**Case Study: Airport Management System**

**Problem Statement:**

Design and implement an Airport Management System using Oracle SQL and PL/SQL. The system will be used to manage airport facilities, track flight information, and handle passenger services for an airport. Your task is to create the necessary database schema, populate the database with sample data, and develop PL/SQL procedures to handle facility management, flight information, and passenger services.

**Requirements:**

1. **Facility Management**:
   * Implement the functionality to add, update, delete, and search for airport facilities.
   * Ensure that each facility has attributes such as FACILITY\_ID, FACILITY\_NAME, LOCATION, CAPACITY, and AVAILABLE.
2. **Flight Information**:
   * Implement the functionality to manage flight information.
   * Ensure that each flight has attributes such as FLIGHT\_ID, FLIGHT\_NUMBER, AIRLINE, ORIGIN, DESTINATION, DEPARTURE\_TIME, and ARRIVAL\_TIME.
3. **Passenger Services**:
   * Implement the functionality to handle passenger services.
   * Ensure that each service has attributes such as SERVICE\_ID, SERVICE\_TYPE, DESCRIPTION, LOCATION, and AVAILABILITY.

**Tasks:**

1. **Design the Database Schema**:
   * Create the Facilities, Flights, and Services tables with the appropriate fields and constraints.
   * Define primary keys and foreign keys to maintain data integrity.
2. **Populate the Database with Sample Data**:
   * Insert sample records into the Facilities, Flights, and Services tables to facilitate testing of the system.
3. **Develop PL/SQL Procedures**:
   * Create a procedure to handle facility management, including adding, updating, and deleting facility records.
   * Create a procedure to manage flight information, including adding new flights, updating flight details, and deleting flights.
   * Create a procedure to manage passenger services, including adding, updating, and deleting service records.

**Expected Outcomes:**

1. **Facilities Table**:
   * Contains all information about the airport facilities.
2. **Flights Table**:
   * Stores details of all flights managed by the airport.
3. **Services Table**:
   * Tracks all passenger services offered at the airport.
4. **PL/SQL Procedures**:
   * Efficiently manage airport facilities, flight information, and passenger services, maintaining accurate records in the database.

**Deliverables:**

1. SQL scripts to create the Facilities, Flights, and Services tables.
2. SQL scripts to insert sample data into the tables.
3. PL/SQL scripts for the procedures to handle facility management, flight information, and passenger services.
4. Documentation explaining how to set up and use the system, including how to run the PL/SQL procedures.

**Database Schema:**

1. **Facilities Table**:
   * **FACILITY\_ID**: Number, Primary Key
   * **FACILITY\_NAME**: Varchar2(50)
   * **LOCATION**: Varchar2(100)
   * **CAPACITY**: Number
   * **AVAILABLE**: Number
2. **Flights Table**:
   * **FLIGHT\_ID**: Number, Primary Key
   * **FLIGHT\_NUMBER**: Varchar2(20)
   * **AIRLINE**: Varchar2(50)
   * **ORIGIN**: Varchar2(50)
   * **DESTINATION**: Varchar2(50)
   * **DEPARTURE\_TIME**: Date
   * **ARRIVAL\_TIME**: Date
3. **Services Table**:
   * **SERVICE\_ID**: Number, Primary Key
   * **SERVICE\_TYPE**: Varchar2(50)
   * **DESCRIPTION**: Varchar2(255)
   * **LOCATION**: Varchar2(100)
   * **AVAILABILITY**: Number

**Case Study Task:**

* **Design**: Create the database schema as provided.
* **Implement**: Insert sample data into the Facilities, Flights, and Services tables.
* **Develop**: Write PL/SQL procedures for handling facility management, flight information, and passenger services.
* **Test**: Test the procedures with various scenarios (e.g., managing facilities, updating flight information, handling passenger services, ensuring proper updates).