



EMPLOYEE ATTENDANCE MANAGEMENT SYSTEM

A database solution for tracking employee attendance

--SUJI R B.TECH

30-12-2024



Objective:

The Employee Attendance Management System is designed to track employee attendance, leave requests, and work hours within an organization.

Key Features:

- Clock-in/clock-out time tracking
- Leave request management
- Department-based reporting
- Attendance reports generation



Problem:

Managing employee attendance manually can be time-consuming and prone to errors. There is a need for an automated system to track attendance accurately.

Solution:

A centralized system to record and manage employee attendance, leaves, and work hours.



System Architecture:

- **Database:** MySQL for storing attendance, employee, leave, and department data.
- **Backend:** SQL queries for fetching and generating reports.
- **Frontend:** A potential future implementation could include a user interface for employees and HR.



Database Design

- **Tables:**
- **Employees:** Stores employee information (name, department, position).
- **Departments:** Stores department details.
- **AttendanceRecords:** Tracks clock-in/clock-out times.
- **LeaveRequests:** Manages leave types and status.
- **Relationships:**
Employees are linked to departments and attendance records.

VIEW ALL EMPLOYEE'S ATTENDANCE, DEPARTMENT AND THEIR WORKING HOURS

MySQL Workbench

Local instance mysql - Warnin...

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

- company
- company1
- db_info
- eas
 - Tables
 - Views
 - Stored Procedures

Administration Schemas

Information

Schema: eas

SQL File 2*

```
87 AttendanceRecords ar
88 JOIN
89 Employees e ON ar.emp_id = e.emp_id
90 JOIN
91 Departments d ON e.department_id = d.department_id
92 ORDER BY
93 ar.date DESC;
```

Result Grid

Employee_Name	Department	Attendance_Date	Clock_In_Time	Clock_Out_Time	Work_Hours
Aleena	Sales	2024-12-20	09:15:00	17:30:00	8
Santhiya	SW Engineering	2024-12-20	08:30:00	18:00:00	9
Josh	Sales	2024-12-20	09:00:00	16:30:00	7
Jananee	HR	2024-12-20	08:30:00	16:30:00	8
Kaviya	IT	2024-12-20	09:30:00	18:30:00	9
Lisya	HR	2024-12-20	08:00:00	17:30:00	9
Rishetha	IT	2024-12-20	09:30:00	18:30:00	9
Bathma	HR	2024-12-20	08:00:00	16:15:00	8

Result 8

Output

Action Output

#	Time	Action	Message	Duration / Fetch
27	15:20:06	SELECT e.name AS Employee_Name, d.department_name AS Department, ...	9 row(s) returned	0.000 sec / 0.000 sec
28	16:21:34	SELECT e.name AS Employee_Name, d.department_name AS Department, ...	9 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Windows Taskbar: Type here to search, 4:22 PM 12/30/2024

DETAILS OF APPROVED LEAVE REQUEST

MySQL Workbench

Local instance mysql - Warnin... x

File Edit View Query Database Server Tools Scripting Help

Navigator:

SCHEMAS

Filter objects

- company
- company1
- db_info
- eas
 - Tables
 - Views
 - Stored Procedures

Administration Schemas

Information:

Schema: eas

SQL File 2* x

```
107 WHERE
108     lr.leave_status = 'Approved'
109 ORDER BY
110     lr.leave_date;
111
112
113 • SELECT
```

Limit to 1000 rows

Result Grid

Employee_Name	Department	Leave_Date	Leave_Type	Status
Santhiya	SW Engineering	2024-12-24	Vacation	Approved
Suji	SW Engineering	2024-12-25	Vacation	Approved

Result 9 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 28	16:21:34	SELECT e.name AS Employee_Name, d.department_name AS Department, ...	9 row(s) returned	0.000 sec / 0.000 sec
✓ 29	16:23:20	SELECT e.name AS Employee_Name, d.department_name AS Department, ...	2 row(s) returned	0.031 sec / 0.000 sec

Object Info Session

Windows Taskbar: Type here to search, 4:23 PM, 12/30/2024

ATTENDANCE RECORDS FOR EMPLOYEES WHO CLOCKED IN LATER THAN 9.00am

The screenshot displays the MySQL Workbench interface. The left sidebar shows the 'SCHEMAS' panel with a search filter and a tree view containing 'company', 'company1', 'db_info', and 'eas'. The 'eas' schema is selected, showing 'Tables', 'Views', and 'Stored Procedures'. The 'Information' panel shows 'Schema: eas'. The main editor window is titled 'SQL File 2*' and contains the following SQL query:

```
128
129 • SELECT
130     e.name AS Employee_Name,
131     d.department_name AS Department,
132     ar.date AS Attendance_Date,
133     ar.clock_in AS Clock_In
134 FROM
135     AttendanceRecords ar
136     JOIN Employees e ON e.employee_id = ar.employee_id
137     JOIN Departments d ON d.department_id = ar.department_id
138 WHERE ar.clock_in > '09:00:00'
```

Below the query editor, the 'Result Grid' shows the results of the query. The grid has columns: Employee_Name, Department, Attendance_Date, and Clock_In. The results are as follows:

Employee_Name	Department	Attendance_Date	Clock_In
Aleena	Sales	2024-12-20	09:15:00
Kaviya	IT	2024-12-20	09:30:00
Rishetha	IT	2024-12-20	09:30:00

At the bottom, the 'Output' panel shows the 'Action Output' tab with the following log:

#	Time	Action	Message	Duration / Fetch
30	16:31:01	SELECT	e.name AS Employee_Name, d.department_name AS Department, ... 9 row(s) returned	0.062 sec / 0.000 sec
31	16:32:14	SELECT	e.name AS Employee_Name, d.department_name AS Department, ... 3 row(s) returned	0.031 sec / 0.000 sec

The Windows taskbar at the bottom shows the system clock as 4:32 PM on 12/30/2024.



Conclusion:

The Employee Attendance Management System streamlines attendance and leave tracking for employees and organizations.

It automates attendance calculations and reporting, saving time and improving accuracy.

Next Steps:

Future integration with a user interface and payroll system.