**HR & Payroll System Requirements**

The company requires a centralized **HR & Payroll system to** manage all employee information, departmental structures, job positions, salaries, and payroll processing. Each employee must be registered in the system with details such as a unique employee ID, full name, gender, date of birth, national ID, contact information (phone number, email, address, city, state, and zip code), hire date, and current employment status. Employees may also have emergency contacts recorded for administrative purposes. (name, phoneNum)

The company is organized into multiple departments. Each department has a unique identifier, name, location, and the date it was established. Every department has one employee assigned as its head, and each department consists of several employees working under it. Since employees may also supervise other employees, the system should allow recording of a manager for each employee when applicable.

Self join emp \*(partial)🡨 🡪\*(total) supervisor

manage manager\_emp 1(partial)🡨 🡪1(total) dept

work emp \*(total)🡨 🡪1(total) dept

Jobs within the company are standardized. Each job has a unique job ID, a title, job level, hourly rate, and description. Employees are linked to one job at a time, and a single job can be assigned to many employees. Emp\*(total) 🡪 1(total) job

Payroll management requires that every **employee** has a salary record stored in the system. Salaries are determined by the **job** assignment and are subject to adjustments such as allowances, bonuses, and deductions. Each payroll cycle must be stored with details including payroll ID, employee ID, salary amount, pay date, tax deductions, and net pay.

Emp 1(partial)🡨 🡪1(total) payroll (weak entity)

The system must also keep records of employee attendance and leave. Attendance records include employee ID, date, time in, time out, and total hours worked. Leave records include leave ID, employee ID, type of leave (such as vacation, sick leave, or unpaid leave), start date, end date, and approval status.

Emp 1(partial)🡨 🡪\*(total) attendance (weak entity)

Emp 1(partial)🡨 🡪\*(total) leave (weak entity)

The company runs multiple projects, and employees can participate in these projects. Each project has a unique project ID, a name, description, start date, end date, and budget. Employees can work on multiple projects at the same time, and each project may involve many employees. For tracking purposes, the system should record which employees are assigned to which projects, along with their specific role in the project and the number of hours allocated.

Emp \*(partial) 🡨 🡪\*(total) project

To support internal reporting and performance management, the system must record training programs attended by employees. Each training program has a unique identifier, title, description, provider, start date, and end date. Employees can participate in multiple training programs, and each training program can include many employees.

EMP \*(partial)🡨 🡪\*(total) training

In addition, the system should maintain performance evaluations. Each evaluation has an evaluation ID, employee ID, evaluator (another employee), evaluation date, score, and comments. This allows supervisors to evaluate employees and keep a historical record of their performance over time.

Emp 1(partial)🡨 🡪\*(total) evaluation (weak entity)

The system should also handle benefits administration. Benefits such as health insurance, retirement plans, and transportation allowances are stored with details like benefit ID, type, description, and eligibility criteria. Employees may be enrolled in multiple benefits, and the system should keep records of which employees are associated with which benefits.

Emp 1(partial)🡨 🡪\*(total) Benefits (weak entity)