

## **Problem Statement:**

//Assigned by Deepthi

### **Class diagram for placing an online order using a credit card.**

A business aims to enhance its customer experience by adding a credit card provision to their existing Online Shopping System. The current system is designed to allow users to browse through a diverse range of products, add what they like to their shopping carts and place orders online. The system facilitates secure payment transactions and order tracking. Key features and functionalities include:

- User Management
  - Users can register and create accounts with unique customer IDs. User state (new, active, deleted) is maintained by the system
- Order Placement
  - Customers can place orders by adding products to their shopping carts. The system calculates the total order amount and allows customers to display and confirm their orders. Order placement triggers a real-time update of product availability by checking inventory and then dispatched the product.
- Product Management
  - The system maintains a catalog of products with details such as name, description, price, and availability.
- Order Processing and Tracking
  - Each order is assigned a unique order ID and includes order details, date, and the customer's information.
  - Customers should be able to track the status of their orders (new, hold, shipped, delivered)
- Payment Processing
  - Secure payment transactions are facilitated through credit card. The system records payment details, including payment ID, amount, date, and status (Pending, Completed, Failed).
- Credit Accounts

Customers with Credit accounts have a credit limit and must pay off their balances monthly. Customers can view their credit ratings and credit limit in their credit accounts. The system checks for overdue payments.

  - The credit card number can be generated by the system. It holds the card number.
  - The card details hold the name of the account holder and the pin number.

