**University Learning Management System (LMS)**

**1. User Class**

Represents a student user with personal information, academic activities, and interactions.

* **Key Members:**
  + UserID
  + Name
  + Email
  + Password
* **Methods:**
  + uploadAssignment()
  + makeFeePayment()
  + viewDashboard()

**2. Post Class**

Represents a post containing academic content such as assignments or project submissions.

* **Key Members:**
  + StudentID
  + Assignment
  + DatePosted
* **Methods:**
  + addComment(Comment comment)
  + displayAssignment()

**3. Message Class**

Handles private messaging between users.

* **Key Members:**
  + MessageID
  + Sender
  + Receiver
  + Content
  + DateSent
* **Methods:**
  + displayMessage()

**4. Notification Class**

Represents system-generated notifications for users, such as new assignments or messages.

* **Key Members:**
  + NotificationID
  + Recipient
  + Message
  + DateReceived
* **Methods:**
  + displayNotification()

**5. Dashboard Class**

Displays student academic progress and attendance.

* **Key Members:**
  + Progress
  + Attendance
* **Methods:**
  + displayGraphs()

**6. Fees Class**

Manages student fee information.

* **Key Members:**
  + Name
  + RollNumber
  + Batch
* **Methods:**
  + displayStatus()
  + uploadChallan()

**Online Shopping Application**

**1. Customer Class**

Represents a customer with personal details and shopping capabilities.

* **Key Members:**
  + Name
  + Email
  + Password
  + Phone
  + Address
* **Methods:**
  + placeOrder()
  + submitFeedback()
  + addToCart()

**2. Seller Class**

Represents a seller with business-related information.

* **Key Members:**
  + UserID
  + Name
  + Email
  + Password
  + ShopAddress
* **Methods:**
  + listProducts()
  + applyDiscountsAndVouchers()

**3. Cart Class**

Manages selected products by a customer before purchase.

* **Key Members:**
  + ProductName
  + Price
  + Image
* **Methods:**
  + buyProduct()
  + removeProduct()
  + updateQuantity()

**4. Payment Class**

Handles the payment process for an order.

* **Key Members:**
  + ProductList
  + TotalAmount
* **Methods:**
  + selectPaymentMethod(String method) *(e.g., Card or Cash)*
  + chooseCOD() *(Cash on Delivery)*

**Hospital Management System**

**1. Patient Management Class**

Handles patient records and appointments.

* **Key Members:**
  + Name
  + Email
  + Password
  + Phone
  + Address
* **Methods:**
  + addPatient()
  + bookDoctorAppointment()
  + removePatient()

**2. Inventory Management Class**

Manages the stock of medical supplies, medications, and equipment.

* **Key Members:**
  + MedicalSupplies
  + Medications
  + Equipment
* **Methods:**
  + displayMedicines()
  + addEquipment()
  + removeItem()

**3. Staff Management Class**

Tracks details of hospital staff including doctors and nurses.

* **Key Members:**
  + Doctor
  + Patient
  + Nurse
* **Methods:**
  + recordAttendance()
  + requestLeave()
  + processPayroll()

**4. Billing Class**

Manages billing operations and invoice generation for patients.

* **Key Members:**
  + PatientName
  + Age
  + PhoneNumber
* **Methods:**
  + generateInvoice()
  + selectPaymentMethod() *(e.g., Card or Cash)*