Phase II: Business Process Modeling (MIS)

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\*\*Project Title: E-commerce Order Management System

# 1. Define the Scope

Business Process Modeled: E-commerce Order Processing  
  
MIS Relevance:  
This process captures how data flows from the moment a customer places an order to the point it is delivered. It aligns with MIS goals by automating operations, facilitating faster decision-making, and ensuring real-time data updates for all stakeholders.  
  
Objectives:  
- Automate the ordering lifecycle from placement to delivery  
- Minimize manual intervention  
- Support inventory and sales management decisions through accurate real-time data  
  
Expected Outcomes:  
- Streamlined customer ordering experience  
- Accurate stock monitoring  
- Clear visibility into order status  
- Faster delivery and better customer service

# 2. Identify Key Entities

Customer: Initiates the order; receives product & confirmation.  
Sales System: Captures order details and initiates process.  
Inventory System: Checks stock availability, updates product quantities.  
Payment Gateway: Handles customer payments and returns confirmation.  
Warehouse Department: Packs and ships the product to the customer.  
Manager (optional): Approves high-value or flagged orders before processing continues.

# 3. Use Swimlanes for Clarity

The BPMN diagram uses swimlanes to divide tasks by actor:  
- Customer  
- Sales System  
- Inventory System  
- Payment Gateway  
- Warehouse  
- (Optionally) Manager  
This helps visualize responsibilities clearly across the process.

# 4. Apply UML/BPMN Notations

Start Event: Customer places order  
Activities/Tasks: Check stock, Process payment, Update database, Approve order, Ship product  
Gateways (Decisions): 'Is stock available?', 'Is payment successful?', 'Does order need approval?'  
End Event: Order shipped to customer  
  
Used BPMN conventions for:  
- Events (circles)  
- Tasks (rounded rectangles)  
- Gateways (diamonds)  
- Sequence flows (arrows)  
- Swimlanes (horizontal divisions)

# 5. Ensure Logical Flow

1. Customer places an order  
2. Sales System receives and logs order  
3. Inventory System checks stock  
 - If stock is unavailable → notify customer and stop  
4. If stock is available → Payment Gateway processes payment  
5. If payment successful → optional Manager approval (for flagged cases)  
6. Warehouse receives order, prepares package  
7. Order shipped to customer  
8. System updates status and notifies customer  
  
Each step is dependent on the previous, ensuring an accurate and controlled workflow.

# Business Process Diagram

