



Development of Business Applications

Book Delivery Management System

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1. Verbal Description

BookSale operates within the Customer Order and Delivery Management department with the primary objectives of ensuring timely and accurate delivery of books to customers, maintaining an up-to-date database of customer information for efficient service, managing the entire order processing cycle from customer registration to delivery and payment collection, and handling exceptions and issues in the order fulfillment and delivery process effectively.

The **Customer Registration and Verification** process involves checking whether a customer is already in the database upon expressing interest in book delivery, collecting necessary contact details and address information for new customers, and regularly updating customer addresses and contact details to ensure accuracy.

In the **Order Processing** phase, the feasibility of delivering to a customer's address is determined, and the customer is informed about the delivery feasibility and price. Once the customer agrees to the delivery terms and price, the order details, including the specific books requested, are collected.

The **Delivery Execution** process involves checking the availability of the requested books, sending the books to the customer's address, and ensuring that the books are delivered as per the order details.

Customer Communication and Notification are crucial for informing customers about the inability to deliver to unsupported addresses, notifying customers about the delivery price, and informing customers if an order is incomplete or unavailable while managing customer consent for partial orders.

Payment Processing involves collecting payments for delivered books and settling payments received while deregistering delivered books from the inventory.

The **Exception Handling** process addresses shipment failures, notifying customers of any such failures, and taking necessary corrective actions. It also involves managing the addition of missing books to the list if the order is incomplete and the customer consents.

Several necessary dictionaries and definitions are used within BookSale processes:

- **Customer Register:** A database containing all customer information, including contact details and delivery addresses.
- **Book Register:** A database containing information about the available books, including titles and publication dates.
- **Delivery Feasibility:** The ability to deliver books to a customer's address based on geographical and logistical constraints.
- **Order Availability:** The status of books requested in an order, indicating whether they are fully available, partially available, or unavailable.

- **Shipment Failure:** An instance where books fail to be delivered to the customer due to various reasons such as incorrect address, logistical issues, etc.
- **Payment Settlement:** The process of reconciling and finalizing payments received from customers for delivered books.

This structured approach ensures that all aspects of the order and delivery process are managed efficiently, and customers are kept informed at every stage.

2. A list of processes

Primary processes:

- Checking Customer in Database:
- Updating Address and Contact Details:
- Checking Feasibility of Delivery:
- Collecting the Order:
- Checking Order Availability:
- Sending and Delivering the Newspaper

Supporting processes:

- Customer Notification
- Order Incompletion Handling
- Payment Collection and Settlement
- Failure Management

3. The specification of requirements

Main Processes

1. Customer Registration and Verification:

- Checking whether the client is in the database.
- Collecting contact details and address from the customer.
- Updating address and contact details.

2. Order Processing:

- Checking feasibility of delivery.
- Informing the customer about the price.
- Collecting the order.
- Checking order availability.

3. Delivery Execution:

- Sending the books.
- Delivering the books.

Additional Processes

1. Notification and Communication:

- Informing the customer about unsupported addresses.
- Notifying the customer about delivery prices.
- Informing the customer about incomplete or unavailable orders.

2. Order Management:

- Handling incomplete orders.
- Adding missing newspapers to the list.
- Managing customer's consent for incomplete orders.

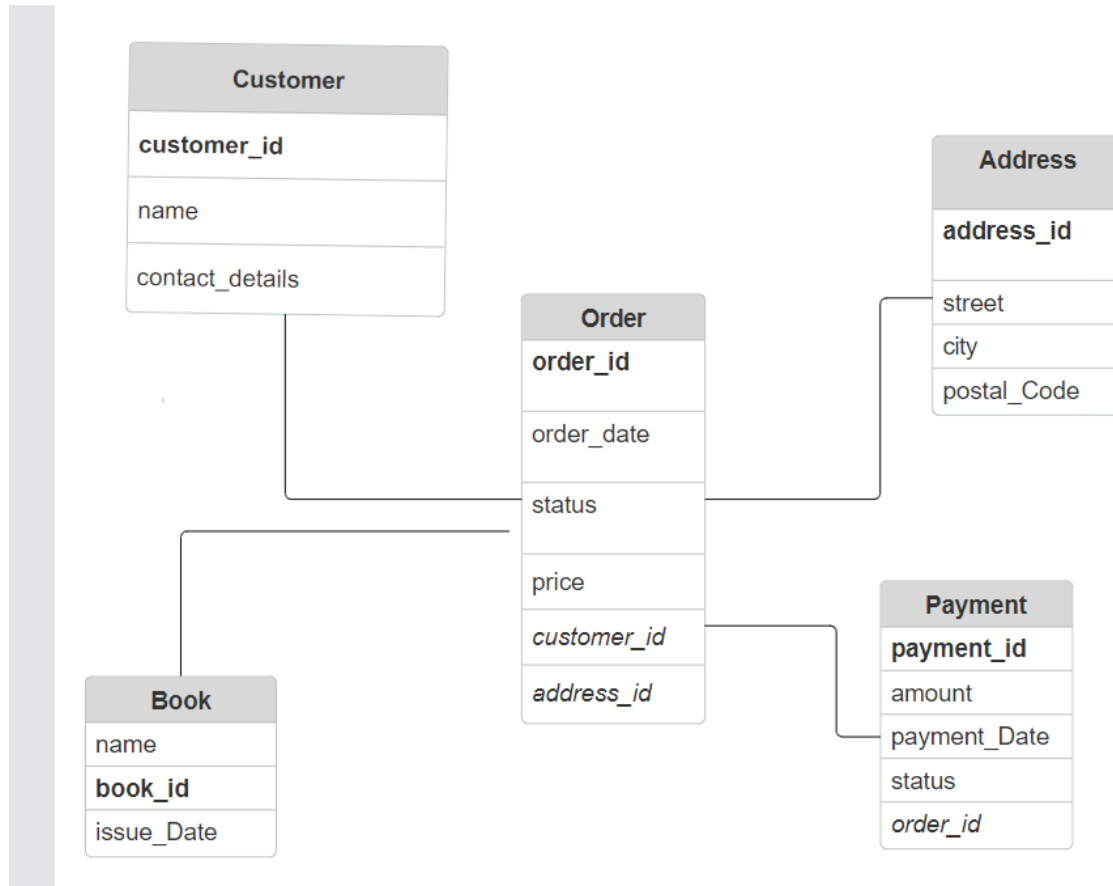
3. Payment Processing:

- Collecting payment.
- Deregistration from the newspaper register.
- Settling received payments.

4. Failure Management:

- Notifying customer of shipment failure.

4. ERD Diagram



Relationships

Customer 1—N Order

Order 1—1 Address

Order 1—1 Payment

Order N—N Book

