**Case Study: Employee Management System**

**Section 1: Python Standalone Console Application**

Design and implement a standalone console application for an Employee Management System using Python. The application should utilize collections, object-oriented programming (OOP), and exception handling to manage employee records, departments, and salaries.

**Requirements:**

1. **Employee Management:**

* Implement the functionality to add, update, and delete employee records.
* Each employee should have attributes such as employee\_id, name, designation, and salary.

1. **Department Management:**

* Implement the functionality to manage departments.
* Each department should have attributes such as department\_id, name, and location.

1. **Salary Management:**

* Implement the functionality to handle employee salaries.
* Each salary record should have attributes such as salary\_id, employee\_id, amount, and date.

**Business Functionalities:**

1. **Manage Employees:**

* Create a class Employee with attributes employee\_id, name, designation, and salary.
* Implement methods to add a new employee, update employee details, and delete an employee from the system.

1. **Manage Departments:**

* Create a class Department with attributes department\_id, name, and location.
* Implement methods to add a new department, update department details, and delete a department.

1. **Manage Salaries:**

* Create a class Salary with attributes salary\_id, employee\_id, amount, and date.
* Implement methods to add a new salary record, update salary details, and delete a salary record.

**Section 2: MySQL Database Management**

Design a MySQL database schema to support the Employee Management System and provide solutions for the problem statements.

**Table Structures:**

1. **Employees Table:**

* employee\_id: INT, Primary Key
* name: VARCHAR(255)
* designation: VARCHAR(255)
* salary: DECIMAL(10, 2)

1. **Departments Table:**

* department\_id: INT, Primary Key
* name: VARCHAR(255)
* location: VARCHAR(255)

1. **Salaries Table:**

* salary\_id: INT, Primary Key
* employee\_id: INT, Foreign Key References Employees(employee\_id)
* amount: DECIMAL(10, 2)
* date: DATE

**Problem Statements:**

1. Write a query to find the total salary amount paid in a specific month.
2. Write a query to find the employees who have been with the company for more than five years.
3. Write a query to find the average salary for each department.
4. Write a query to find the highest-paid employee in each department.
5. Write a query to find the employees whose salary is above the average salary of their department.