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05/28/2024

BIDD 330A

Module 07

GitHub BIDD 330\_Spring2024 Link: [https://github.com/Phillips094/BIDD330\\_Spring2024](https://github.com/Phillips094/BIDD330_Spring2024)

## Intermediate Power BI and Jupyter Notebook

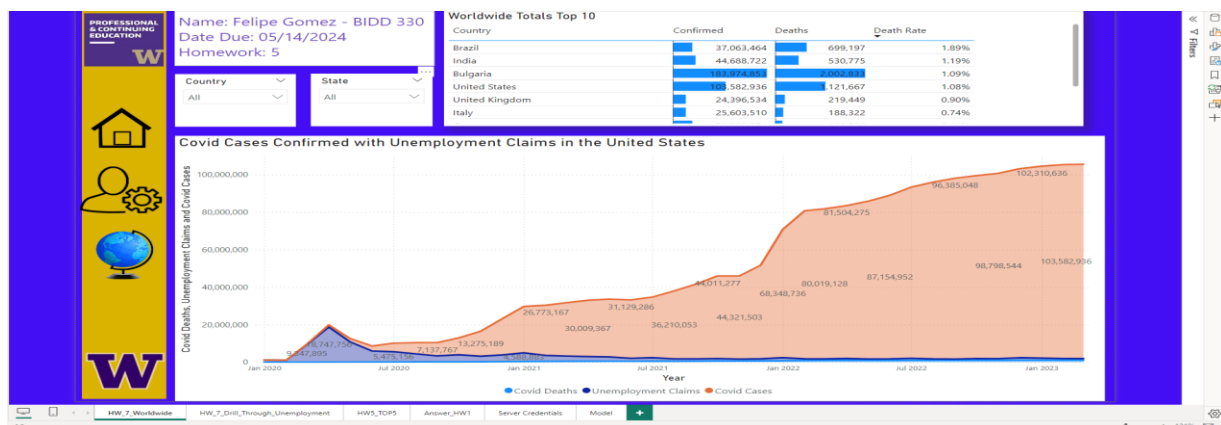
### Introduction:

For module 07, we focus on developing an Advanced Power BI report that builds from our previous HW5 and HW1 Power BI assignments. We also investigate reviewing our SQL quizzes and reviewing the presentation from our guest speakers from TekSystems.

### Power BI:

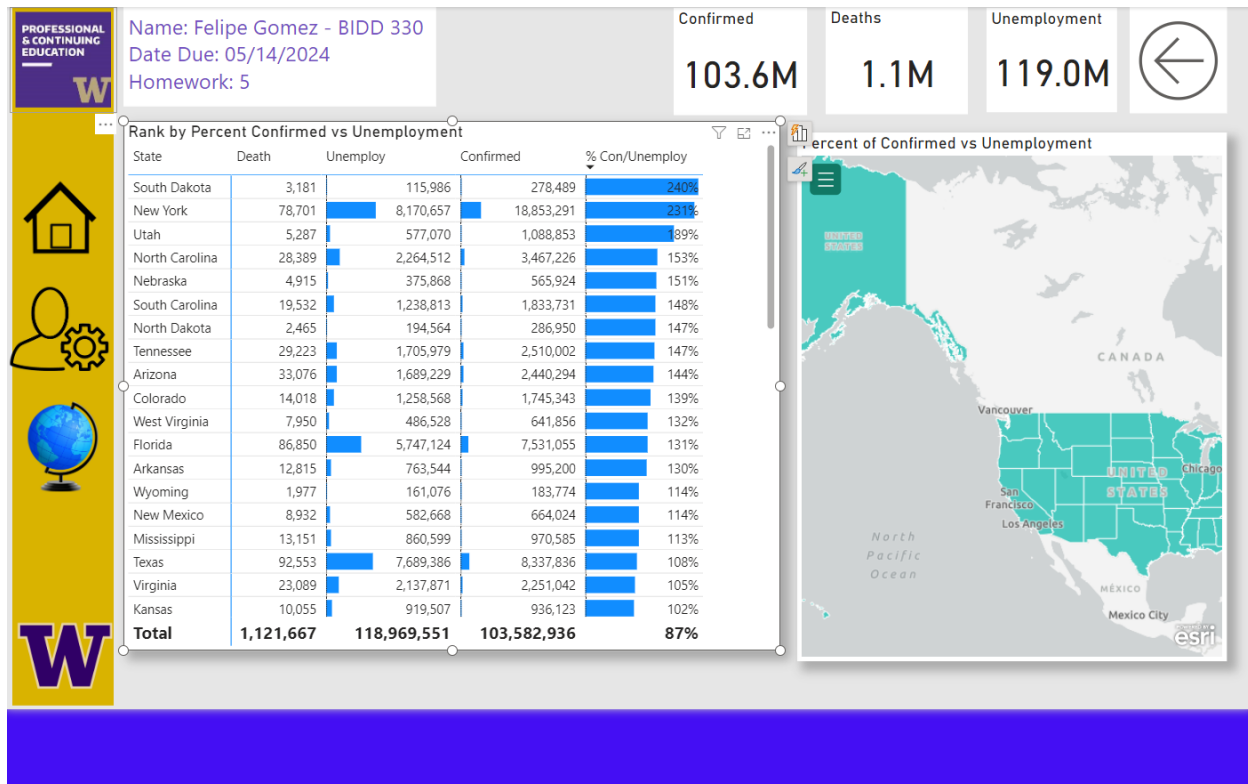
In our advanced Power BI report. We focus on including features such as drillthroughs, drill downs and additional bookmarks to our report. We create two new report pages, named HW\_7\_Worldwide and HW\_7\_Drill\_Through\_Unemployment. The first report is for displaying the Covid confirmed cases and Deaths in the United States as well as showing the Top 10 world wide death rates. We create two different slicers, one by Country and the other by State. We add a line chart for displaying the covid cases confirmed with unemployment claims in the United States over time as well as the covid deaths over time. We have the ability to drill up or down by Date, such that we can view the data by month or year. Our second visualization is a matrix that displays our confirmed covid cases, deaths from covid and the Death Rate %. In this case we are showing the Top 10 countries by the Confirmed cases around the world. We also include the ability to drill through our Worldwide Totals Top 10 matrix visualization to go deeper into the details of these country's data. We include our 3 bookmarks that take us to one of the following bookmarks: Our Home page report, our Admin report and our Drill Through bookmark. The last Drill Through bookmark is used to navigate to our Drillthrough page without having to drillthrough a specific country.

Below is a screenshot of our first report:



Our second report, which is our main drill through page and bookmark Drill Through page that has information for a specific country. We have multiple cards that display our total Confirmed covid cases, Deaths and Unemployment. We also have a matrix and include an ArcGIS map visualization. With our matrix visualization, we have State, Death, Unemployment, Confirmed and % Confirmed/Unemployed. Our ArcGIS map visualization includes similar information for our data points. We also have our bookmarks on the side that take us to our Home page, our Admin page and our World Wide report.

Below is a screenshot of our drill through page:



When it comes to my Advanced Power BI report, I will remember to apply cool and interesting features like the Drill Through and Bookmark features for developing powerful Power BI applications. I value the difficulty from building these types of Apps, especially when it involves difficult DAX equations and understanding how to work with Data Models in Power BI.

## SQL Quiz: Question 1 Solution:

Mod\_SQL\_Quiz\_Quest\_14q - Microsoft SQL Server Management Studio

File Edit View Query Project Tools Window Help

Mod\_Quiz

Object Explorer

Connect

Localhost (SQL Server 16.0.11151 - DESKTOP-L3HCYGFelpa) A

Databases

- System Databases
- Database Snapshots
- AdventureWorks\_Basics
- AdventureWorks2022
- AdventureWorksDW2022
- AdventureWorksLT2012
- DoctorSchedules
- DWAdventureWorks\_Basics
- DWAdventureWorks\_BasicsVHS
- DWAdventureWorksLT2012v1
- DWClientReportData
- DWClientReportDataFelpaGomez
- DWIndependentBookSellers
- Gold\_Debt
- Gold\_Debt\_Test
- IndependentBookSellers
- Patients
- Pubs
- Mod\_Quiz
- Database Diagrams
- Tables
- System Tables
- FileTables
- External Tables
- Graph Tables
- dbo.Customers
- dbo.fact\_events
- dbo.fact\_events\_csv
- dbo.Orders
- Dropped Ledger Tables
- Views
- External Resources
- Synonyms
- Programmability
- Service Broker
- Storage
- Security
- Security
- Server Objects
- Replication
- Always On High Availability
- Management
- Integration Services Catalogs
- SQL Server Agent

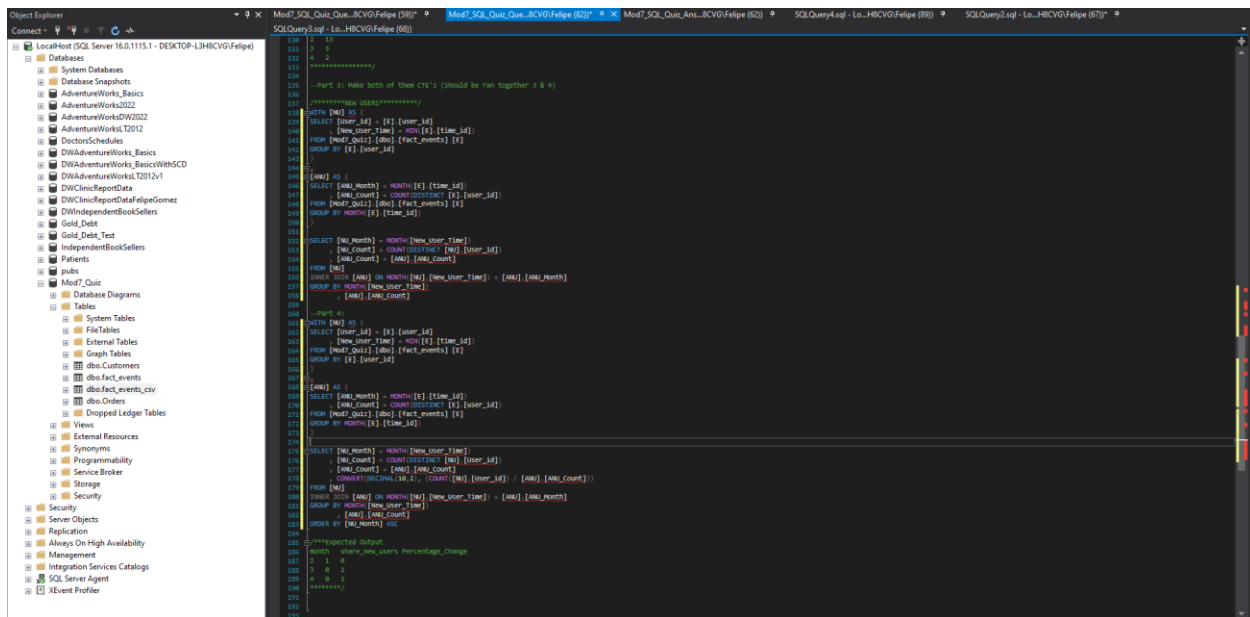
Mod\_SQL\_Quiz\_Quest\_14q (Felpa) (77) x SQLQuery2.sql - Lo...H3CYGFelpa (80) SQLQuery3.sql - Lo...H3CYGFelpa (80) Mod\_SQL\_Quiz\_Quest\_1 - not connected

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86 --SELECT * FROM Orders
87
88 --Write the query
89
90 --Step 1: Joins the orders with customers using an inner join
91 --Step 2: sum the total amount spent by each customer
92 --Step 3: find the % total spent (order cost / Sum(order cost) by customer)
93 --Step 4: round(100)
94
95
96 --EXPECTED OUTPUT
97 first_name last_name order_details % total spent
98 3111 Michael Cost 55
99 2112 Michael Shoes 44
100 Mia Owen Boats 32
101 Mia Owen Shirts 19
102 Mia Owen Slippers 6
103 Mia Owen Jeans 25
104 Mia Owen Shirts 16
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### SQL Quiz: Question 2 Solution:

[illegible]



The screenshot shows the SQL Server Enterprise Manager interface on the left, displaying a database structure with various tables and views. The main window displays a SQL query script with the following content:

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Overall, these SQL questions were tricky, I liked how they built on top of one another. I also think that they were good practice and review, especially when it comes to tricky SQL questions. I think they did help me in practicing CTEs and applying my SQL skills with interview questions.

TekSystems:

Overall, I enjoyed hearing from tech recruiters who provided valuable feedback on the current market and process for hiring and contracting in Tech. I will use their advice and knowledge for my next career step. I am glad I was able to hear the perspectives from two Tech recruiters on what they look for in candidates.

Summary:

In summary, these 3 topics discussed in this Lessons Learned really provided valuable knowledge in understanding and implementing concepts in Power BI, SQL and in real life career scenarios. I thought the last few lectures provided much needed information to feel confident in the next steps of my career. I know I will apply all I have learned these past few lectures in my personal career. I found the SQL quiz interesting because it forced me to actually think about how to solve SQL questions on the spot and in a quickly time manner. As for the TekSystems guest speakers, I will make sure to keep in touch after the course is over. For the Power BI report, I will continue to improve my skills on DAX and applying advanced features in Power BI for my daily work.