**HR Management System – Project Overview**

The **HR Management System** is a MySQL-based project designed to handle all core HR operations such as employee data management, salary computation, and activity logging with automated rules and reports.

**1. Objective**

To create a robust, efficient, and automated HR database that ensures:

* Accurate employee record-keeping
* Prevention of human errors in salary or critical data changes
* Automated reporting for decision-making

**2. Key Features**

1. **Employee Data Management**
   * Stores detailed employee records: name, department, role, salary, joining date.
   * Enforces data integrity using constraints.
2. **Triggers for Automation & Data Protection**
   * **INSERT Trigger:** Logs every new employee hiring.
   * **UPDATE Trigger:** Tracks salary or detail changes.
   * **DELETE Trigger:** Logs deletions and prevents removal of critical roles like CEO or CTO.
   * **Salary Protection:** Prevents accidental salary reduction.
3. **Stored Procedures for Business Logic**
   * **calculate\_yearly\_salary(emp\_id)** – Returns an employee’s annual pay.
   * **assign\_bonus(dept, bonus\_amount)** – Grants bonuses to a whole department.
   * **department\_salary\_report(dept)** – Generates department-wise salary summaries.
4. **HR Dashboard View**
   * Pre-built SQL VIEW summarizing employee count, total salaries, and average pay per department.

**3. Benefits**

* **Automation:** Reduces manual work by using triggers and procedures.
* **Security:** Prevents critical role deletions and salary tampering.
* **Transparency:** Maintains audit logs for all changes.
* **Decision Support:** Quick salary and department reports for management.

**4. Testing the Project**

You can test it by:

1. **Adding Employees** – Verify logs in employee\_log table.
2. **Updating Salaries** – Ensure changes are tracked and salary reductions are blocked.
3. **Deleting Employees** – Check that deletions are logged and CEO/CTO deletion is prevented.
4. **Running Stored Procedures** – Generate reports and verify bonus allocations.
5. **Viewing HR Dashboard** – Fetch summary insights with:

SELECT \* FROM hr\_dashboard;

**5. Real-World Applications**

* Small-to-medium companies for managing HR records.
* Integrates easily with web apps or admin dashboards.
* Scalable for payroll, performance, and attendance modules.

**HR Management System – Executive Overview**

The **HR Management System** is a fully functional, database-driven solution built entirely in **MySQL** to streamline and automate human resource operations.  
It is designed with **real-world HR challenges** in mind, ensuring **data accuracy, security, and efficiency** for day-to-day employee management.

**1. Business Problem It Solves**

In many organizations, HR data is scattered across spreadsheets or poorly structured databases.  
This leads to **manual errors, lack of audit trails, and inefficiency** in payroll or reporting.  
This project addresses those pain points by:

* Centralizing all HR data
* Automating repetitive tasks
* Enforcing strict data rules
* Providing real-time insights for decision-making

**2. Core Features & Innovations**

1. **Centralized Employee Database**
   * Stores key employee details including department, designation, salary, and joining date.
   * Ensures referential integrity with foreign key constraints.
2. **Trigger-Based Automation**
   * **AFTER INSERT Trigger:** Automatically logs every new hire in employee\_log.
   * **AFTER UPDATE Trigger:** Tracks every change in employee data, especially salary updates.
   * **AFTER DELETE Trigger:** Logs deletions and prevents removal of critical designations (e.g., CEO, CTO).
   * **BEFORE UPDATE Trigger:** Blocks salary reduction to protect employee benefits.
3. **Stored Procedures for HR Operations**
   * **calculate\_yearly\_salary(emp\_id)** – Instant annual salary calculation.
   * **assign\_bonus(dept, bonus\_amount)** – Mass bonus allocation for departments or top performers.
   * **department\_salary\_report(dept)** – Department-wise payroll summary for budgeting.
4. **Pre-Built HR Dashboard View**
   * A single SQL VIEW aggregates total employees, total salary cost, and average salaries per department — perfect for high-level HR analytics.

**3. Business Impact**

* **Efficiency:** Automates logs, salary checks, and bonus allocation without manual intervention.
* **Security:** Prevents unauthorized or accidental critical changes.
* **Transparency:** Maintains a complete audit history of HR actions.
* **Data-Driven Decisions:** Real-time salary and staffing reports.

**4. Testing & Demonstration**

To demonstrate the system:

1. **Insert a New Employee** – Shows automatic logging in employee\_log.
2. **Update Salary** – Verifies audit trail and salary protection.
3. **Delete a Critical Role** – Proves system prevents removal.
4. **Run assign\_bonus Procedure** – Allocates and updates salaries department-wide.
5. **Query hr\_dashboard View** – Displays management-level salary and headcount summary.

**5. Real-World Application**

This system is suitable for:

* **SMEs** looking for a cost-effective HR database
* **Payroll & compliance teams** for accurate salary computation
* **Integrations** with ERP or web-based HR portals for seamless data flow

It is built to **scale**, making it adaptable for additional modules like:

* Attendance tracking
* Performance evaluation
* Recruitment pipeline management

**Self INTRO**

**“Hi, I’m Akash, a recent MCA graduate from S.A. Engineering College with a strong interest in cloud-based HR technologies. I have around 6 months of experience as a Junior Software Analyst, where I was involved in analyzing software systems, documenting technical specifications, and working with SQL and RDBMS concepts extensively.**

**I’m passionate about Oracle technologies and have been actively building my skills in SQL, database design, and data analysis. I’m also familiar with concepts like stored procedures, data migration, and system integration. I recently completed a project that involved handling employee data and automating certain HR processes using SQL and basic scripting.**

**What excites me about Kovaion is the opportunity to work hands-on with Oracle HCM Cloud and be part of real digital transformations. I’m a quick learner, team-oriented, and highly motivated to grow in this domain. I believe this role aligns perfectly with my technical skills and passion for HR tech.”**