**Case Study: Travel Booking System**

**Problem Statement:**

Design and implement a Travel Booking System using Oracle SQL and PL/SQL. The system will be used to manage travel bookings, customer information, and itinerary details for a travel agency. Your task is to create the necessary database schema, populate the database with sample data, and develop PL/SQL procedures to handle booking management, customer registration, and itinerary tracking.

**Requirements:**

1. **Booking Management**:
   * Implement the functionality to add, update, delete, and search for bookings.
   * Ensure that each booking has attributes such as BOOKING\_ID, CUSTOMER\_ID, ITINERARY\_ID, BOOKING\_DATE, DEPARTURE\_DATE, RETURN\_DATE, and STATUS.
2. **Customer Registration**:
   * Implement the functionality to register new customers.
   * Ensure that each customer record has attributes such as CUSTOMER\_ID, FIRST\_NAME, LAST\_NAME, EMAIL, PHONE\_NUMBER, and ADDRESS.
3. **Itinerary Tracking**:
   * Implement the functionality to track travel itineraries.
   * Ensure that each itinerary has attributes such as ITINERARY\_ID, DESTINATION, DEPARTURE\_DATE, RETURN\_DATE, TRANSPORTATION, and ACCOMMODATION.

**Tasks:**

1. **Design the Database Schema**:
   * Create the Bookings, Customers, and Itineraries 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 Bookings, Customers, and Itineraries tables to facilitate testing of the system.
3. **Develop PL/SQL Procedures**:
   * Create a procedure to handle booking management. The procedure should insert, update, and delete booking records.
   * Create a procedure to manage customer registration. The procedure should insert new customer records.
   * Create a procedure to track travel itineraries. The procedure should insert and update itinerary details.

**Expected Outcomes:**

1. **Bookings Table**:
   * Contains all information about the bookings made by customers.
2. **Customers Table**:
   * Stores customer information for the travel agency.
3. **Itineraries Table**:
   * Tracks the travel itineraries planned for customers.
4. **PL/SQL Procedures**:
   * Efficiently manage bookings, customer registration, and itinerary tracking, maintaining accurate records in the database.

**Deliverables:**

1. SQL scripts to create the Bookings, Customers, and Itineraries tables.
2. SQL scripts to insert sample data into the tables.
3. PL/SQL scripts for the procedures to handle booking management, customer registration, and itinerary tracking.
4. Documentation explaining how to set up and use the system, including how to run the PL/SQL procedures.

**Database Schema:**

1. **Bookings Table**:
   * **BOOKING\_ID**: Number, Primary Key
   * **CUSTOMER\_ID**: Number, Foreign Key References Customers(CUSTOMER\_ID)
   * **ITINERARY\_ID**: Number, Foreign Key References Itineraries(ITINERARY\_ID)
   * **BOOKING\_DATE**: Date
   * **DEPARTURE\_DATE**: Date
   * **RETURN\_DATE**: Date
   * **STATUS**: Varchar2(50)
2. **Customers Table**:
   * **CUSTOMER\_ID**: Number, Primary Key
   * **FIRST\_NAME**: Varchar2(50)
   * **LAST\_NAME**: Varchar2(50)
   * **EMAIL**: Varchar2(100)
   * **PHONE\_NUMBER**: Varchar2(15)
   * **ADDRESS**: Varchar2(255)
3. **Itineraries Table**:
   * **ITINERARY\_ID**: Number, Primary Key
   * **DESTINATION**: Varchar2(100)
   * **DEPARTURE\_DATE**: Date
   * **RETURN\_DATE**: Date
   * **TRANSPORTATION**: Varchar2(100)
   * **ACCOMMODATION**: Varchar2(100)

**Case Study Task:**

* **Design**: Create the database schema as provided.
* **Implement**: Insert sample data into the Bookings, Customers, and Itineraries tables.
* **Develop**: Write PL/SQL procedures for handling booking management, customer registration, and itinerary tracking.
* **Test**: Test the procedures with various scenarios (e.g., managing bookings, registering customers, tracking itineraries, ensuring proper updates).