**1. Recharge Management System**

**Scenario:**

Design a Spring Boot REST API to handle mobile recharges for telecom users.

**Entity: Recharge**

Long id

String userId

double amount

String planType // Prepaid, Postpaid, DataOnly

LocalDate rechargeDate

**Required Endpoints:**

* POST /recharges – Add a new recharge
* GET /recharges – View all recharge records
* GET /recharges/user/{userId} – Get recharge history for a user
* GET /recharges/plan/{planType} – Get all recharges by plan type
* DELETE /recharges/{id} – Delete a recharge

**Postman Testing Tips:**

* Try adding multiple recharges with different plan types.
* Use filtering endpoints to compare Prepaid vs Postpaid usage.

**2. Complaint Management System**

**Scenario:**

Create a Spring Boot application that allows users to raise, view, and resolve complaints about network issues.

**Entity: Complaint**

Long id

String userId

String issueType // Network, Billing, Data, Other

String description

LocalDateTime createdDate

String status // Open, In Progress, Resolved, Closed

**Required Endpoints:**

* POST /complaints – Raise a new complaint
* GET /complaints – View all complaints
* GET /complaints/user/{userId} – View complaints by user
* PUT /complaints/{id} – Update complaint status or details
* DELETE /complaints/{id} – Remove a complaint

**Postman Testing Tips:**

* Try creating complaints with various statuses.
* Test PUT to move status from Open → Resolved.

**3. Missed Call Alert (MCA) Registration System**

**Scenario:**

Develop an API for users to opt in or out of the Missed Call Alert service.

**Entity: MissedCallAlert**

Long id

String mobileNumber

boolean subscribed

LocalDateTime subscribedAt

**Required Endpoints:**

* POST /mca/register – Register for MCA service
* GET /mca – View all MCA subscribers
* GET /mca/{mobileNumber} – View MCA status for a user
* PUT /mca/{mobileNumber} – Update subscription status
* DELETE /mca/{mobileNumber} – Unsubscribe from service

**Postman Testing Tips:**

* Check registration flow for new vs existing numbers.
* Toggle subscription true/false using PUT.