

Introduction

Purpose: A brief overview of why the database schema is being created and how it relates to the overall project.

Scope: This document should cover the database schema for the Employee Management System, which includes the **users**, **employees**, and **departments** tables.

Database Structure Overview

1. Departments Table

- **Purpose:** Stores department information within an organization.
 - **Columns:**
 - **id:** Primary key, uniquely identifies each department (auto-incremented).
 - **name:** Name of the department, must be unique.
 - **created_at:** Timestamp of when the department was created.
 - **updated_at:** Timestamp of the last update to the department record.
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2. Employees Table

- **Purpose:** Stores employee information and links to departments.
- **Columns:**
 - **id:** Primary key, uniquely identifies each employee (auto-incremented).
 - **first_name:** Employee's first name.
 - **last_name:** Employee's last name.

- **email:** Employee's email must be unique.
 - **phone:** Employee's phone number.
 - **role_title:** The employee's role or title within the company.
 - **department_id:** Foreign key that links the employee to a department .
(references the **departments table**).
 - **Cascade update:** If the department **id** is updated, the employee's **department_id** will update automatically.
 - **Restrict delete:** If a department is deleted, employees linked to it cannot be deleted without additional actions.
 - **bio:** A short biography or description of the employee.
 - **profile_pic_url:** URL to the employee's profile picture.
 - **join_date:** The date the employee joined the company.
 - **status:** The current status of the employee, such as "working" or "not working."
 - **created_at:** Timestamp of when the employee record was created.
 - **updated_at:** Timestamp of the last update to the employee record.
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3. Users Table

- **Purpose:** Stores user account details for system access, linked to employees.
- **Columns:**
 - **id:** Primary key, uniquely identifies each user (auto-incremented).
 - **employee_id:** Foreign key that links the user account to an employee
(references the **employees table**).
 - **Cascade delete:** If an employee is deleted, the associated user account will also be deleted.

- **username:** Unique username for login.
 - **password_hash:** Hash of the user's password for authentication.
 - **role:** The role of the user, either "admin" or "employee."
 - **Check constraint:** Ensures that only "admin" or "employee" values can be stored.
 - **created_at:** Timestamp of when the user record was created.
 - **updated_at:** Timestamp of the last update to the user record.
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Relationships & Constraints:

- **Departments and Employees:** One department can have multiple employees (one-to-many relationship).
- **Employees and Users:** One employee can have one user account (one-to-one relationship).
- **Cascade Updates:** Changes in the department's **id** will automatically reflect in the employees' records.
- **Restrict Delete:** Deleting a department will be restricted if any employees are associated with it.
- **Cascade Delete:** Deleting an employee will automatically delete their associated user account.