IT 697 SQL Module Eight Reflection Journal

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Throughout the eighth week of this course, I dealt with a few more days of COVID symptoms and overall COVID-related fatigue. Despite this challenge, I was able to be productive with my SQL learning activities and my projects for the Executive Brief due next week. There were four main activities around which this week’s learning experience revolved. The first two were tasks specifically for Module 8. These included exploring SQL Set Operators and participating in the discussion page which focused on time management strategies and challenges. The second two activities were tasks for projects that I hope to use in my Executive Brief in order to demonstrate what I have learned throughout this learning experience.

Early in the week, I set out to watch Youtube videos and read through web tutorials that covered the SQL Set Operators UNION, UNION ALL, INTERSECT, and MINUS. I used Oracle Database Tutorials on Youtube as well as web tutorials from docs.oracle.com and tutorialspoint.com, all of which have proven to be useful in my SQL learning experience throughout this course. I was able to get the hang of how the set operators are used in queries and the differences between them. There are a lot of parallels between set operators and concepts in basic probability and logic. Essentially, the UNION operator can be thought of as OR and the INTERSECT operator can be thought of as AND in the way that AND/OR are used in probability.

This week’s discussion page asked my classmates and I to share our time management strategies and the challenges we have faced throughout this learning experience compared to other courses. I appreciated the opportunity to share my approach to time management and to read posts from my peers. I related to many of the challenges they have faced. In particular, I was drawn to respond to Tracy’s idea about being most productive at a certain time of day and Uriel’s thoughts about the advantages of getting ahead of schedule when it comes to learning topics and completing assignments.

Aside from the Module 8 specific activities, I spent a large amount of time this week working on the two projects that I plan to use in my Executive Brief to demonstrate the knowledge and skills that I have accumulated throughout this learning experience. The first project is my attempt to land on the top 10 leaderboard of the Spring Sprint monthly challenge from sqlpad.io. To accomplish this goal, I must accumulate points by solving easy, medium, and hard practice problems related to a movie rental database. 10th place on the March leaderboard finished with 146 points, so I believe I will need to earn at least that many points in the month of April. As of last Sunday, I was in 11th place. I had solved 23 easy-level questions and earned 46 points. I had not yet been able to solve any medium (5 point) or hard (10 point) questions. I also had been forced to skip any questions that included filtering or grouping based on a date column. This week, I spent time on three separate days working to solve more practice problems. On the first two days, I was able to answer six medium-level questions. On the third day, I looked into how to work with dates in SQL. I became able to include things in my queries such as EXTRACT(MONTH from rental\_ts) and WHERE DATE(rental\_ts) BETWEEN ‘2020-05-01’ AND ‘2020-05-31’. With this newfound knowledge, I was able to solve 12 more questions that involved working with dates. After solving these practice problems today, I find myself with 118 points and in 5th place on the leaderboard.

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My final activity of this week was working on a project of converting organizational database requirements into a data model and then into a database schema using SQL. Last week, I found two sample database requirements that I could use for the project. The first example came from a blog that follows through on the exact steps of the project that I am planning. I used this example and the solution to develop my understanding of the database schema process and the queries that can be used to create tables in a SQL database. I wrote the queries in our APEX Oracle environment to create the tables from the example solution. Although I was copying queries directly from the blog, writing them out myself was great practice to help me learn about defining the attributes using different data types and the CONSTRAINT clauses. At this point, I turned to the second example which included database requirements for a hospital but no process or solution. I was able to create a conceptual data model for the hospital data requirements. The requirements and conceptual model are shown below. Next week, I plan to create the actual tables in APEX Oracle, populate them with sample data, and run a few queries to show how the database I created works. Learning SQL is about more than just writing queries to interact with a database. To be considered proficient at SQL, I believe it is required to understand relational databases that apply to the real world. My hope is that this database requirements project along with the problems that I’ve solved on sqlpad.io will demonstrate the knowledge and skills that I’ve acquired throughout this learning experience.

Project/Coursework Tracker

* Company requirements -> database schema
  + Week 4 - database design podcast
  + Week 7 - found one example with solution and one example that I can try to solve on my own for the project
  + Week 8 – created sample tables using example with solution, developed conceptual model using other example requirements
* Sqlpad.io movie rental practice questions
  + 43/80 completed
  + 118 points in April 2021 Spring Sprint Challenge
    - 5th place as of 4/18/2021

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