**Problem Definition: Sales Management Microservices System**

**Introduction:** The Sales Management System is designed to handle the sales process for goods or services using separate microservices. Each service will have a specific role, and they will communicate with each other securely using REST APIs. The system will be easy to manage, scalable, and secure.

**Microservices Overview:**

1. **Customer Service**:
   * **Purpose**: Manages customer-related tasks like registration, login, and assigning roles.
   * **Key Features**:
     + Handles customer accounts.
     + Uses roles: Admin (full access) and Customer (limited access).
2. **Product/Service Catalog Service**:
   * **Purpose**: Manages the list of products or services for sale.
   * **Key Features**:
     + Allows admins to add, edit, or remove products.
     + Shows customers product details like name, price, and quantity
3. **Order Management Service**:
   * **Purpose**: Manages customer orders and tracks their status.
   * **Key Features**:
     + Handles order creation by customers.
     + Checks product availability with the Product Catalog Service.
     + Automatically archives old orders (older than six months) using a scheduled job.
4. **Payment Service**:
   * **Purpose**: Processes payments for orders.
   * **Key Features**:
     + Handles customer payments.
     + Sends payment status (success or failure) to the Order Management Service.

**Key Requirements:**

1. **Service Communication**:
   * All services will talk to each other using REST APIs with **Spring’s RestTemplate**.
2. **API Documentation**:
   * Each service will have a **Swagger** link to document its endpoints.
3. **Separate Databases**:
   * Each service will use its own database, so they stay independent and easier to manage.
4. **Scheduled Job**:
   * The Order Management Service will automatically archive orders older than six months.
5. **Security**:
   * All APIs will be secured using **Spring Security**.
   * Two roles will be used:
     + **Admin**: Full control over products, orders, and users.
     + **Customer**: Limited access to browse products, place orders, and make payments.

**Scope:**

This system will handle a full sales process from start to finish. It will be secure, organized, and scalable. By splitting tasks into separate microservices, the system will be easy to manage and can handle growth efficiently.