer Views Past Orders

1. Customer selects "Order History".

2. System retrieves previous order details.

9. Exception Flows

E1: Delivery Partner API Timeout

1. System cannot fetch real-time updates.

2. System displays "Status Unavailable. Please try again later."

10. Business Rules

❖ Tracking should refresh every 30 seconds.

11. Assumptions

❖ Delivery partner's API is available.

PRIORITIZATION

Requirement Prioritization

Effective prioritization ensures that high-value features are delivered first while keeping development effort realistic. For the e-commerce system, MoSCoW and Value vs Effort analysis were used to identify MVP features and future release candidates.

MoSCoW Prioritization

Feature	Description	Priority
Place Order	User buys items → checkout → payment	Must Have
Add to Cart	Add/remove items before checkout	Must Have
Payment Integration	Card/UPI/Wallet payments	Must Have
Track Order	View real-time delivery status	Should Have
Apply Promo Code	Use coupon during checkout	Should Have
Save Addresses	Add multiple delivery addresses	Should Have
Product Reviews and Rating	Write/read reviews	Could Have
Wishlist	Save items to wishlist	Could Have
Product Recommendations	Show suggested products	Wont Have(Now)

Value vs Effort Matrix

High Value Low Effort (Build First) • Track Order • Save Addresses • Apply Promo Code	High Value High Effort (Plan for Later Releases) • Place Order • Add to Cart • Payment Integration
Low Value Low Effort (Optional Enhancements) • Wishlist • Basic Suggestions	Low Value High Effort (Avoid/Deprioritize) • Advanced AI Recommendations • Social Shopping Features

MVP Features Identified

Based on the prioritization, the following features form the **Minimum Viable Product:**

- ❖ Browse & View Products
- ❖ Add to Cart
- ❖ Checkout
- ❖ Payment Processing
- ❖ Order Confirmation
- ❖ Basic Order Tracking