**Case Study: Investment Portfolio Management System**

**Problem Statement:**

Design and implement an Investment Portfolio Management System using Oracle SQL and PL/SQL. The system will be used to manage investment portfolios, track portfolio performance, and generate investment reports. Your task is to create the necessary database schema, populate the database with sample data, and develop PL/SQL procedures to handle portfolio management, performance tracking, and report generation.

**Requirements:**

1. **Portfolio Management**:
   * Implement the functionality to add, update, delete, and search for investment portfolios.
   * Ensure that each portfolio has attributes such as PORTFOLIO\_ID, OWNER\_ID, PORTFOLIO\_NAME, CREATION\_DATE, and DESCRIPTION.
2. **Performance Tracking**:
   * Implement the functionality to track portfolio performance over time.
   * Ensure that performance records have attributes such as PERFORMANCE\_ID, PORTFOLIO\_ID, PERFORMANCE\_DATE, TOTAL\_VALUE, and PROFIT\_LOSS.
3. **Report Generation**:
   * Implement the functionality to generate investment reports.
   * Reports should include details such as portfolio performance summaries, investment allocation breakdown, and profit/loss analysis.

**Tasks:**

1. **Design the Database Schema**:
   * Create the InvestmentPortfolios, PortfolioPerformances, and InvestmentReports 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 InvestmentPortfolios and PortfolioPerformances tables to facilitate testing of the system.
3. **Develop PL/SQL Procedures**:
   * Create a procedure to handle investment portfolio management. The procedure should insert, update, and delete portfolio records.
   * Create a procedure to track portfolio performance. The procedure should calculate total portfolio value and profit/loss.
   * Create a procedure to generate investment reports. The procedure should aggregate data to provide insights into portfolio performance and investment allocation.

**Expected Outcomes:**

1. **InvestmentPortfolios Table**:
   * Contains all information about the investment portfolios.
2. **PortfolioPerformances Table**:
   * Tracks the performance of each investment portfolio over time.
3. **InvestmentReports Table**:
   * Stores the generated investment reports.
4. **PL/SQL Procedures**:
   * Efficiently manage investment portfolios, track performance, and generate reports, maintaining accurate records in the database.

**Deliverables:**

1. SQL scripts to create the InvestmentPortfolios, PortfolioPerformances, and InvestmentReports tables.
2. SQL scripts to insert sample data into the InvestmentPortfolios and PortfolioPerformances tables.
3. PL/SQL scripts for the procedures to handle investment portfolio management, performance tracking, and generate investment reports.
4. Documentation explaining how to set up and use the system, including how to run the PL/SQL procedures.

**Database Schema:**

1. **InvestmentPortfolios Table**:
   * **PORTFOLIO\_ID**: Number, Primary Key
   * **OWNER\_ID**: Number
   * **PORTFOLIO\_NAME**: Varchar2(100)
   * **CREATION\_DATE**: Date
   * **DESCRIPTION**: Varchar2(255)
2. **PortfolioPerformances Table**:
   * **PERFORMANCE\_ID**: Number, Primary Key
   * **PORTFOLIO\_ID**: Number, Foreign Key References InvestmentPortfolios(PORTFOLIO\_ID)
   * **PERFORMANCE\_DATE**: Date
   * **TOTAL\_VALUE**: Number
   * **PROFIT\_LOSS**: Number
3. **InvestmentReports Table**:
   * **REPORT\_ID**: Number, Primary Key
   * **REPORT\_DATE**: Date
   * **PORTFOLIO\_PERFORMANCE\_SUMMARY**: Clob
   * **INVESTMENT\_ALLOCATION\_BREAKDOWN**: Clob
   * **PROFIT\_LOSS\_ANALYSIS**: Clob

**Case Study Task:**

* **Design**: Create the database schema as provided.
* **Implement**: Insert sample data into the InvestmentPortfolios and PortfolioPerformances tables.
* **Develop**: Write PL/SQL procedures for handling investment portfolio management, performance tracking, and generating investment reports.
* **Test**: Test the procedures with various scenarios (e.g., managing portfolios, tracking performance, generating reports, ensuring proper updates).