**Case Study: Sales and Inventory Management System for Retail Stores**

**Problem Statement:**

Design and implement a Sales and Inventory Management System for Retail Stores using Oracle SQL and PL/SQL. The system will be used to manage product sales, customer information, and inventory tracking for a retail store. Your task is to create the necessary database schema, populate the database with sample data, and develop PL/SQL procedures to handle sales processing, customer management, and inventory tracking.

**Requirements:**

1. **Sales Processing**:
   * Implement the functionality to add, update, delete, and search for sales transactions.
   * Ensure that each sales transaction has attributes such as TRANSACTION\_ID, PRODUCT\_ID, QUANTITY, SALE\_DATE, and TOTAL\_PRICE.
2. **Customer Management**:
   * Implement the functionality to add, update, delete, and search for customer information.
   * Ensure that each customer record has attributes such as CUSTOMER\_ID, FIRST\_NAME, LAST\_NAME, EMAIL, and PHONE\_NUMBER.
3. **Inventory Tracking**:
   * Implement the functionality to track product inventory.
   * Ensure that each product record has attributes such as PRODUCT\_ID, PRODUCT\_NAME, DESCRIPTION, PRICE, and AVAILABLE\_QUANTITY.

**Tasks:**

1. **Design the Database Schema**:
   * Create the SalesTransactions, Customers, and Inventory 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 SalesTransactions, Customers, and Inventory tables to facilitate testing of the system.
3. **Develop PL/SQL Procedures**:
   * Create a procedure to handle sales processing. The procedure should insert, update, and delete sales transactions.
   * Create a procedure to manage customer information. The procedure should insert, update, and delete customer records.
   * Create a procedure to track product inventory. The procedure should update the available quantity of products after each sales transaction.

**Expected Outcomes:**

1. **SalesTransactions Table**:
   * Contains all information about the sales transactions.
2. **Customers Table**:
   * Stores customer information for the retail store.
3. **Inventory Table**:
   * Tracks the inventory of products available for sale.
4. **PL/SQL Procedures**:
   * Efficiently manage sales transactions, customer information, and product inventory, maintaining accurate records in the database.

**Deliverables:**

1. SQL scripts to create the SalesTransactions, Customers, and Inventory tables.
2. SQL scripts to insert sample data into the tables.
3. PL/SQL scripts for the procedures to handle sales processing, customer management, and inventory tracking.
4. Documentation explaining how to set up and use the system, including how to run the PL/SQL procedures.

**Database Schema:**

1. **SalesTransactions Table**:
   * **TRANSACTION\_ID**: Number, Primary Key
   * **PRODUCT\_ID**: Number, Foreign Key References Products(PRODUCT\_ID)
   * **QUANTITY**: Number
   * **SALE\_DATE**: Date
   * **TOTAL\_PRICE**: Number
2. **Customers Table**:
   * **CUSTOMER\_ID**: Number, Primary Key
   * **FIRST\_NAME**: Varchar2(50)
   * **LAST\_NAME**: Varchar2(50)
   * **EMAIL**: Varchar2(100)
   * **PHONE\_NUMBER**: Varchar2(15)
3. **Inventory Table**:
   * **PRODUCT\_ID**: Number, Primary Key
   * **PRODUCT\_NAME**: Varchar2(100)
   * **DESCRIPTION**: Clob
   * **PRICE**: Number
   * **AVAILABLE\_QUANTITY**: Number

**Case Study Task:**

* **Design**: Create the database schema as provided.
* **Implement**: Insert sample data into the SalesTransactions, Customers, and Inventory tables.
* **Develop**: Write PL/SQL procedures for handling sales processing, customer management, and inventory tracking.
* **Test**: Test the procedures with various scenarios (e.g., processing sales transactions, managing customers, tracking inventory, ensuring proper updates).