**Case Study: Patient Management System for Healthcare**

**Problem Statement:**

Design and implement a Patient Management System for Healthcare using Oracle SQL and PL/SQL. The system will be used to manage patient records, appointments, and medical history. Your task is to create the necessary database schema, populate the database with sample data, and develop PL/SQL procedures to handle patient management, appointment scheduling, and medical history tracking.

**Requirements:**

1. **Patient Management**:
   * Implement the functionality to add, update, delete, and search for patient records.
   * Ensure that each patient record has attributes such as PATIENT\_ID, FIRST\_NAME, LAST\_NAME, DATE\_OF\_BIRTH, GENDER, and CONTACT\_NUMBER.
2. **Appointment Scheduling**:
   * Implement the functionality to schedule, reschedule, and cancel appointments for patients.
   * Ensure that each appointment record has attributes such as APPOINTMENT\_ID, PATIENT\_ID, APPOINTMENT\_DATE, APPOINTMENT\_TIME, and STATUS.
3. **Medical History Tracking**:
   * Implement the functionality to track medical history for patients.
   * Ensure that each medical history record has attributes such as HISTORY\_ID, PATIENT\_ID, VISIT\_DATE, SYMPTOMS, DIAGNOSIS, and PRESCRIPTION.

**Tasks:**

1. **Design the Database Schema**:
   * Create the Patients, Appointments, and MedicalHistory 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 Patients, Appointments, and MedicalHistory tables to facilitate testing of the system.
3. **Develop PL/SQL Procedures**:
   * Create a procedure to handle patient management. The procedure should insert, update, and delete patient records.
   * Create a procedure to manage appointment scheduling. The procedure should insert, update, and delete appointment records.
   * Create a procedure to track medical history. The procedure should insert and update medical history records.

**Expected Outcomes:**

1. **Patients Table**:
   * Contains all information about the patients.
2. **Appointments Table**:
   * Tracks the appointments scheduled for patients.
3. **MedicalHistory Table**:
   * Stores the medical history records for patients.
4. **PL/SQL Procedures**:
   * Efficiently manage patient records, appointments, and medical history, maintaining accurate records in the database.

**Deliverables:**

1. SQL scripts to create the Patients, Appointments, and MedicalHistory tables.
2. SQL scripts to insert sample data into the tables.
3. PL/SQL scripts for the procedures to handle patient management, appointment scheduling, and medical history tracking.
4. Documentation explaining how to set up and use the system, including how to run the PL/SQL procedures.

**Database Schema:**

1. **Patients Table**:
   * **PATIENT\_ID**: Number, Primary Key
   * **FIRST\_NAME**: Varchar2(50)
   * **LAST\_NAME**: Varchar2(50)
   * **DATE\_OF\_BIRTH**: Date
   * **GENDER**: Varchar2(10)
   * **CONTACT\_NUMBER**: Varchar2(15)
2. **Appointments Table**:
   * **APPOINTMENT\_ID**: Number, Primary Key
   * **PATIENT\_ID**: Number, Foreign Key References Patients(PATIENT\_ID)
   * **APPOINTMENT\_DATE**: Date
   * **APPOINTMENT\_TIME**: Varchar2(10)
   * **STATUS**: Varchar2(50)
3. **MedicalHistory Table**:
   * **HISTORY\_ID**: Number, Primary Key
   * **PATIENT\_ID**: Number, Foreign Key References Patients(PATIENT\_ID)
   * **VISIT\_DATE**: Date
   * **SYMPTOMS**: Clob
   * **DIAGNOSIS**: Clob
   * **PRESCRIPTION**: Clob

**Case Study Task:**

* **Design**: Create the database schema as provided.
* **Implement**: Insert sample data into the Patients, Appointments, and MedicalHistory tables.
* **Develop**: Write PL/SQL procedures for handling patient management, appointment scheduling, and medical history tracking.
* **Test**: Test the procedures with various scenarios (e.g., managing patients, scheduling appointments, tracking medical history, ensuring proper updates).