**SQL Mentor User Performance Analysis**

## Project Overview

This project is designed to help beginners understand SQL querying and performance analysis using real-time data from SQL Mentor datasets. In this project, you will analyze user performance by creating and querying a table of user submissions. The goal is to solve a series of SQL problems to extract meaningful insights from user data.

## Objectives

* Learn how to use SQL for data analysis tasks such as aggregation, filtering, and ranking.
* Understand how to calculate and manipulate data in a real-world dataset.
* Gain hands-on experience with SQL functions like COUNT, SUM, AVG, EXTRACT(), and DENSE\_RANK().

## Project Level: Beginner

This project is designed for beginners who are familiar with the basics of SQL and want to learn how to handle real-world data analysis problems. You'll be working with a small dataset and writing SQL queries to solve different tasks that are commonly encountered in data analytics.

## SQL Mentor User Performance Dataset

The dataset consists of information about user submissions for an online learning platform. Each submission includes:

* **User ID**
* **Question ID**
* **Points Earned**
* **Submission Timestamp**
* **Username**

This data allows you to analyze user performance in terms of correct and incorrect submissions, total points earned, and daily/weekly activity.

## SQL Problems and Questions

Here are the SQL problems that you will solve as part of this project:

### Q1. List All Distinct Users and Their Stats

* **Description**: Return the user name, total submissions, and total points earned by each user.
* **Expected Output**: A list of users with their submission count and total points.

### Q2. Calculate the Daily Average Points for Each User

* **Description**: For each day, calculate the average points earned by each user.
* **Expected Output**: A report showing the average points per user for each day.

### Q3. Find the Top 3 Users with the Most Correct Submissions for Each Day

* **Description**: Identify the top 3 users with the most correct submissions for each day.
* **Expected Output**: A list of users and their correct submissions, ranked daily.

### Q4. Find the Top 5 Users with the Highest Number of Incorrect Submissions

* **Description**: Identify the top 5 users with the highest number of incorrect submissions.
* **Expected Output**: A list of users with the count of incorrect submissions.

### Q5. Find the Top 10 Performers for Each Week

* **Description**: Identify the top 10 users with the highest total points earned each week.
* **Expected Output**: A report showing the top 10 users ranked by total points per week.

## Key SQL Concepts Covered

* **Aggregation**: Using COUNT, SUM, AVG to aggregate data.
* **Date Functions**: Using EXTRACT() and TO\_CHAR() for manipulating dates.
* **Conditional Aggregation**: Using CASE WHEN to handle positive and negative submissions.
* **Ranking**: Using DENSE\_RANK() to rank users based on their performance.
* **Group By**: Aggregating results by groups (e.g., by user, by day, by week).