

## Object Oriented Analysis and Design using Java

### Week 2 Lab Assignment

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#### Problem Statement

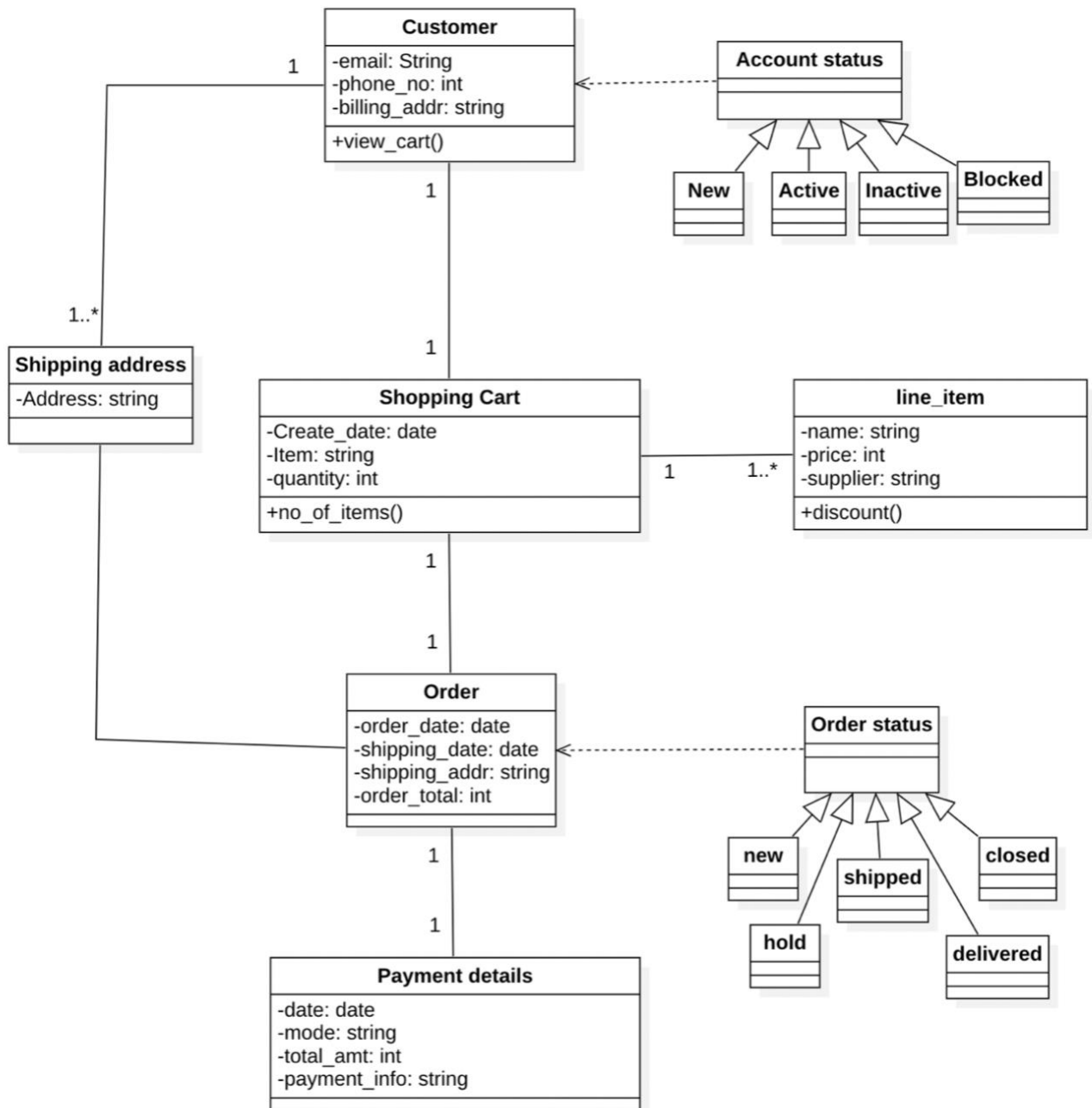
**Prepare the class diagram for an Online Grocery Store, by identifying the classes, attributes, relationships and their cardinality**

Online Grocery Store: A Customer with details like Email and Phone Number has an account on the website. The account details include the billing address, account status (New, Active, Blocked, Inactive etc.). The Customer can associate multiple Shipping Addresses with their account. The account is linked to a Shopping Cart with details like create date and a computed attribute, the number of items in the cart. The shopping cart contains line items with discounts (if any) and quantity for each. The line item is for a specific grocery product whose details include name, price and supplier. Once the customer checks out items in the shopping cart, an order is created with the corresponding line items. The order has details like order date, shipping date, ship to address, order total and the order status (New, Hold, Shipped, Delivered and Closed). The order is also linked to the payment details like date, mode, total amount and payment details based on the mode.

#### 1. Classes, Attributes, Methods and Constraints

Class	Attribute	Methods	Constraints
Customer	Email, phone_no, billing_addr, account_status	View_cart()	
Shopping Cart	Create_date, item, quantity	No_of_items()	>1
Line_item	Name, price, supplier	Discount()	
Order	Order_date, shipping_date, shipping_addr, order_total		
Payment_details	Date, mode, total_amt, payment_info		
Shipping_addr	address		>1
Account_status	New, active, blocked, inactive		
Order_status	New, shipped, hold, delivered, closed		

## 2. Class Diagram



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Class	Attribute	Methods	Constraints
Customer	Email, phone-no billing-addr, account-status,	view-cart()	

ShoppingCart	create-date, <del>create-date</del> <del>create-date</del> quantity	no. of items() <del>discount()</del>	
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Line-item	name, price, supplier	<del>discount()</del> discount()	>1
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Order	order-date, shipping-date, shipping-addr, order-total order-status		
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Payment-details	date, mode, total-amt, payment-info		
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Shipping-addr	address	>1	
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Account-status	new, active, blocked, inactive		
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Order-status	new, hold, shipped, delivered, closed		
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