# Payroll Management System ER Diagram

The **payroll management system ER diagram** shows the relationships of the system's entities that build its **database design**. ER diagram describes the logical structure of the system's database or data storage. It is done by identifying the payroll management process entities, their properties, and the interactions between them.

The **payroll management system database design** is sketched out using **ER (entity-relationship) diagram**. This sketch becomes the actual basis of the system's data storage that will serve as data destination and source.

## Payroll Management System Features

- **Payroll Management** - Payroll Management is the main feature of this system wherein ER diagram contains the basic details needed for creating payrolls. This basic information was composed of employee job info and status. This will also monitor or check about the leave and bonuses that the employee deserves aside from the salary.
- **Employee Management** - This feature plays a big role in the system because this gathers important information about the employees. This information was used to track their job performance and other important matters regarding the system.
- **Manage Salaries and Bonuses** - The salary and bonuses management will be done by the admin to track the wages and expenses of the establishment. This process will help them in updating the status of the payroll in terms of giving the salaries and other matters regarding their employees.
- **Manage Job Status and Calculate Expenses** - Its feature will manage and monitor the job status of every employee and then will calculate their salaries for the range of their labor or per month. This will also record all the expenses of the establishment and then save them to the database for future inventory purposes.

## What is an ER Diagram?

In DBMS, the **ER Diagram of payroll management system** is also known as the system's **database design**. It is the graphical depiction of relationships between all the entities involved in the system. Its major components are Entities, Attributes, and Relationships.

To build and troubleshoot relational databases, the **payroll system ER Diagram** is used. It works best with DFD (Data Flow Diagram), which is responsible for data movement. Developing the **database design for payroll management system** would be much easier with the help of ER diagram.

## Importance of ER Diagram

The **importance of ER diagram for payroll management system** is to help in modeling its data storage or database. It is the basis of the project's database foundation for construction. The

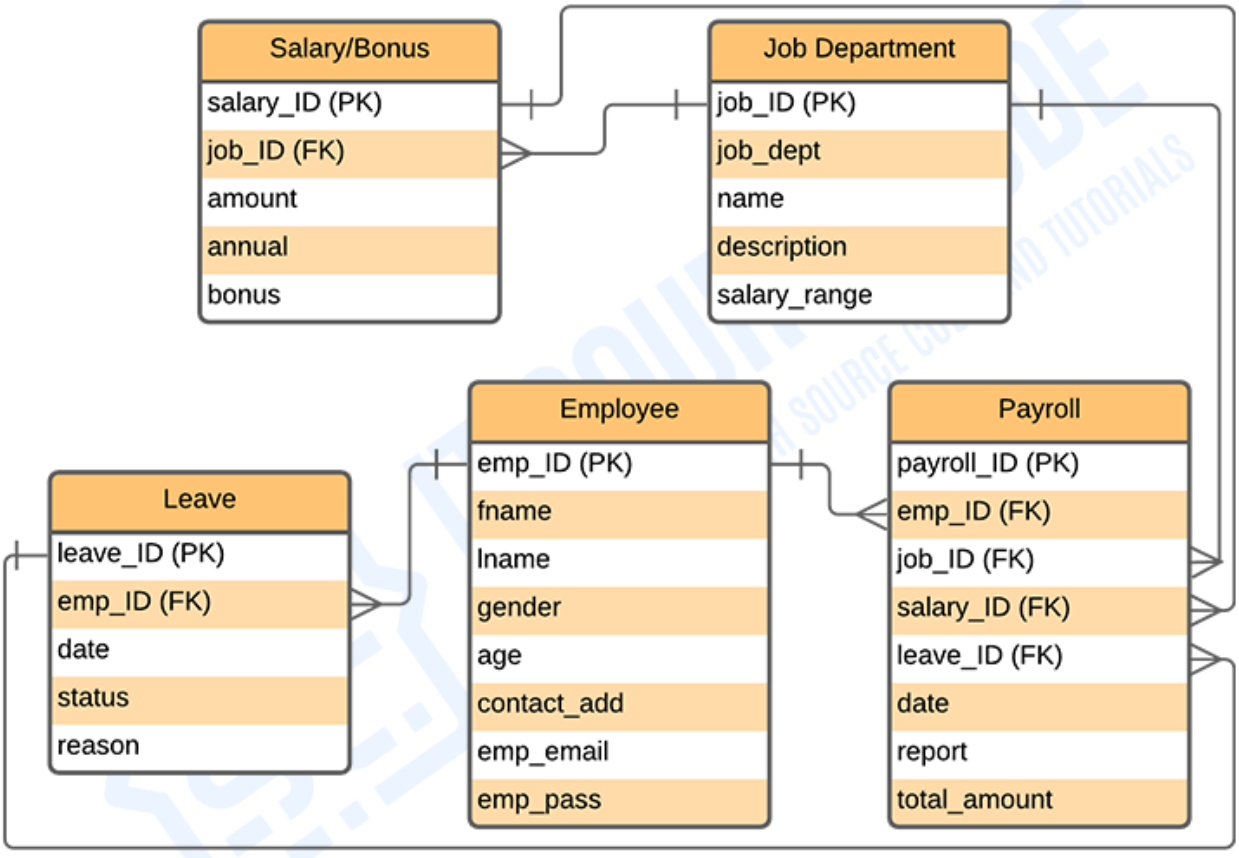
**payroll management system entity-relationship diagram (ERD)** also aids in defining the data types to be stored such as their attributes and characteristics.

All other real-world projects are presented with ER Diagrams (database designs). To display the details and attributes of a data store, the **er diagram for payroll management system** is used in conjunction with its data flow diagram. It visualizes how data is connected generically.

**ERD (Entity-relationship diagram)** is utilized in software engineering during the planning phase of software development. It aids in the identification of various system constituents and their interrelationships. **Payroll Management System ERD** is also used as the foundation of the payroll system DFD (Dataflow Diagram).

# ER Diagram for Payroll Management System

**ER Diagram of Payroll Management System** shows the system entity relationships in each entity and their supposed functions in each relationship.




*Payroll Management System ER Diagram*

Based on the image above, the **Entity-Relationship Diagram for Payroll Management System tables** includes employee, payroll, job department, salary and Bonuses, and leave table.

The tables are made to meet the required specification of the system and provide much more specific details of each entity within the system.

# Payroll Management System Database Design

This **Payroll management system database** design was made based on managing payroll requirements. The system can encode employees' information. Payroll admin can have access to the employees' status and information in terms of working performances and salaries as well as monitoring the ranges of labor made by the employees.

The features included in the system ER diagram were the security and monitoring of the employees' work and leave records, job information, and status. These features were also listed and recorded in reports that served as the history of transactions done in the system.

# Payroll Management System ER Diagram Tables

These tables below provide the complete database table details such as **Field Name**, **Descriptions**, **data types**, and **character lengths**. Each of these tables represents the characteristics and the attributes of data storage. The **field** column presents the names of each database's attributes, the **description** column gives the complete thought of each attribute, the **type** column is their data type and the **length** is for their character lengths.

### Table Name: Employee

| Field | Description | Type | Length |
|---|---|---|---|
| **emp_ID (PK)** | Employee ID | Int | 11 |
| **fname** | Employee First Name | Varchar | 255 |
| **lname** | Employee Last Name | Varchar | 255 |
| **gender** | Employee Gender | Int | 11 |
| **age** | Employee Age | Int | 11 |
| **contact_add** | Contact Address | Int | 11 |
| **emp_email** | Employee Email | Varchar | 255 |
| **emp_pass** | Employee Password | Varchar | 255 |

### Table Name: Users

| Field | Description | Type | Length |
|---|---|---|---|
| **admin_ID (PK)** | Admin ID | Int | 11 |
| **fname** | Instructor First Name | Varchar | 255 |
| **lname** | Instructor Last Name | Varchar | 255 |
| **gender** | Instructor Gender | Int | 11 |
| **age** | Instructor Age | Int | 11 |
| **contact_add** | Contact Address | Int | 11 |
| **admin_email** | Admin Email | Varchar | 255 |
| **admin_pass** | Admin Password | Varchar | 255 |

### Table Name: Job Department

| Field | Description | Type | Length |
|---|---|---|---|
| **job_ID (PK)** | Job ID | Int | 11 |
| **job_dept** | Job Department | Varchar | 30 |
| **name** | Job Name | Varchar | 30 |
| **description** | Job Description | Varchar | 30 |
| **salary_range** | Salary Range | Varchar | 30 |

## Table Name: Salary or Bonus

| Field | Description | Type | Length |
|---|---|---|---|
| **salary_ID (PK)** | Salary ID | Int | 11 |
| **job_ID (FK)** | Job ID | Int | 11 |
| **amount** | Amount | Int | 11 |
| **annual** | Annual Expense | Date | |
| **bonus** | Bonus | Date | |

## Table Name: Leave

| Field | Description | Type | Length |
|---|---|---|---|
| **leave_ID (PK)** | Leave ID | Int | 11 |
| **emp_ID (FK)** | Employee ID | Int | 11 |
| **date** | Date | Date | |
| **status** | Leave Status | Varchar | 30 |
| **reason** | Reason for Leave | Text | |

## Table Name: Payroll

| Field | Description | Type | Length |
|---|---|---|---|
| **payroll_ID (PK)** | Payroll ID | Int | 11 |
| **emp_ID (FK)** | Employee ID | Int | 11 |
| **job_ID (FK)** | Job ID | Int | 11 |
| **salary_ID (FK)** | Salary ID | Int | 11 |
| **leave_ID (FK)** | Leave ID | Int | 11 |
| **date** | Date of Payroll Report | Date | |
| **report** | Report | Text | |
| **total amount** | Total Amount | Int | 11 |

The tables given will be the basis for developers on how would they do the **payroll management system database design**. It has the complete description of the database and they will put this into the program or data storage the same as the names given to each of the tables. They will create a database with the attributes given as well as the value of each attribute.