

EMPLOYEE MANAGEMENT AND ATTENDANCE TRACKER

INTRODUCTION

This project aims to develop a relational database system using MySQL Workbench that effectively manages employee details and tracks attendance records. The system is designed to help HR departments monitor employee punctuality, work duration, and generate insightful reports.

ABSTRACT

The Employee Management and Attendance Tracker is a SQL-based mini project that includes creating and manipulating tables for departments, roles, employees, and attendance. This project demonstrates the use of SQL queries, joins, subqueries, aggregate functions, stored procedures, views, and triggers to manage and analyze organizational attendance data.

TOOLS USED

- MySQL Database Server
- MySQL Workbench
- SQL (DDL, DML, DQL)

STEPS INVOLVED IN BUILDING THE PROJECT

1. Created database and tables: Departments, Roles, Employees, and Attendance.
2. Inserted 200+ dummy employee and attendance records using SQL scripts.
3. Created joins, subqueries, and views for reporting late arrivals and monthly attendance.
4. Implemented a trigger to auto-update attendance status based on check-in time.
5. Developed stored functions to calculate total work hours per employee.
6. Built stored procedures to mark attendance efficiently.
7. Generated reports using GROUP BY, HAVING, and aggregate functions.

CONCLUSION

This project provides a complete, hands-on experience in building a normalized SQL database for employee and attendance management. It integrates fundamental SQL concepts such as DDL, DML, triggers, and procedures with practical applications in the corporate HR domain. The tracker helps streamline attendance monitoring and enhances data-driven HR decisions.