

Employee Performance and Productivity Analysis

1. Introduction

This project focuses on analyzing employee performance and departmental productivity using SQL for data analysis and Power BI for data visualization. The analysis is based on three tables: employees, attendance, and tasks.

2. Objective

To assess individual and team performance metrics, departmental efficiency, and task distribution to support informed decision-making in resource planning and employee management.

3. Database Design

Tables Used:

- **employees:** Contains employee details such as ID, name, and department.
 - **attendance:** Stores daily attendance and hours worked by each employee.
 - **tasks:** Records the number of tasks completed by each employee on a given date.
-

4. SQL Queries and Analysis

Below are the key queries used for analysis along with their purpose and results:

- **Total Tasks Completed by Each Employee**
Calculates the sum of tasks completed by each employee.
 - **Average Hours Worked per Employee**
Finds the average number of hours worked by each employee.
 - **Department-wise Total Tasks Completed**
Aggregates the number of tasks completed by employees in each department.
 - **Daily Task Completion Trends**
Shows how many tasks were completed each day across all employees.
 - **Top Performing Employees by Task Completion**
Lists employees who have completed the most tasks.
 - **Employee Efficiency (Tasks per Hour Worked)**
Computes how efficiently each employee works based on tasks per hour.
 - **Attendance Summary per Employee**
Counts the number of days each employee was present.
 - **Department-wise Average Efficiency**
Calculates average task-per-hour rate for each department.
-

5. Power BI Dashboard

The Power BI dashboard was created using an Excel workbook containing the exported tables and summary sheet. It visualizes:

- Task trends over time.
 - Department-wise comparisons.
 - Top performers.
 - Average hours and efficiency.
-

6. Tools Used

- **MySQL** – For database creation and SQL queries.
 - **Google Sheets / Excel** – For data formatting and summaries.
 - **Power BI** – For creating interactive dashboards.
 - **GitHub** – For version control and project hosting.
-

7. Conclusion

This project provided valuable insights into employee performance and workload distribution. By integrating SQL and Power BI, we identified top performers, efficient departments, and areas needing improvement. These insights are essential for HR, project planning, and organizational growth.