

# Employee Management System

---

Project Report

Prepared by: Shubham Chaudhary

Date: September 2025

## 1. Overview

### What:

This project is an Employee Management System that provides role-based access to employees and admins. It supports employee profiles, attendance tracking, leave management, performance monitoring, and project assignment.

### Why:

Companies use such systems to streamline HR operations, improve transparency, and maintain accurate records of employees. This project demonstrates practical applications of database management and full-stack development.

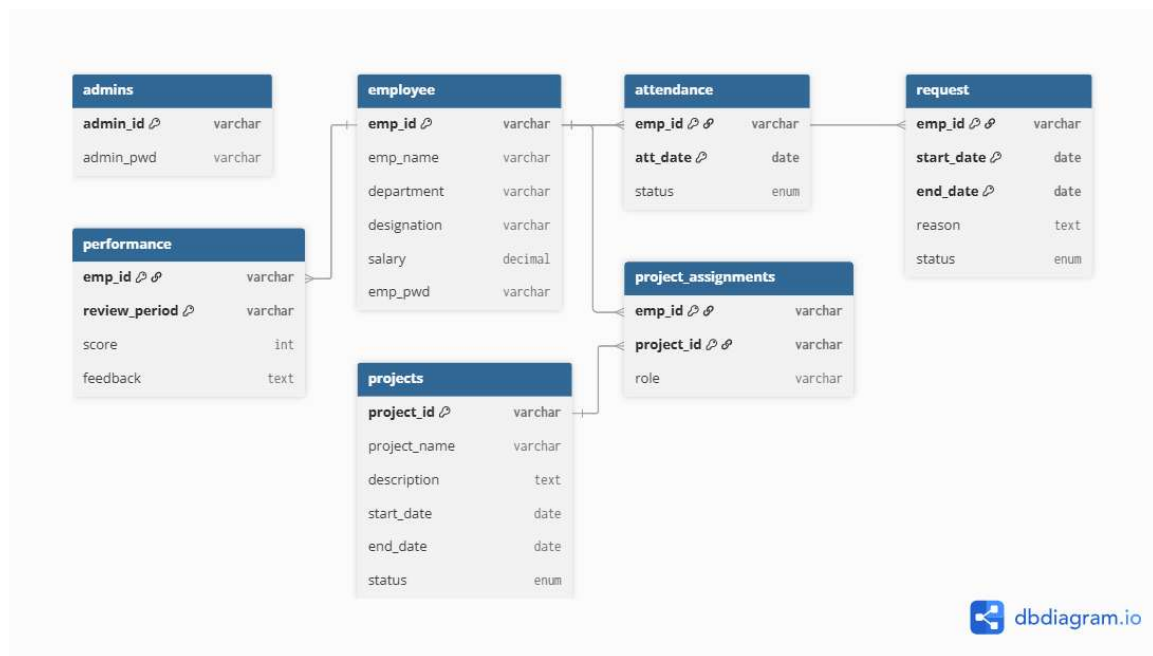
### How:

- Frontend: Streamlit (Python web framework)
- Backend: MySQL (Database for employees, attendance, performance, projects)
- Libraries: Pandas, mysql-connector-python
- Language: Python

## 2. Database Structure

The database contains the following tables:

- Admins
- Employee
- Attendance
- Request (Leave Management)
- Performance
- Projects
- Project Assignments



### 3. SQL Commands & Workbench Screenshots

#### Create Database:

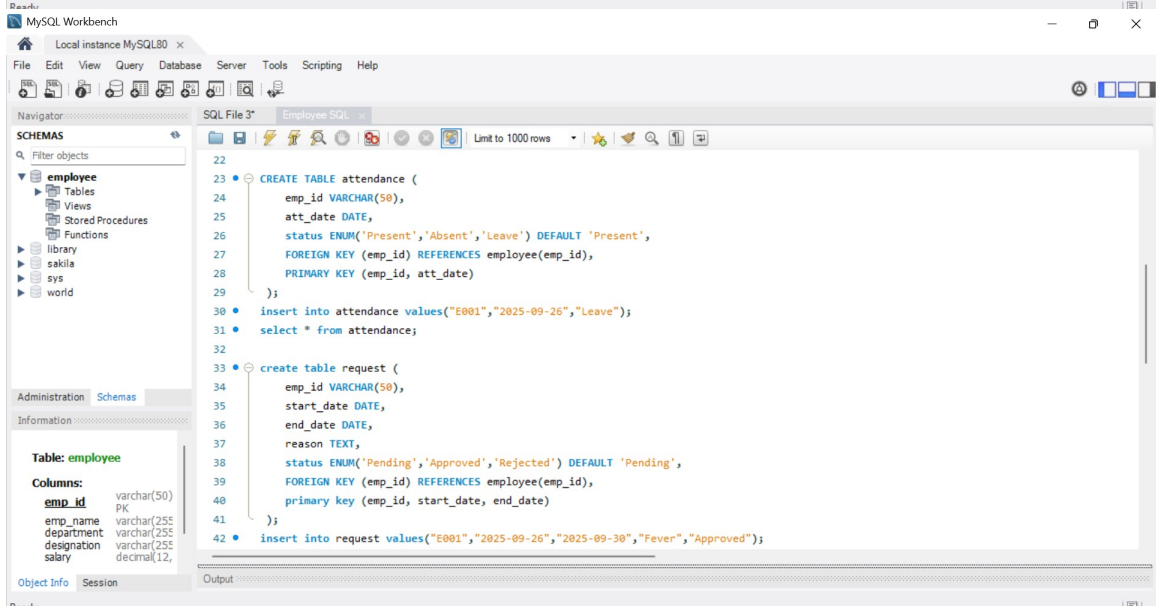
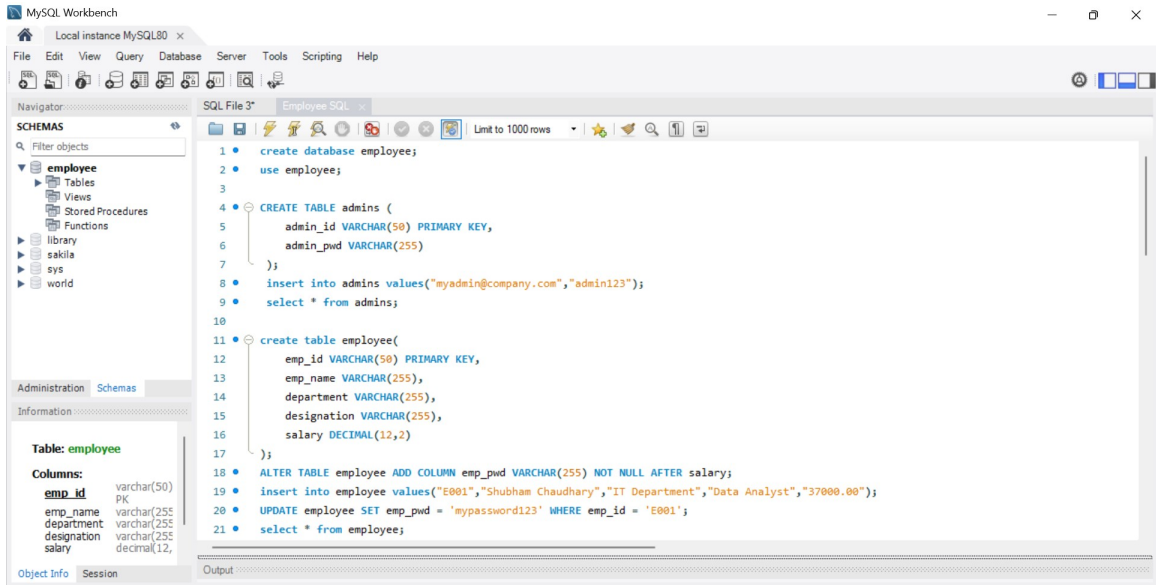
```
CREATE DATABASE employee;  
  
USE employee;
```

#### Admin Table:

```
CREATE TABLE admins (  
    admin_id VARCHAR(50) PRIMARY KEY,  
    admin_pwd VARCHAR(255)  
);  
  
INSERT INTO admins VALUES ("myadmin@company.com","admin123");  
  
SELECT * FROM admins;
```

#### Employee Table:

```
CREATE TABLE employee (  
    emp_id VARCHAR(50) PRIMARY KEY,  
    emp_name VARCHAR(255),  
    department VARCHAR(255),  
    designation VARCHAR(255),  
    salary DECIMAL(12,2),  
    emp_pwd VARCHAR(255) NOT NULL  
);  
  
INSERT INTO employee VALUES ("E001","Shubham Chaudhary","IT Department","Data Analyst","37000.00","mypassword123");  
  
SELECT * FROM employee;
```



MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- employee
  - Tables
  - Views
  - Stored Procedures
  - Functions
- library
- sakila
- sys
- world

Administration Schemas

Information

Table: employee

Columns:

| Column      | Type          | PK |
|-------------|---------------|----|
| emp_id      | varchar(50)   | PK |
| emp_name    | varchar(255)  |    |
| department  | varchar(255)  |    |
| designation | varchar(255)  |    |
| salary      | decimal(12,2) |    |

Object Info Session

SQL File 3\*

Employee SQL

```

40     primary key (emp_id, start_date, end_date)
41 );
42 • insert into request values ("E001", "2025-09-26", "2025-09-30", "Fever", "Approved");
43 • select * from request;
44
45 • CREATE TABLE performance (
46     emp_id VARCHAR(50),
47     review_period VARCHAR(50),
48     score INT,
49     feedback TEXT,
50     PRIMARY KEY(emp_id, review_period),
51     FOREIGN KEY(emp_id) REFERENCES employee(emp_id)
52 );
53 • INSERT INTO performance VALUES ('E001', '2025-Q3', 8, 'Good performance with timely project completion.');
```

Output

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- employee
  - Tables
  - Views
  - Stored Procedures
  - Functions
- library
- sakila
- sys
- world

Administration Schemas

Information

Table: employee

Columns:

| Column      | Type          | PK |
|-------------|---------------|----|
| emp_id      | varchar(50)   | PK |
| emp_name    | varchar(255)  |    |
| department  | varchar(255)  |    |
| designation | varchar(255)  |    |
| salary      | decimal(12,2) |    |

Object Info Session

SQL File 3\*

Employee SQL

```

55
56 • CREATE TABLE projects (
57     project_id VARCHAR(50) PRIMARY KEY,
58     project_name VARCHAR(255),
59     description TEXT,
60     start_date DATE,
61     end_date DATE,
62     status ENUM('Not Started', 'In Progress', 'Completed') DEFAULT 'Not Started'
63 );
64 • insert into projects values ("P001", "Data Migration", "Migrate all data from old CRM to new system.", "2025-07-01", "2025-09-30", "Completed");
65 • select * from projects;
66
67 • CREATE TABLE project_assignments (
68     emp_id VARCHAR(50),
69     project_id VARCHAR(50),
70     role VARCHAR(100),
71     PRIMARY KEY(emp_id, project_id),
72     FOREIGN KEY(emp_id) REFERENCES employee(emp_id),
73     FOREIGN KEY(project_id) REFERENCES projects(project_id)
74 );
75 • insert into project_assignments values ("E001", "P001", "Data Analyst");
```

Output

## 4. Main Streamlit Python Code

Paste important parts of your Streamlit code here (Login, Attendance, Projects, etc.).

**# ----- Employee Section -----**

```
elif(menu=="Employee"):

    st.header("Employee Login")

    emp_id = st.text_input("Enter Employee ID")

    emp_pwd = st.text_input("Enter Password",type="password")

    btn = st.button("Login as Employee")

    if btn:

        db = get_db()

        c = db.cursor()

        c.execute("select * from employee where emp_id=%s",(emp_id,))

        st.session_state['employee_id'] = emp_id

        for r in c:

            if(r[0]==emp_id and r[5]==emp_pwd):

                st.session_state['employee_login'] = True

                break

        if(not st.session_state['employee_login']):

            st.error("Incorrect Employee ID or Password!")

        if(st.session_state['employee_login']):

            st.status("Login Successful!")

            emp_choice = st.selectbox("Employee Features",("Profile","Mark Attendance","Apply Leave","View Performance","My Projects"))
```

**# ----- Admin Section -----**

elif menu == "Admin":

st.header("Admin Login")

adm\_id = st.text\_input("Enter Admin ID")

adm\_pwd = st.text\_input("Enter your password", type="password")

btn2 = st.button("Login as Admin")

if btn2:

db = get\_db()

c = db.cursor()

c.execute("SELECT \* FROM admins WHERE admin\_id=%s", (adm\_id,))

row = c.fetchone()

if row and row[0] == adm\_id and row[1] == adm\_pwd:

st.session\_state['admin\_login'] = True

st.session\_state['admin\_id'] = adm\_id

else:

st.error("Incorrect Admin ID or Password!")

if st.session\_state['admin\_login']:

st.success("Login Successful!")

admin\_choice = st.selectbox("Admin Features", (

"None", "Manage Employees", "Manage Attendance", "Manage Leaves",



```
"Performance Management","Project Management"
```

```
)
```

```
db = get_db()
```

```
c = db.cursor()
```

## 5. Streamlit Application Screenshots

Menu

Home

Home

Employee

Admin

Menu

Employee

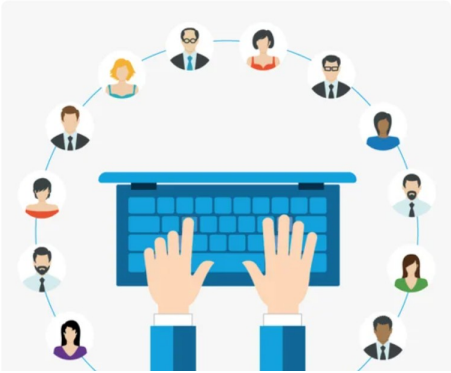
Menu

Admin

Deploy

### Employee Management System

This is an Employee Management System web application



Deploy

### Employee Login

Enter Employee ID

E002

Enter Password

\*\*\*\*\*

Login as Employee

Login Successful!

Employee Features

Profile

|   | emp_id | emp_name  | department    | designation        | salary | emp_pwd  |
|---|--------|-----------|---------------|--------------------|--------|----------|
| 0 | E002   | Arpit Rai | IT Department | Software Developer | 43000  | arpit123 |

Deploy

### Admin Login

Enter Admin ID

myadmin@company.com

None

Manage Employees

Manage Attendance

Manage Leaves

Performance Management

Project Management

None