Just IT

B2W group

Apprenticeships | Training | Recruitment

Data Technician Week 2 Introduction to Tableau & Power BI

Name: Al Amin

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Table of contents

Day 1: Task 1 3
Day 1: Task 2 5
Day 2: Task 1 6
Day 2: Task 2 8
Day 3: Task 1 10
Day 3: Task 2 10
Day 4: Task 1 11
Day 4: Task 2 11
Course Notes 15

Day 1: Task 1

Please research the different versions of Tableau, compare and contrast them below and explain the limited functionality on 'Tableau Public'.

Different Tableau versions	**Different versions of Tableau:** **Tableau Desktop** 1. Data Analysis: Allows users to connect to various data sources, create data visualizations, and perform data analysis. 2. Data Visualization: Offers a range of visualization options, including charts, tables, maps, and more. 3. Data Storytelling: Enables users to create interactive stories and dashboards to share insights with others. 4. Cost: Available in two editions: Personal ($35/user/month) and Professional ($70/user/month). **Tableau Server** 1. Collaboration: Enables teams to share and collaborate on data visualizations and dashboards. 2. Security: Provides robust security features, including authentication, authorization, and data encryption. 3. Scalability: Supports large-scale deployments and high-performance analytics. 4. Cost: Pricing varies based on the number of users and deployment options. **Tableau Online** 1. Cloud-Based: A cloud-based version of Tableau Server, offering scalability and flexibility. 2. Automatic Updates: Receives automatic updates, ensuring users have access to the latest features. 3. Secure: Provides robust security features, including data encryption and access controls. 4. Cost: Pricing varies based on the number of users and deployment options. **Tableau Public** 1. Free: A free version of Tableau, allowing users to create and share public visualizations. 2. Limited Features: Offers limited features compared to Tableau Desktop but still allows for data visualization and sharing. 3. Public Sharing: Enables users to share visualizations publicly, making it ideal for bloggers, journalists, and students. **Tableau Reader** 1. Free: A free version of Tableau, allowing users to view and interact with Tableau visualizations. 2. Limited Features: Offers limited features compared to Tableau Desktop but still allows for viewing and interacting with visualizations. 3. No Editing: Does not allow users to edit or create new visualizations. **Tableau Prep** 1. Data Preparation: A data preparation tool that allows users to clean, transform, and prepare data for analysis. 2. Integration: Integrates with Tableau Desktop and Tableau Server, enabling seamless data preparation and analysis.

3. Cost: Included with Tableau Desktop and Tableau Server subscriptions.

When choosing a version of Tableau, consider the following factors:

1. Data Analysis Needs: If you need to perform advanced data analysis, Tableau Desktop or Tableau Server may be the best choice.
2. Collaboration Requirements: If you need to collaborate with others, Tableau Server or Tableau Online may be the best choice.
3. Budget: If budget is a concern, Tableau Public or Tableau Reader may be a good starting point.
4. Data Preparation Needs: If you need to perform data preparation tasks, Tableau Prep may be a useful addition to your Tableau workflow.

Limited functionality on Tableau Public

Tableau Public is a free version of Tableau that allows users to create and share interactive data visualizations. However, it has some limitations compared to the paid versions of Tableau. Here are some of the limited functionalities on Tableau Public:

Data Connectivity

1. Limited data sources: Tableau Public can only connect to a limited number of data sources, including CSV, Excel, and Google Sheets.
2. No database connectivity: Tableau Public cannot connect to databases, such as MySQL, PostgreSQL, or SQL Server.

Data Size and Complexity

1. Data size limit: Tableau Public has a data size limit of 10 million rows.
2. Limited data complexity: Tableau Public may struggle with complex data models or large datasets.

Visualization and Interactivity

1. Limited visualization options: Tableau Public has a limited number of visualization options compared to the paid versions.
2. No dashboarding: Tableau Public does not allow users to create dashboards.
3. Limited interactivity: Tableau Public has limited interactivity features, such as filtering and drilling down.

Sharing and Collaboration

1. Public sharing only: Tableau Public visualizations can only be shared publicly.
2. No password protection: Tableau Public visualizations cannot be password-protected.
3. Limited collaboration: Tableau Public does not allow real-time collaboration.

Other Limitations

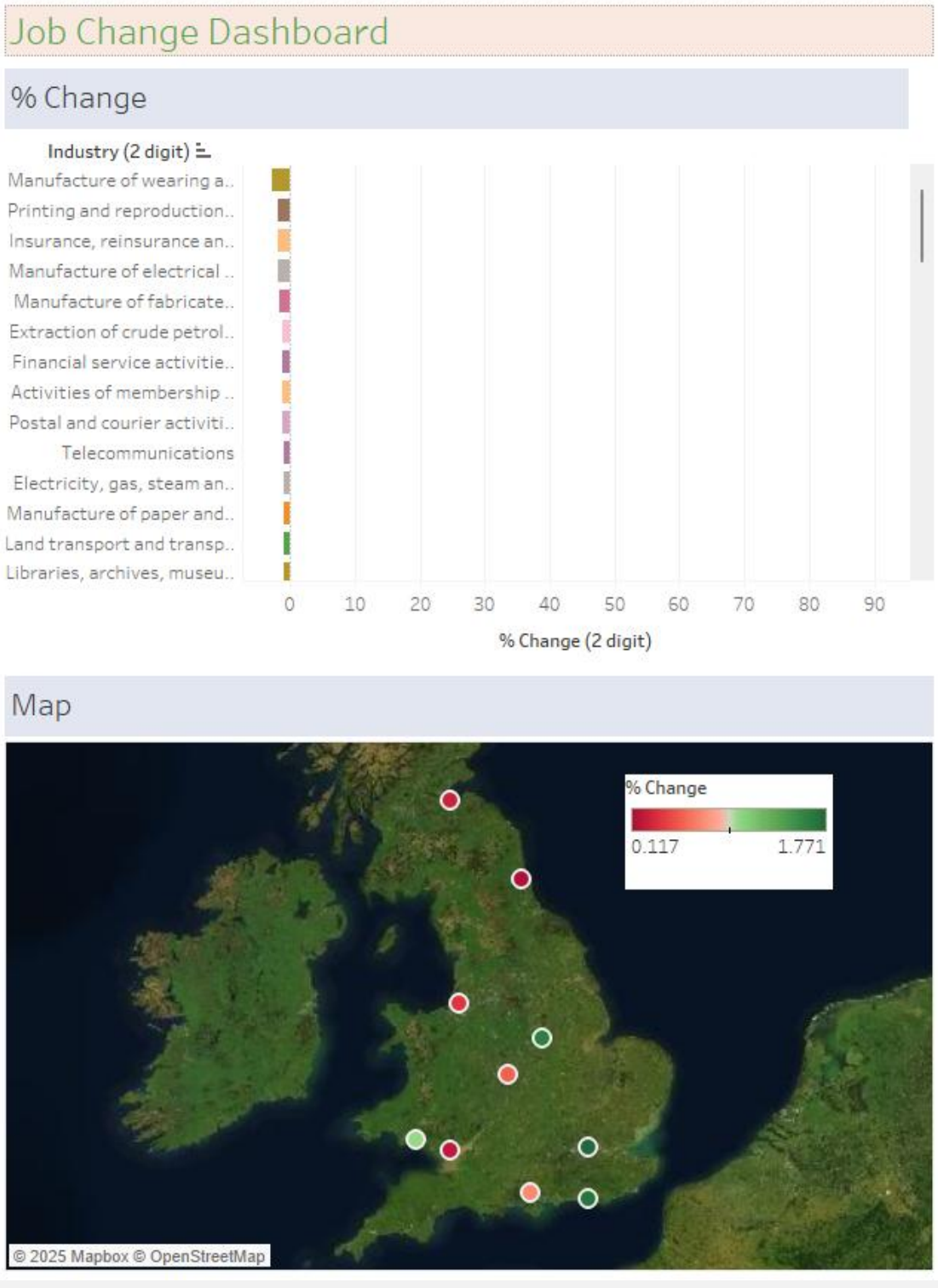
1. Watermarking: Tableau Public visualizations are watermarked with the Tableau logo.
2. Limited support: Tableau Public users have limited access to support resources and forums.
3. No offline access: Tableau Public visualizations require an internet connection to view.

Overall, Tableau Public is a great option for users who want to create and share simple data visualizations, but it may not be suitable for more complex data analysis or enterprise-level deployments.

Day 1: Task 2

Using the *EMSI_JobChange_UK* dataset, create your own dashboard, I want to see a bar chart showing percentage change and a UK based map showing the key city locations impacted.

Paste your print scree n here

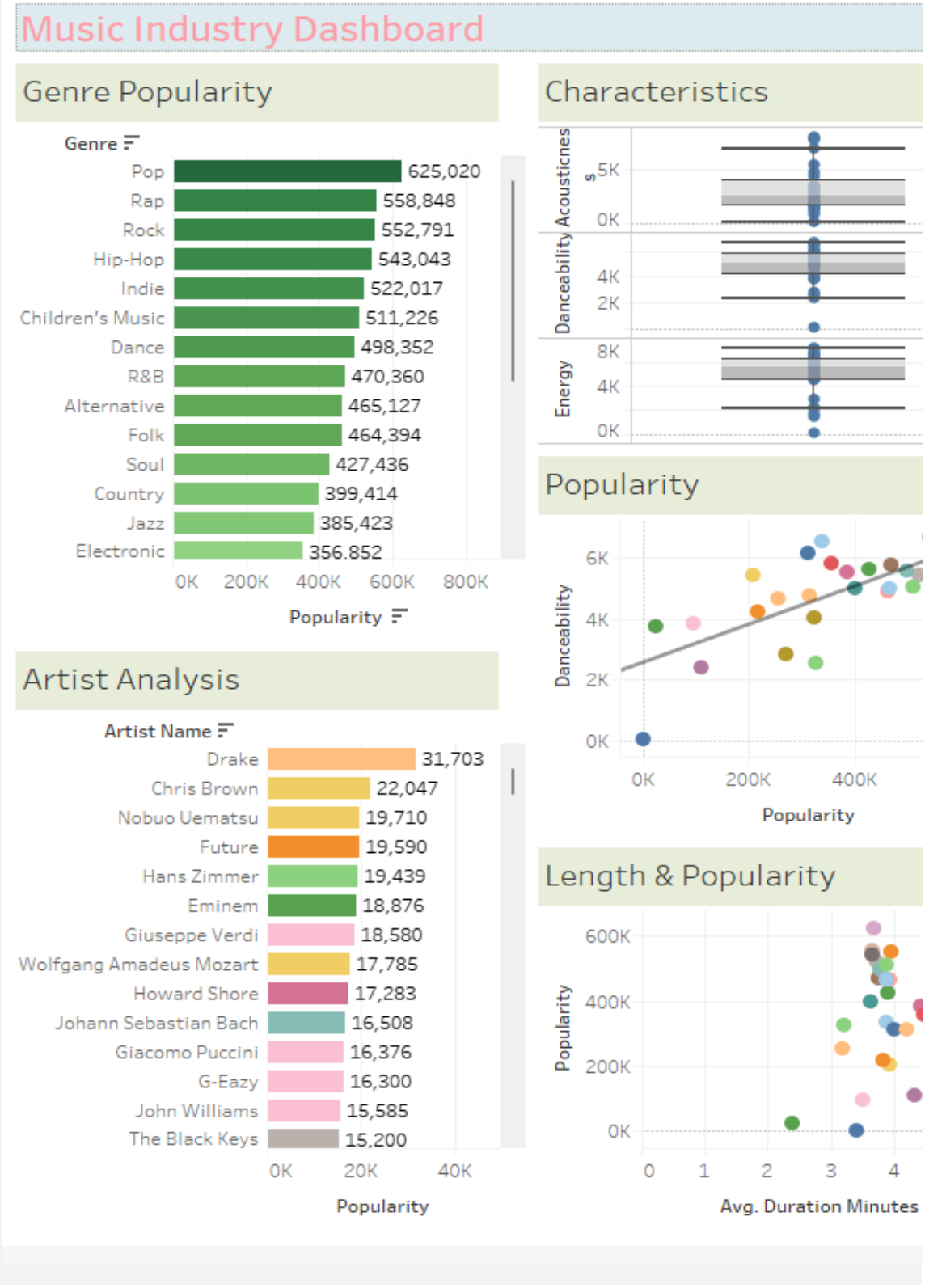


Day 2: Task 1

Using the Spotify data set, conduct an analysis to find trends and key information that could be used by an organisation for future projects.

There is no set scope for the analysis, simply to find trends and document them below:

Paste your print screens here



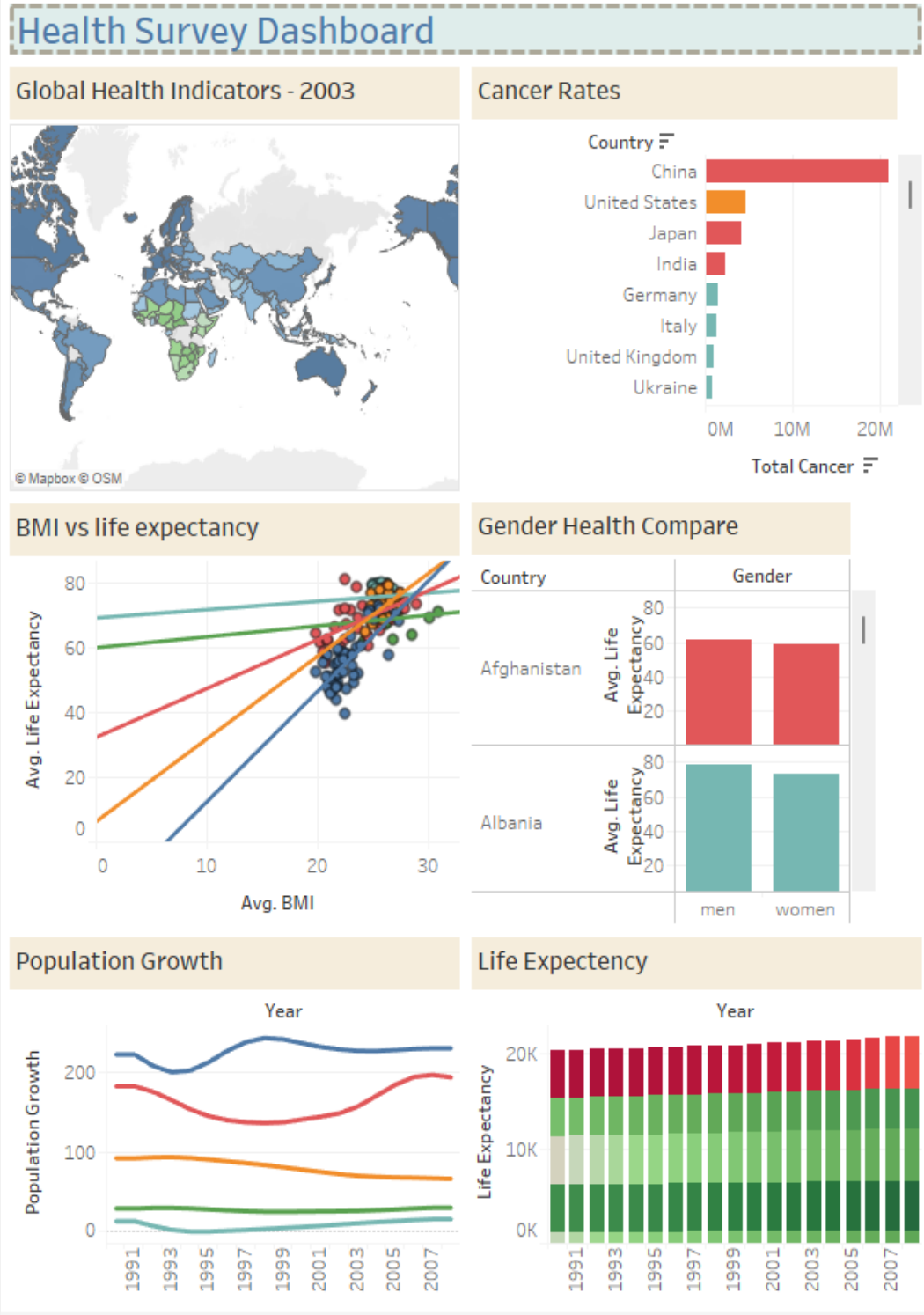
What did you find?	Here are my findings: • **Pop** is the most popular music genre, followed by **Rap**. • The most popular artist is **Drake**, closely followed by **Chris Brown**. • Songs that are neither too long nor too short tend to be more popular, with the majority of popular genres falling between **3.5 to 4 minutes** in length. • There's a noticeable cluster of genres with very similar average song lengths. • **Danceability** and **Acousticness** are within a similar range when compared to **Energy**.

Day 2: Task 2

Using the Health data set, conduct an analysis to find trends and key information that could be used by an organisation for future support.
There is no set scope for the analysis, simply to find trends and document them below.

- Data can be lifesaving and is being used more within the NHS, reflect on how this data could support decision making for the NHS.

Paste your print screens here



What did you find and any reflections on how the NHS could use this?

Here are my findings:

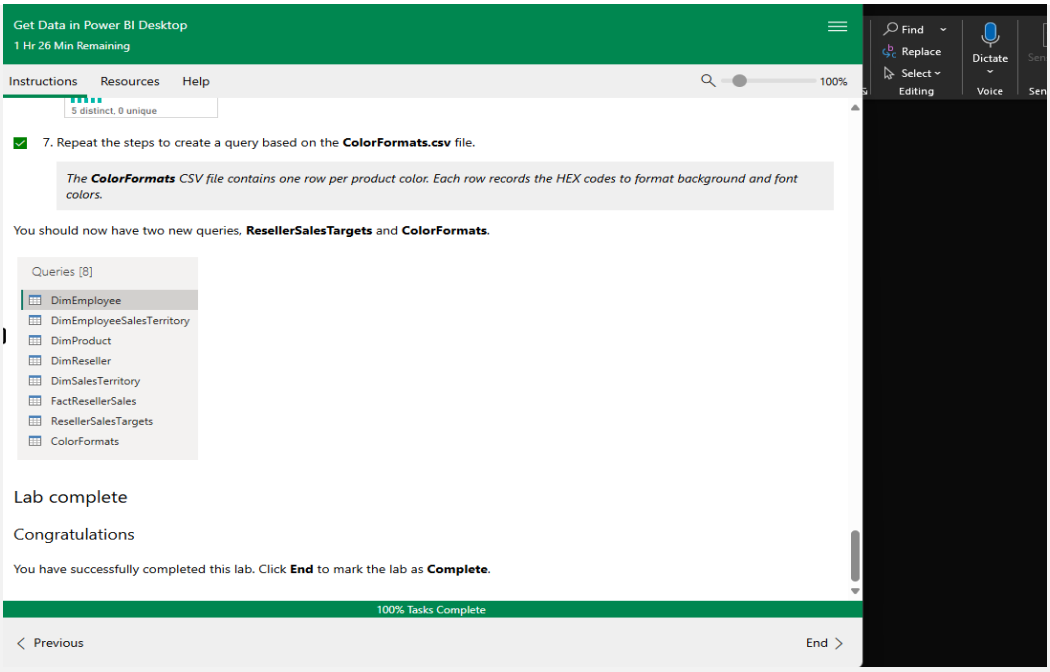
- **Africa** has a lower life expectancy compared to other continents.
- In **Asia**, the average life expectancy increased the most from **65** in 1990 to **71** in 2008.
- The average **BMI** falls between **24 and 28**, which is associated with a higher life expectancy.
- **China** has the highest number of cancer patients, followed by the **United States**. However, it's important to note that China has the largest population in the world.
- Between **1994 and 2003**, Asia's population growth significantly declined, while Africa's population growth saw a substantial increase during the same period.
- On a global scale, **men's life expectancy** is higher than **women's**.
- **Japan** has the highest average life expectancy at **82.65**, while the **Central African Republic** shows the lowest at **46.20**, nearly half the figure of Japan.

Day 3: Task 1

Please complete Lab 1 ‘Get Data in Power Bi Desktop’. Once complete, paste a print screen below and in the collaboration board.

“Teaching is the best way to learn, so please listen out for support requests from the class and we’ll work through the challenges together”

Paste your completed lab here

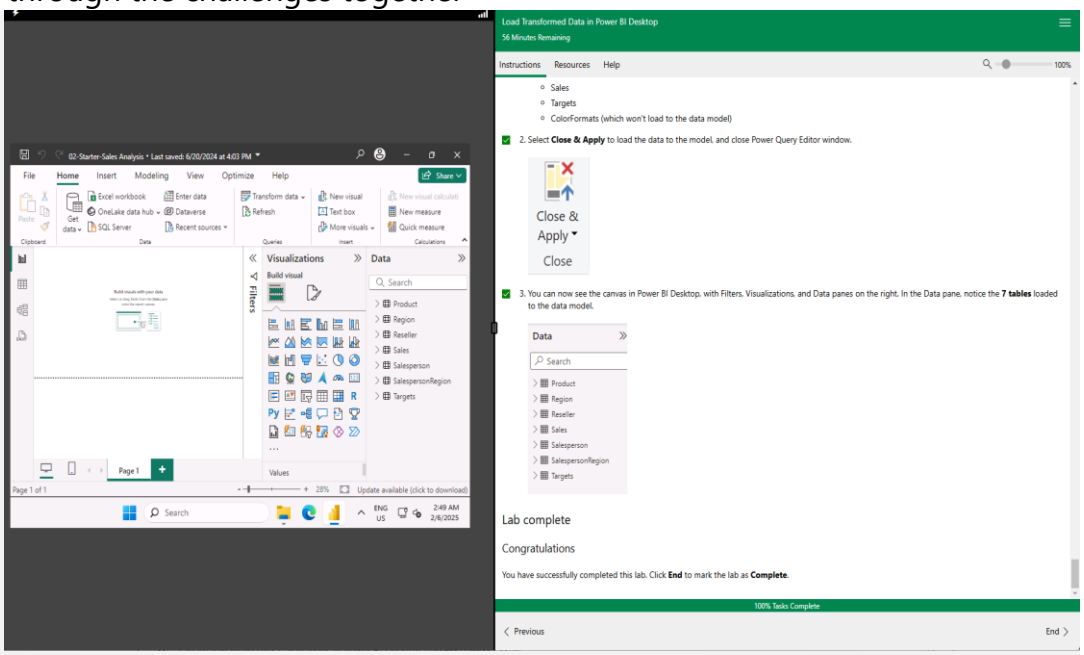


Day 3: Task 2

Please complete Lab 2 ‘Load Transformed Data in Power BI Desktop’. Once complete, paste a print screen below and in the collaboration board.

“Teaching is the best way to learn, so please listen out for support requests from the class and we’ll work through the challenges together”

Paste your complete d lab here

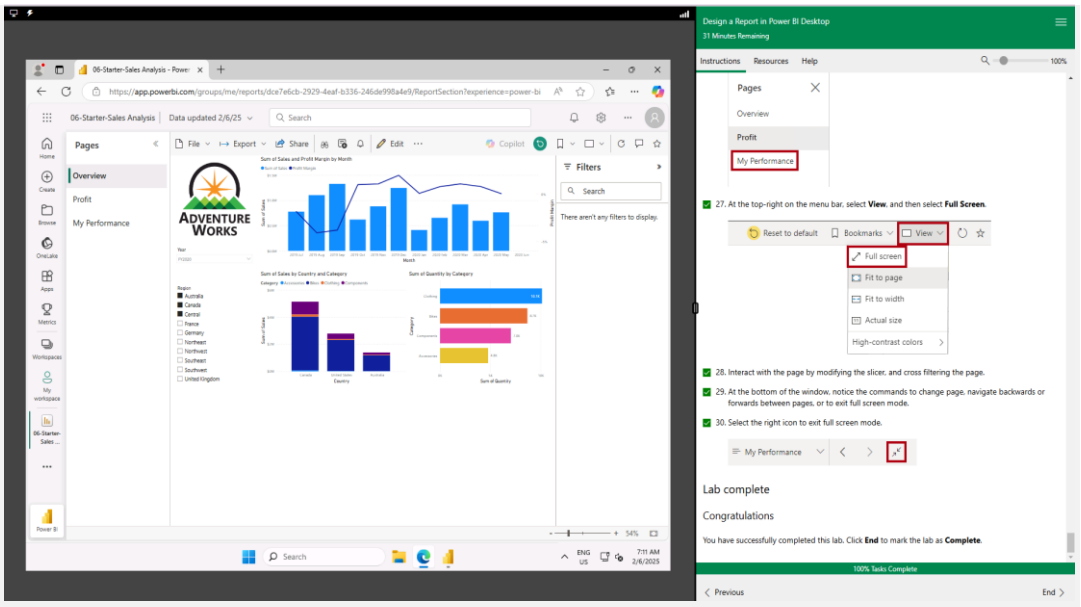


Day 4: Task 1

Please complete Lab 6 'Design a Report in Power BI Desktop'. Once complete, paste a print screen below and in the collaboration board.

"Teaching is the best way to learn, so please listen out for support requests from the class and we'll work through the challenges together"

Paste your complete d lab here

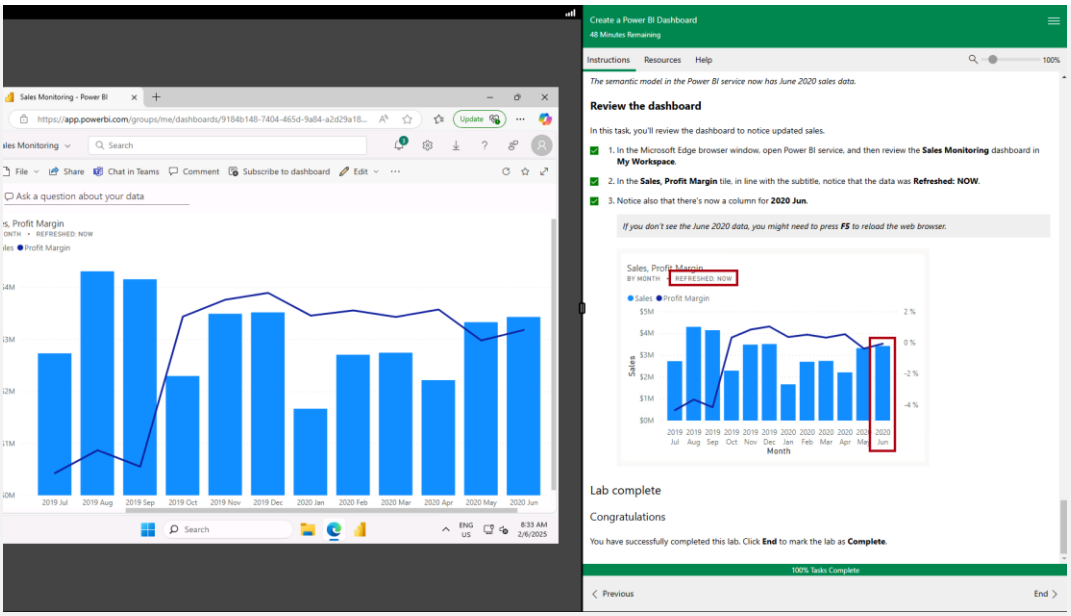


Day 4: Task 2

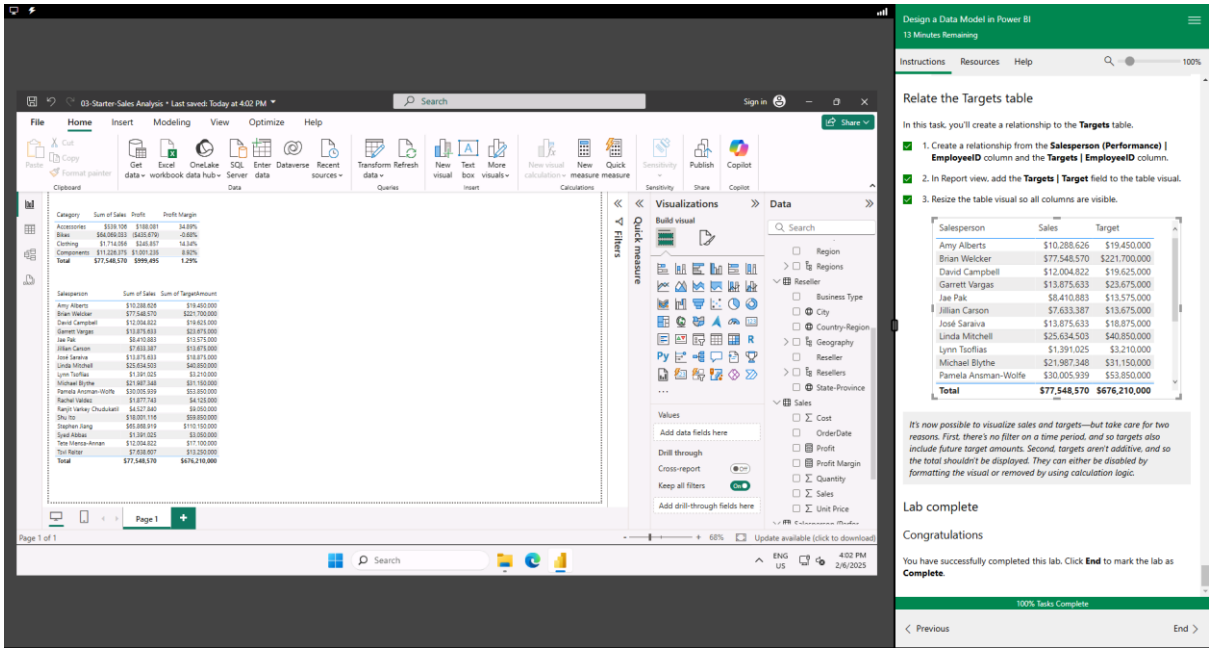
Please complete Lab 9 'Create a Power BI Dashboard'. Once complete, paste a print screen below and in the collaboration board.

"Teaching is the best way to learn, so please listen out for support requests from the class and we'll work through the challenges together"

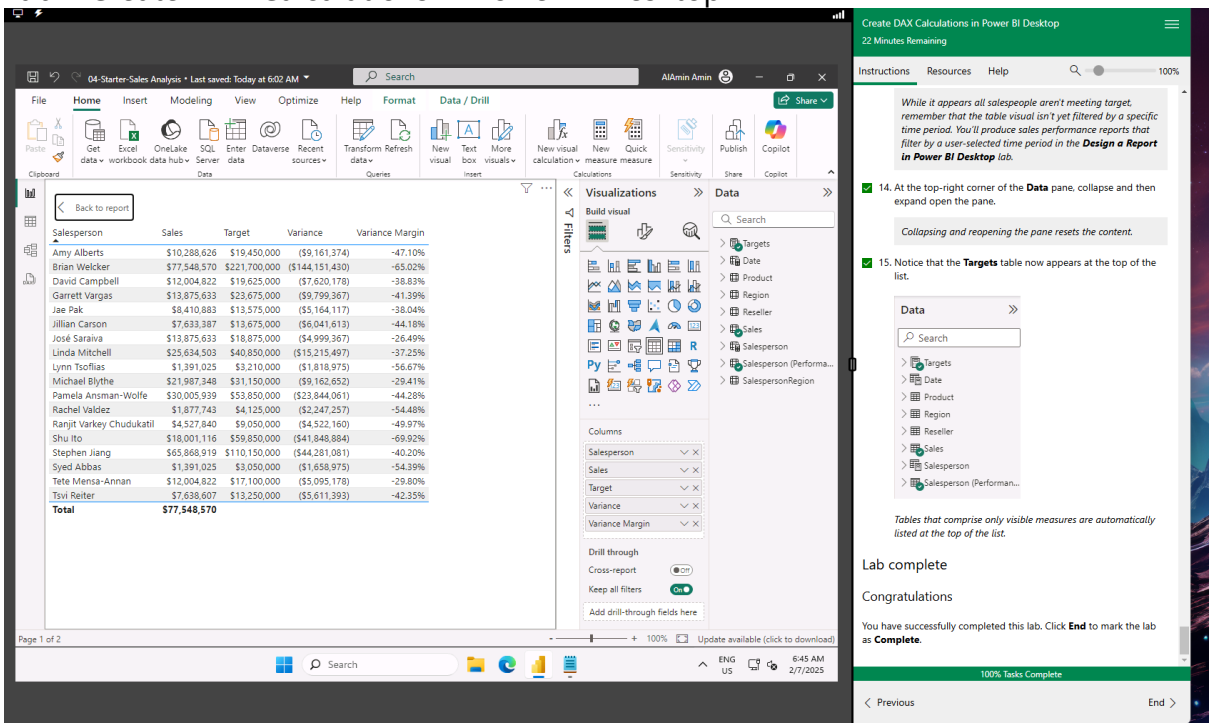
Paste your complete d lab here



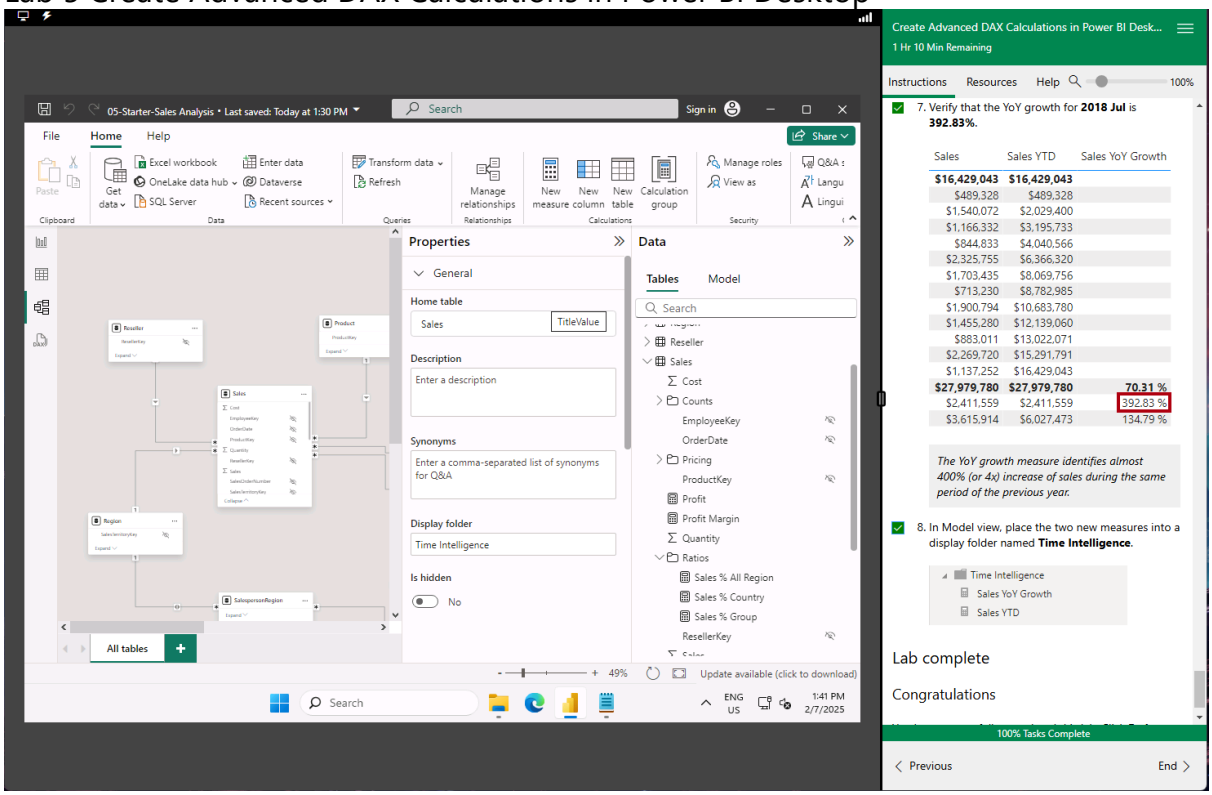
Lab 3 Design a Data Model in Power BI



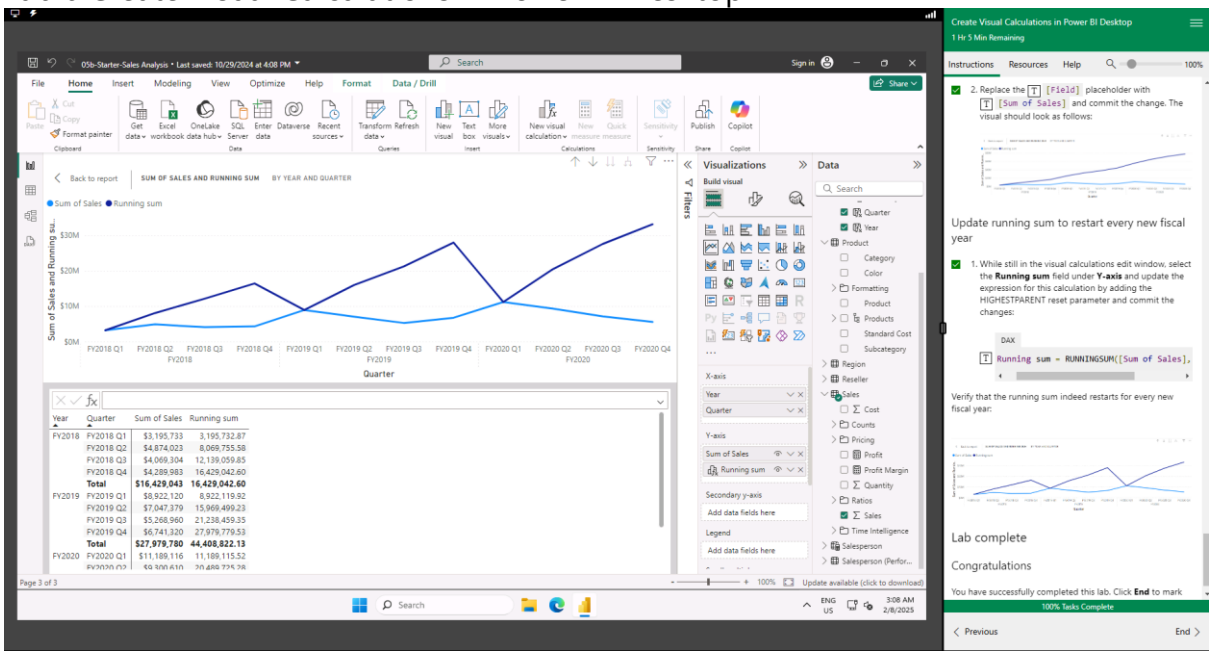
Lab 4 Create DAX Calculations in Power BI Desktop



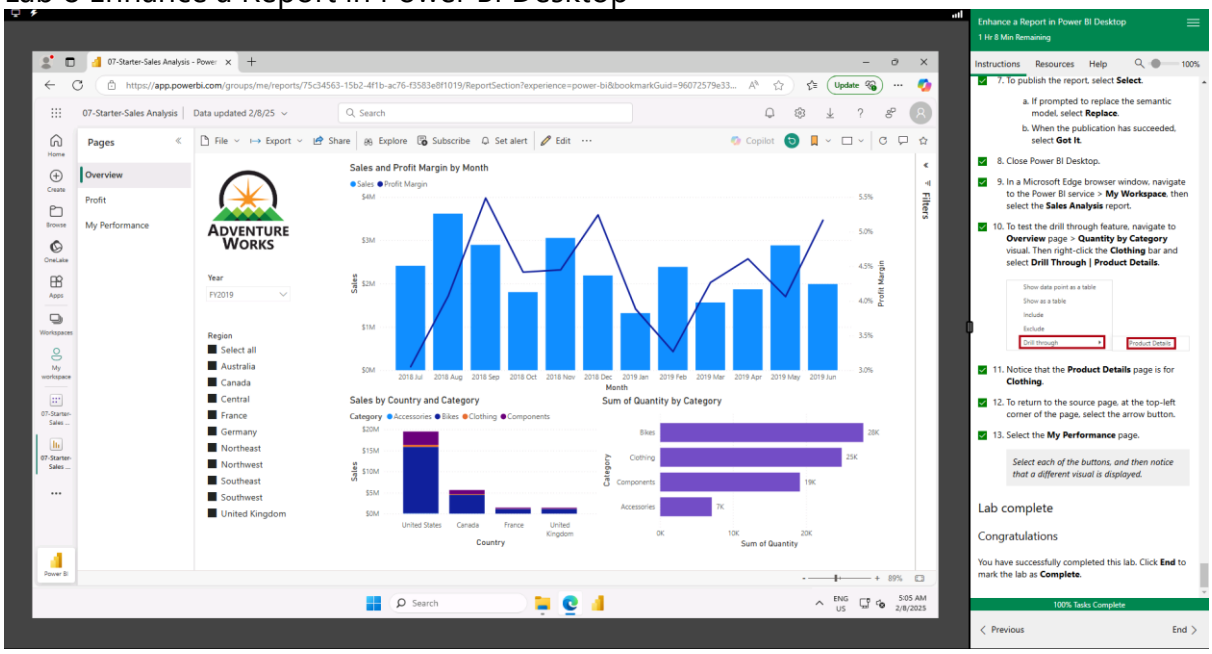
Lab 5 Create Advanced DAX Calculations in Power BI Desktop



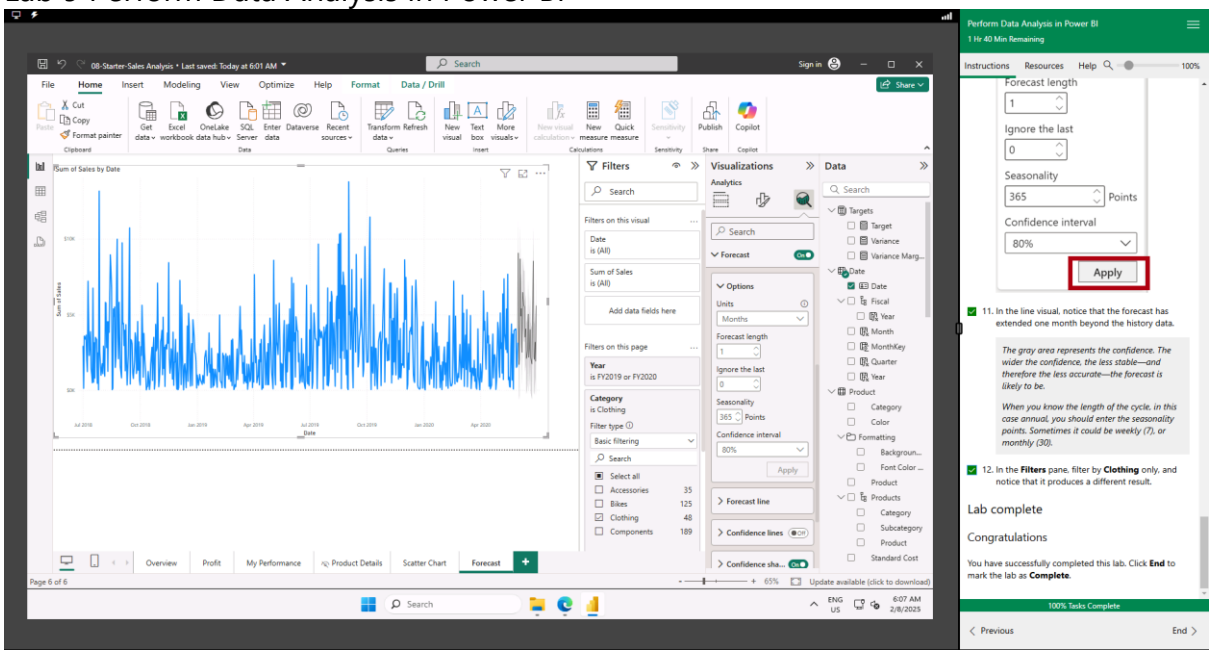
Lab 6 Create Visual Calculations in Power BI Desktop

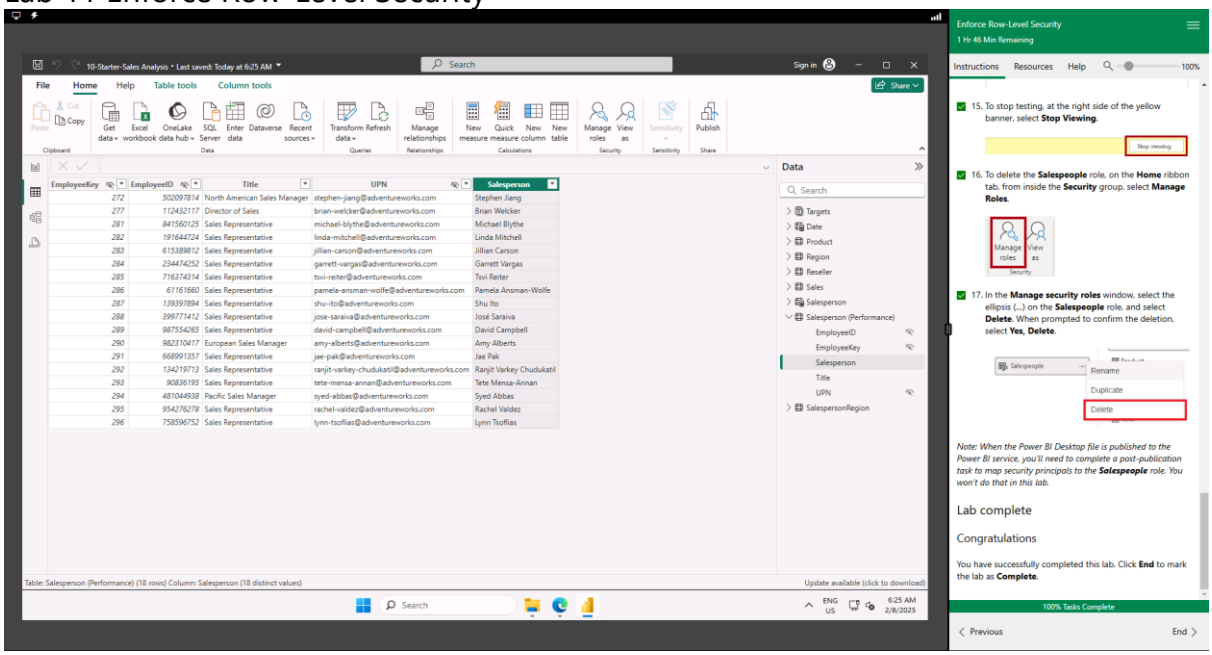


Lab 8 Enhance a Report in Power BI Desktop



Lab 9 Perform Data Analysis in Power BI





Course Notes

It is recommended to take notes from the course, use the space below to do so, or use the revision guide shared with the class:

We have included a range of additional links to further resources and information that you may find useful, these can be found within your revision guide.

END OF WORKBOOK

Please check through your work thoroughly before submitting and update the table of contents if required.

Please send your completed work booklet to your trainer.