**Case Study: Employee Management System**

**Context:**

You are required to develop a console-based Employee Management System using Core Java. The application will allow users to manage employee records and perform various business operations related to employee management. The application will utilize Java Collections for storing employee records, implement Object-Oriented Programming principles, and include exception handling to manage potential errors.

**Requirements:**

**Features:**

1. **Calculate Total Salary Expenditure:**
   * Calculate and display the total salary expenditure for all employees in the organization.
2. **Find Highest and Lowest Salary:**
   * Determine and display the employee(s) with the highest and lowest salary in the organization.
3. **Average Salary by Department:**
   * Calculate and display the average salary for each department within the organization.
4. **Employee Tenure Calculation:**
   * Calculate and display the tenure of each employee based on their joining date.
   * Highlight employees eligible for long service awards based on their tenure.

**Classes and Objects:**

1. **Employee Class:**
   * Attributes: id, name, designation, salary, department, joiningDate.
   * Methods: Constructors, getters and setters, toString method.
2. **Department Class:**
   * Attributes: departmentId, departmentName.
   * Methods: Constructors, getters and setters, toString method.
3. **EmployeeManager Class:**
   * Attributes: HashMap<Integer, Employee> employees, HashMap<Integer, Department> departments.
   * Methods:
     + calculateTotalSalaryExpenditure(): Calculates the total salary expenditure.
     + findHighestAndLowestSalary(): Finds employees with the highest and lowest salary.
     + calculateAverageSalaryByDepartment(): Calculates the average salary for each department.
     + calculateEmployeeTenure(): Calculates the tenure of employees and identifies long service award candidates.
     + Helper methods for input validation and exception handling.

**Deliverables:**

1. Complete source code for the Employee Management System.
2. Documentation including:
   * How to run the application.
   * Instructions for each feature.
   * Explanation of the exception handling implemented.
3. A brief report on the application design and how Object-Oriented principles were applied.