PROJECT-1(MySQL)

Project Title: Employee Absenteeism Analysis and Compensation Optimization

Project Overview: This project focuses on analyzing absenteeism patterns among employees and optimizing compensation strategies based on various criteria such as health status and smoking habits. The data used includes information on absenteeism incidents, employee characteristics, reasons for absence, and compensation rates.

Objectives:

1. **Absenteeism Analysis**: Investigate absenteeism patterns to identify trends and factors influencing absence from work.
2. **Health Assessment**: Determine the healthiest employees eligible for performance bonuses based on criteria such as drinking and smoking habits, body mass index (BMI), and absenteeism hours.
3. **Compensation Optimization**: Propose an increase in compensation rates for non-smokers, supported by financial analysis and budget allocation.

Data Sources:

- **Absenteeism_at_work**: Contains detailed employee records including reasons for absence, month and day of absence, and various personal attributes.
- **Compensation**: Lists employee IDs and their corresponding compensation rates per hour.
- **Reasons**: Provides a mapping of numerical codes to detailed reasons for absence.

Queries and Analysis:

1. **Join Table Creation**: Combines data from absenteeism_at_work, compensation, and reasons tables to consolidate absenteeism data with compensation details and reasons for absence.

2. **Identifying Healthiest Employees for Bonus**: Filters employees who are non-drinkers, non-smokers, have a BMI less than 25, and have absenteeism hours lower than the company average, to determine bonus eligibility.
3. **Compensation Rate Increase for Non-Smokers**: Calculates the count of non-smokers to propose an increased compensation rate aimed at incentivizing healthier lifestyles among employees.
4. **Financial Analysis**:
    - Estimates the budget allocated for bonuses and calculates the manpower cost per year for non-smokers based on standard working hours.
    - Determines the per-hour increase in compensation and the resultant annual increase per employee.
5. **Query Optimization**: Optimizes SQL queries to improve performance and efficiency, particularly focusing on queries that retrieve employee ID, absence reasons, BMI categories, and seasonal absenteeism patterns.

Conclusion: By leveraging data-driven insights from the analysis, the project aims to enhance employee health awareness, reduce absenteeism rates, and optimize compensation strategies to align with company objectives and financial capabilities.

This project not only addresses operational efficiency through query optimization but also underscores the strategic importance of health-oriented incentives in improving overall employee well-being and productivity.