Employee Attendance System ER Diagram

The **ER diagram for employee attendance management system** shows the relationships of the system's entities that build its **database design**. It is done by identifying the employee attendance management process entities, their properties, and the interactions between them.

The **employee attendance 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.

Employee Attendance Management System Features

- **Employee Attendance Management** - It is the main feature of the system wherein the designed ER diagram contains the basic details in attendance checking of the employees. The design will show the specific database that is needed in processing the checking of attendance.
- **Employee Management** - This feature plays a big role in the system because this gathers important information about the employee. This information was stored in the employee database and the data will be used during the attendance checking.
- **Manage Attendance Information** - Attendance information management was important for the system because it serves as the basis for the whole attendance report. This will also help in calculating the number of employee absences for the whole working days and hours.

What is an ER Diagram?

In DBMS, the **ER Diagram of employee attendance 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 **employee management system ER Diagram** is used. It works best with DFD (Data Flow Diagram), which is responsible for data movement. Developing the **database design for employee attendance management system** would be much easier with the help of ER diagram.

Importance of ER Diagram

The **importance of ER diagram for employee 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 **employee attendance management system entity-relationship diagram (ERD)** also aids in defining the data types to be stored such as their attributes and characteristics.
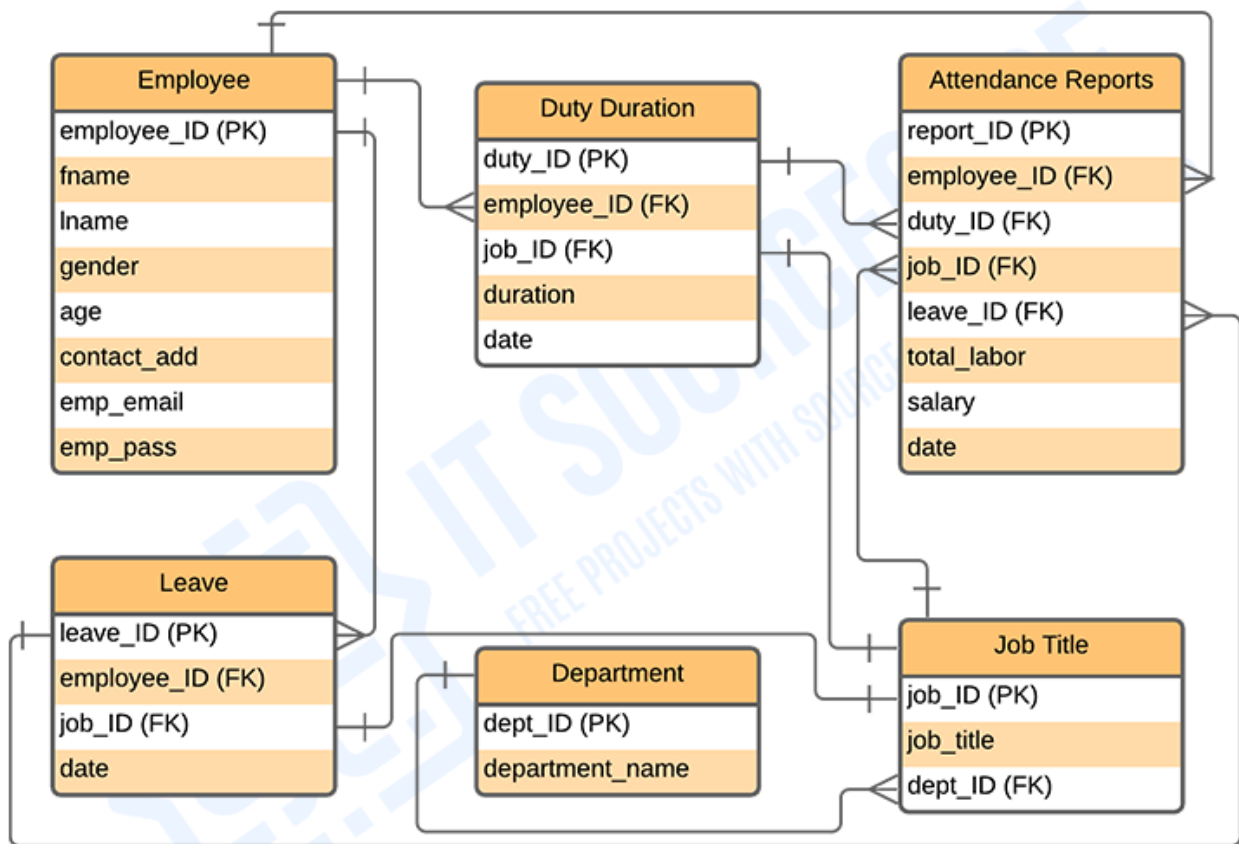
All other real-world projects are presented with ER Diagrams (database designs). To display the details and attributes of a data store, the **ER diagram for employee attendance**

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. **Employee Attendance Management System ERD** is also used as the foundation of the employee attendance system DFD (Dataflow Diagram).

ER Diagram for Employee Attendance Management System

The **ER Diagram for Employee Attendance Management System** shows the system entity relationships in each entity and their supposed functions in each relationship.

Employee Attendance Management System ER Diagram

Based on the image above, the **Entity-Relationship Diagram for Employee Attendance Management System tables** consists of the following: employee, department, job title, leave, duty duration, and attendance reports. The tables are made to meet the required specification of the system and provide much more specific details of each entity within the system.

Employee Attendance Management System Database Design

The **database design** made for the **Employee Attendance Management system** was based on the activities included in attendance management. The system ERD must show how to secure and monitor the attendance of employees. The company admin can have access to the employees' status during checking of attendance. And of course, the admin can also update the employee attendance.

The features included in the Management system's ERD were the security and managing of the employee attendance records and status. These features were also listed and recorded in reports that served as the history of attendance checking done in the system.

Employee Attendance 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
employee_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: Job Title

Field	Description	Type	Length
job_ID (PK)	Job ID	Int	11
job_title	Job Title	Varchar	255
dept_ID (FK)	Department ID	Int	11
employee_ID (FK)	Employee ID	Int	11

Table Name: Department

Field	Description	Type	Length
dept_ID (PK)	Department ID	Int	11

	department_name	Department Name	Varchar	30

Table Name: On-Duty

Field	Description	Type	Length
duty_ID (PK)	On-Duty ID	Int	11
employee_ID (FK)	Employee ID	Int	11
job_ID (FK)	Job ID	Int	11
duration	On-Duty Duration	Int	11
date	Date	Date	

Table Name: Leave

Field	Description	Type	Length
leave_ID (PK)	Leave ID	Int	11
emp_ID (FK)	Employee ID	Int	11
job_ID (FK)	Job ID	Int	11
date	Date of Leave	Date	

Table Name: Attendance Reports

Field	Description	Type	Length
report_ID (PK)	Report ID	Int	11
employee_ID (FK)	Employee ID	Int	11
job_ID (FK)	Job ID	Int	11
duty_ID (FK)	Duty ID	Int	11
total_labor	Total Labor	Int	11
salary	Salary	Int	11
date	Date	Date	

The tables given will be the basis for developers on how would they do the **employee attendance 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.