Just IT

B2W group

Apprenticeships | Training | Recruitment

Data Technician

Name:

Course Date:

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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

Feature / Capability	Tableau Public (Free)	Tableau Desktop (Paid)	Tableau Server (Paid)	Tableau Cloud (Paid)
Cost	Free	Subscription-based	Subscription-based (self-hosted)	Subscription-based (fully hosted by Tableau)
Deployment	Cloud-based (Tableau Public website)	Installed locally on user's computer	Installed on organization's own servers or cloud infrastructure	Hosted by Tableau (SaaS)
Data Source Connections	Excel, CSV, Google Sheets, JSON, PDFs, Web Connectors	Wide range: Excel, SQL, cloud services, big data sources	Uses published data sources from Desktop or connectors via server	Same as Server, with built-in connectors and scheduled refreshes
Data Refresh Support	Google Sheets (daily refresh only)	Manual refresh	Scheduled refreshes and live connections	Scheduled refreshes and live connections
Data Privacy	All content is	Local files can be	Private and secure	Private and secure

	public	private	access within an organization	access, cloud-hosted by Tableau
Storage Location	Tableau Public cloud only	Local machine	Organization's servers or cloud	Tableau's managed cloud infrastructure
User Management	None	Local user only	Admin dashboard with user roles, groups, and permission settings	Similar to Server, but managed through Tableau's online interface
Collaboration & Sharing	Public sharing only	Export as packaged workbooks (.twbx)	Centralized sharing, access control, role-based permissions	Same as Server, but without needing infrastructure management
Advanced Analytics	Basic calculations and visualizations	Full analytics and statistical tools	Leverages Desktop's capabilities, with scalable publishing and consumption	Leverages Desktop's capabilities, with web-based publishing and usage
Best For	Beginners, public data projects, learning	Analysts creating visualizations	Medium to large organizations needing secure, centralized analytics management	Organizations preferring a hosted solution with minimal IT maintenance

Summary

- **Tableau Public:** Best for public sharing, learning, and portfolio projects.
- **Tableau Desktop:** Core tool for building complex dashboards; used by analysts.
- **Tableau Server:** Best for enterprises that want full control and host analytics on their own infrastructure.
- **Tableau Cloud:** Ideal for organizations wanting a fully managed cloud environment without infrastructure overhead.

Limitations of Tableau Public

- **Public Visibility:** All visualizations are publicly accessible; there's no option to keep workbooks private.
- **Limited Data Sources:** Cannot connect to many databases or cloud services; restricted to basic file types and web connectors.

- **No Local Saving:** Workbooks must be saved online; local storage is not supported.
- **Data Refresh Constraints:** Limited to daily refreshes for Google Sheets; no support for live connections to other data sources.
- **Feature Restrictions:** Lacks advanced analytics capabilities found in the paid versions.

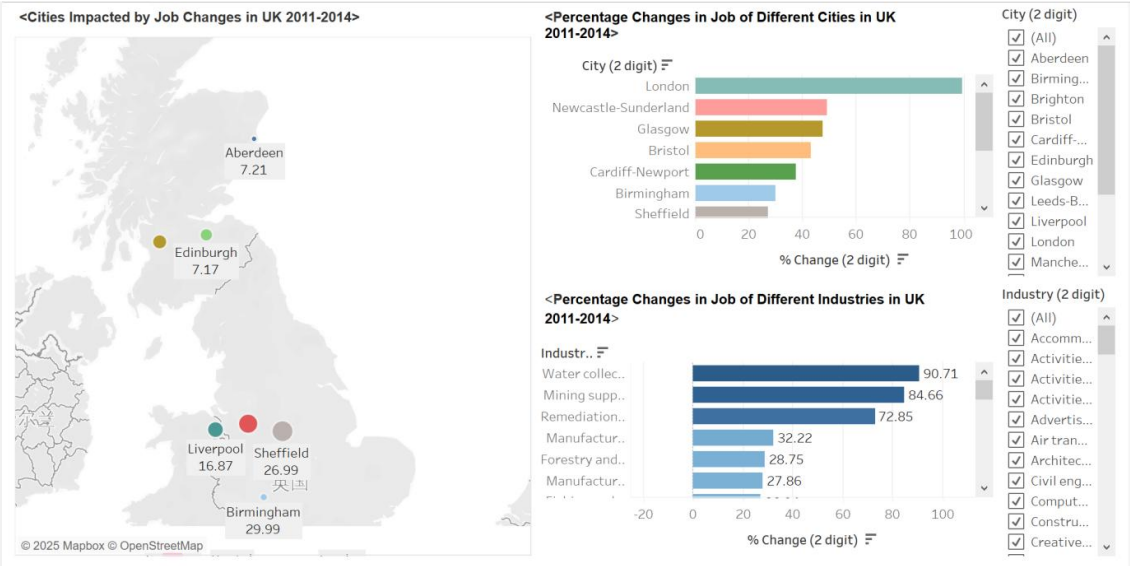
Suitable Use Cases for Tableau Public

- **Learning and Skill Development:** Ideal for individuals learning data visualization techniques.
- **Public Data Sharing:** Useful for sharing non-sensitive data with the public, such as in journalism or education.
- **Portfolio Building:** Great for showcasing data visualization projects to potential employers or clients.

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 screen here



Day 2: Task 1

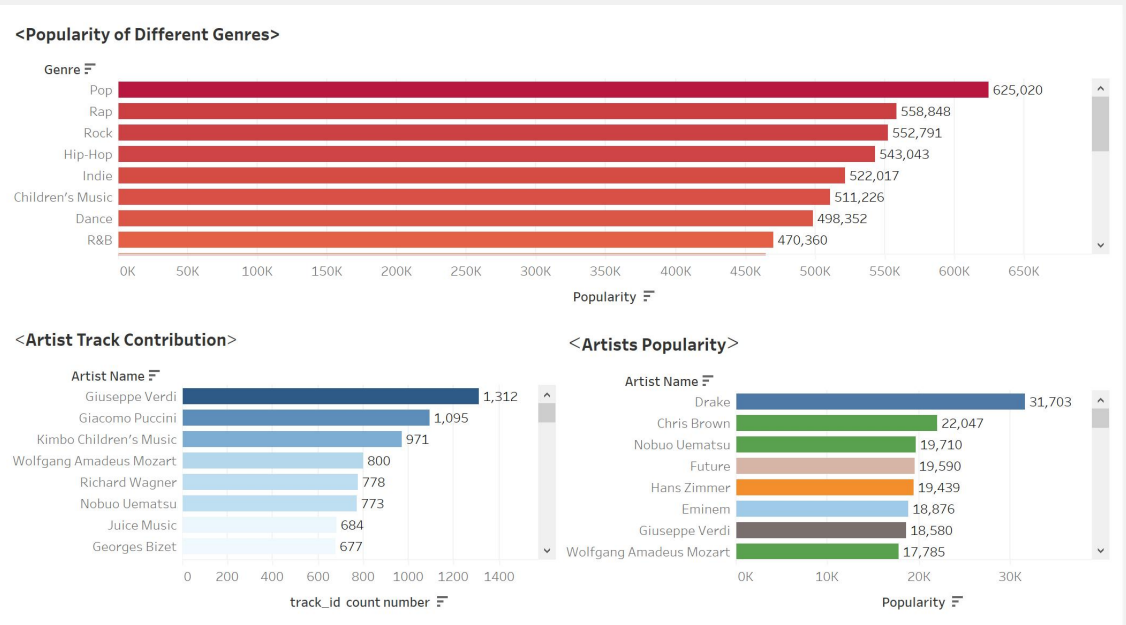
Using the Spotify data set, conduct an analysis to find trends and key information that could be used by an organisation for future projects.

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

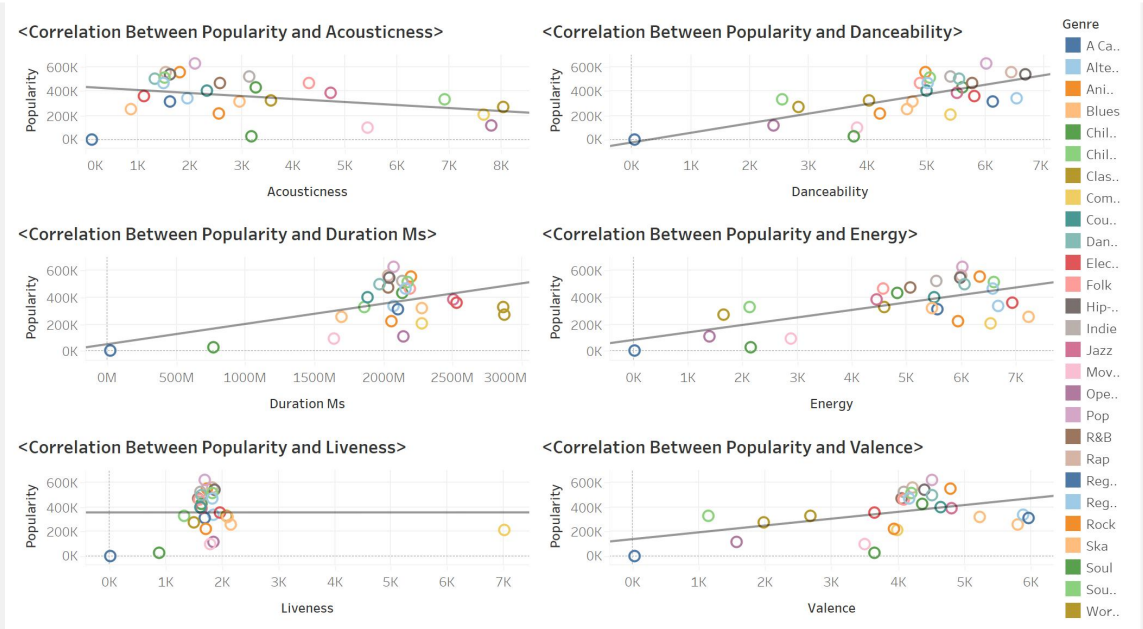
Paste your print screens here

Dashboard 1:

Dashboard 2:



Dashboard 3:



What did you find?

Based on Spotify data, I created 3 dashboards aiming to illustrate the following aspects: an overview of the Spotify music market, an analysis of music popularity, and a correlation analysis of popularity-related features.

Overview of the Spotify Music Market

- The top 10 music genres with the most tracks on Spotify are: Comedy, Soundtrack, Indie, Jazz, Pop, Electronic, Children's Music, and Folk.
- Tracks with a 4/4 time signature dominate the Spotify platform, followed by those with a 3/4 time signature.
- The top 5 most common keys on the platform are: C, G, D, A, and C#.

Analysis of Music Popularity

- The top 5 most popular music genres on the platform are: Pop, Rap, Rock, Hip-hop, and Indie.
- The artist with the most tracks on the platform is Giuseppe Verdi.
- The most popular artist on the platform is Drake.

Correlation Analysis of Popularity

- Track popularity shows a positive correlation with Danceability, Duration (ms), Energy, and Valence.

- Track popularity shows a negative correlation with Acousticness.
- There is no significant correlation between track popularity and Liveness.

Day 2: Task 2

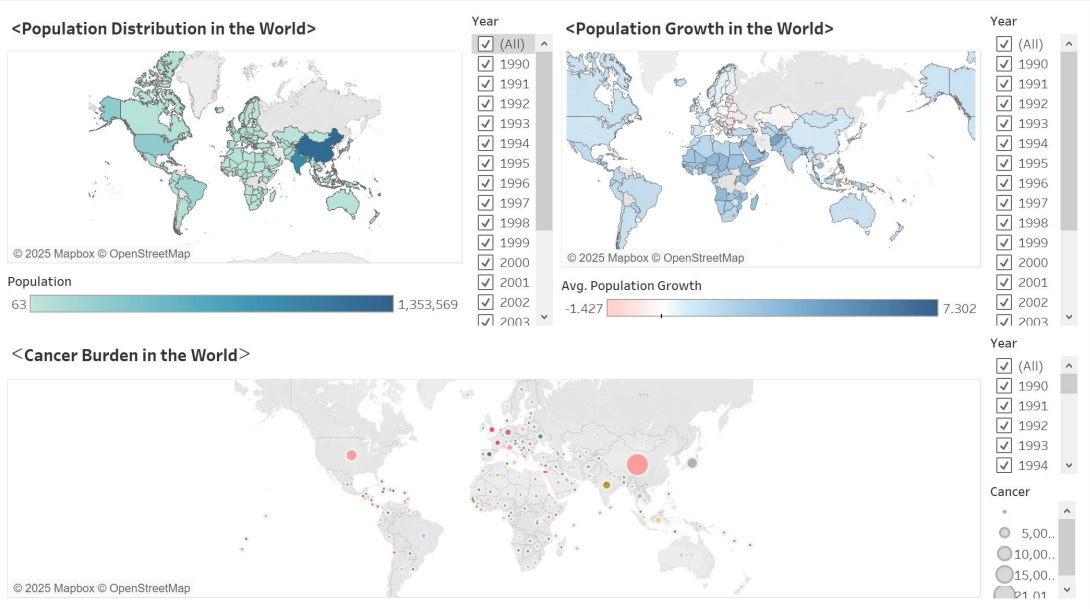
Using the Health, conduct an analysis to find trends and key information that could be used by an organisation for future support.

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

Dashboard 1:



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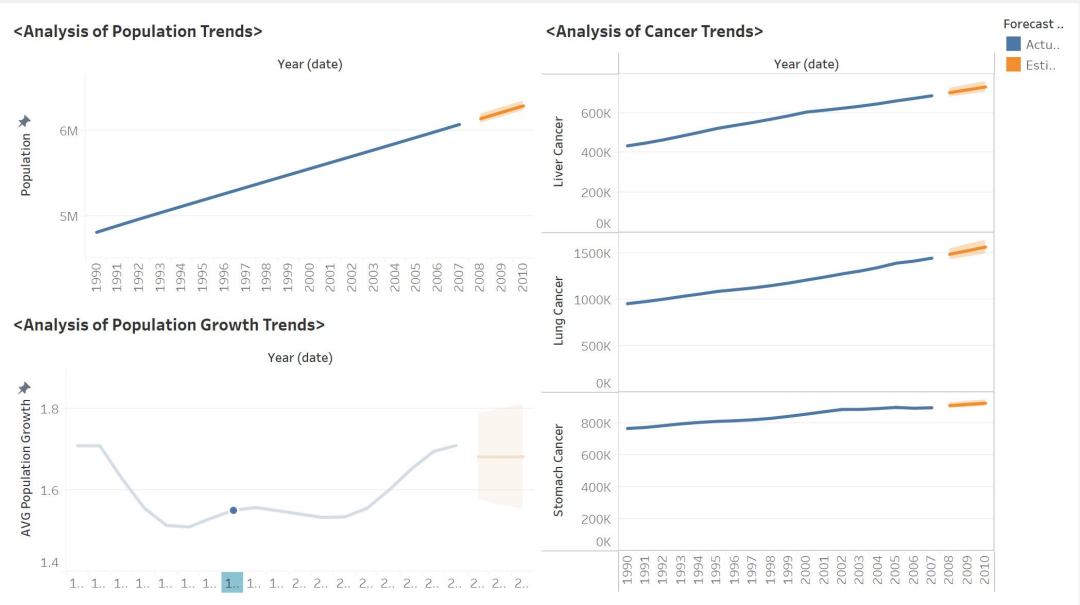

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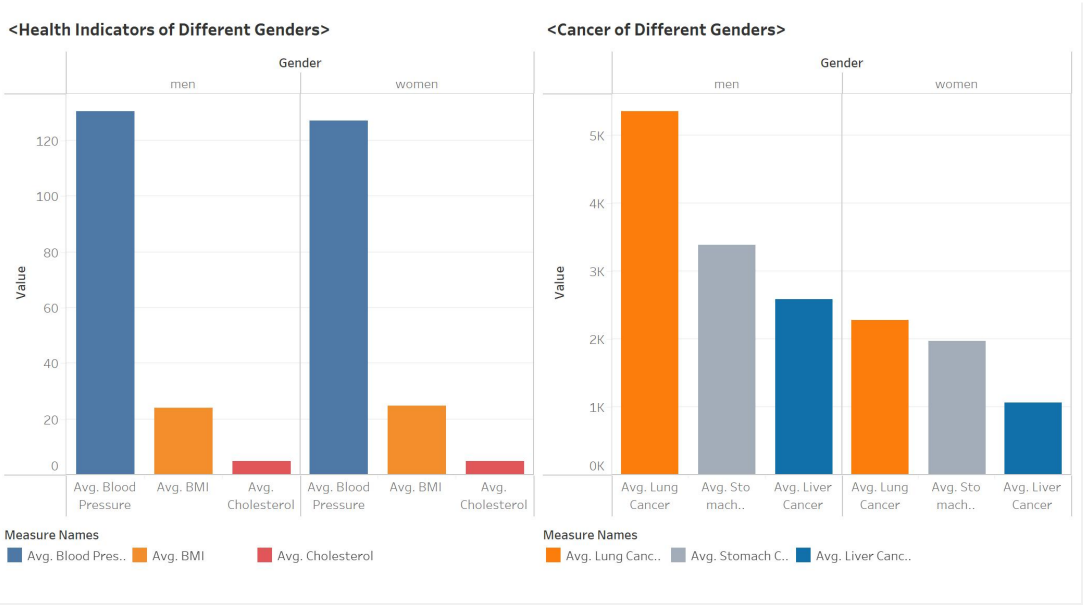
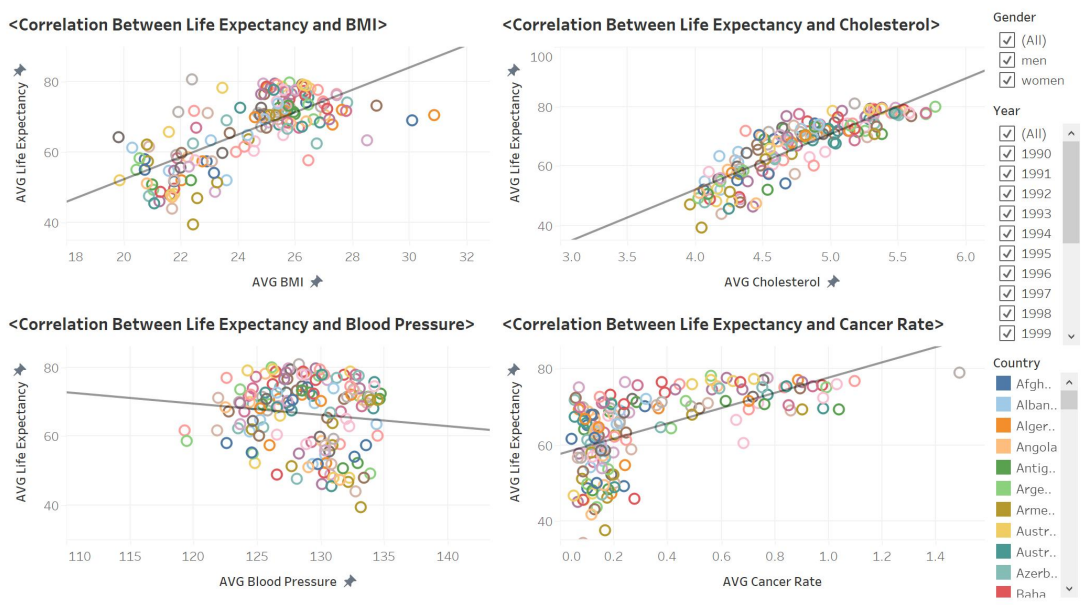


Dashboard 4:



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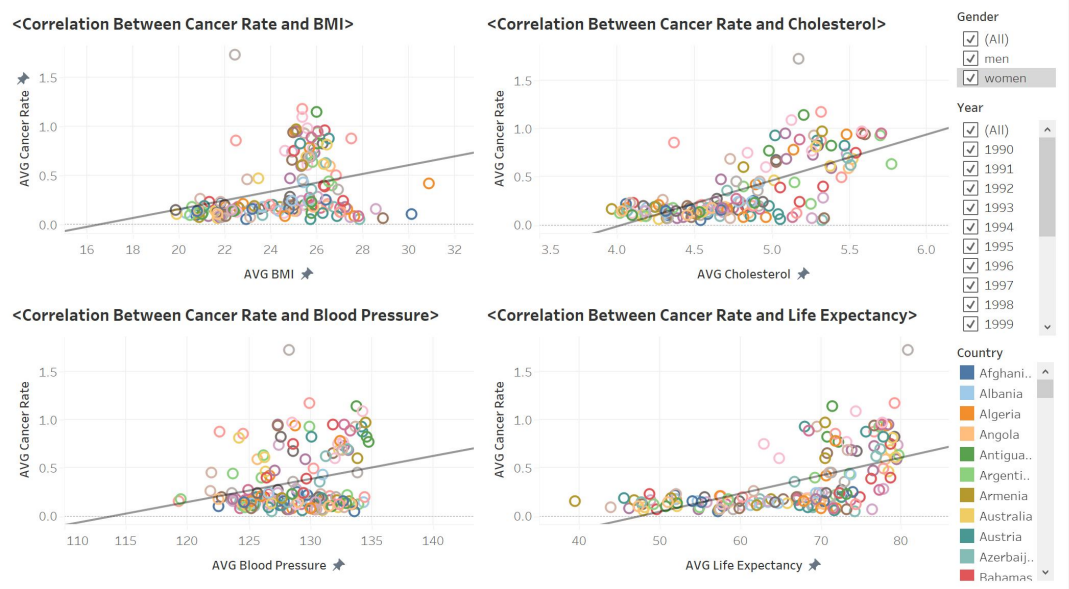


What did you find and any reflections on how the NHS could use this?

Population Insights

- **Population Distribution:** The map shows global population concentrations, with China standing out as the most populous.
- **Population Growth:** Certain African and Asian countries show higher average population growth, while parts of Europe and East Asia show negative or minimal growth.

Cancer Burden Overview

The bubble map highlights countries with higher cancer burdens, particularly in Asia and North America. Larger circles represent a higher number of cancer cases.

Trend Analysis (Across Years)

- **Population:** The world's population is gradually increasing over time, and it is expected that the total world population will continue to grow after 2008.
- **Population Growth:** From 1990 to 1995, global population growth declined rapidly, then fluctuated slightly with slow growth until 2002. Afterward, it accelerated before 2008. It is expected that after 2008, the growth rate of the world's population will gradually slow down.
- **Cancer:** The prevalence statistics of lung cancer, gastric cancer and liver cancer increased year by year from 1990 to 2008, and there is

a further growth trend in the future.

Analysis of Gender Differences

- In terms of the statistical values of health indicators such as BMI, cholesterol and blood pressure, there were no significant differences between men and women.
- In terms of the incidence of cancer, men generally have a higher rate than women, and the incidence of lung cancer in men is significantly higher than that in women.

Life Expectancy & Health Factors (Correlations)

- **Positive Correlations:**
  - BMI and Cholesterol show a strong positive correlation with Life Expectancy — higher BMI/cholesterol often associate with longer life, possibly due to better nutrition/access to healthcare.
  - Cancer Rate also shows a moderate positive correlation with Life Expectancy, likely reflecting better detection in countries with higher life expectancy.
- **Negative Correlation:**
  - Blood Pressure shows a slight negative correlation with life expectancy, suggesting higher blood pressure may reduce lifespan.

Cancer Rate vs Health Indicators

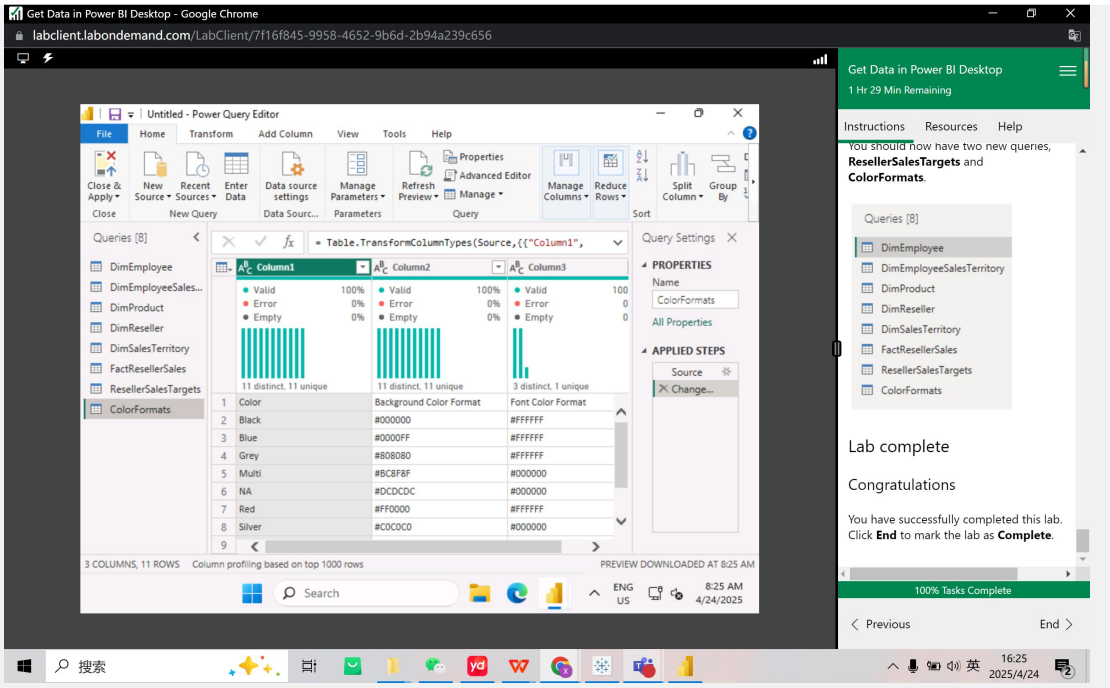
- Cancer rate increases with rising BMI, Cholesterol, and Blood Pressure, especially at higher ranges.
- Higher Life Expectancy also correlates with higher Cancer Rates, likely because aging populations have more cancer cases.

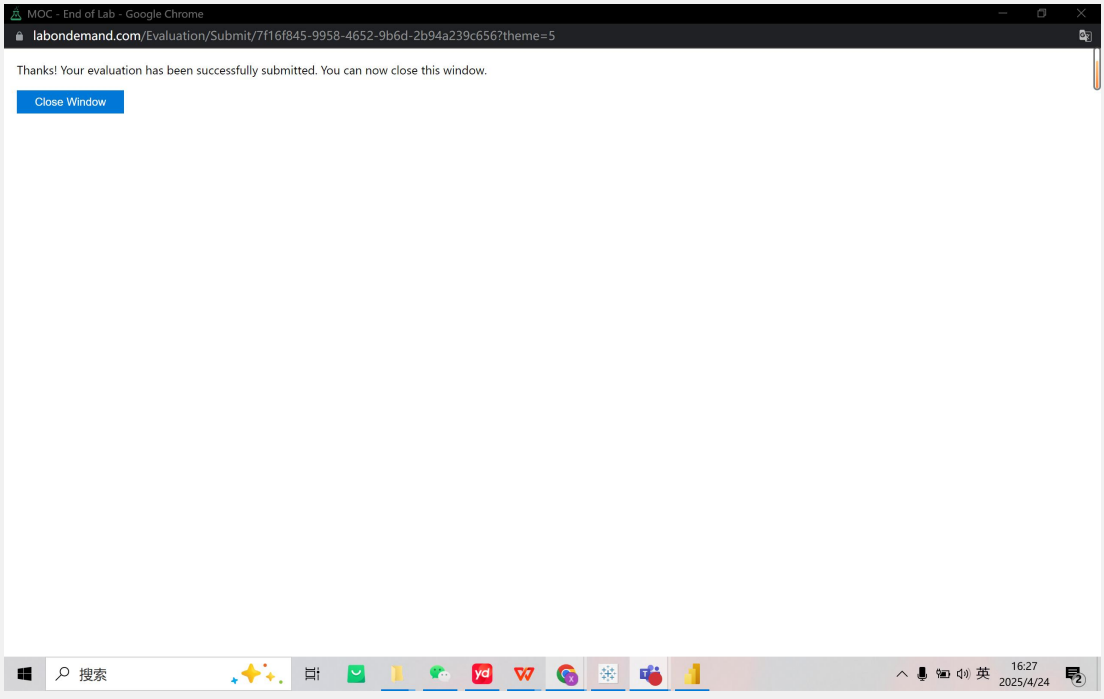
Day 3: Task 1

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.

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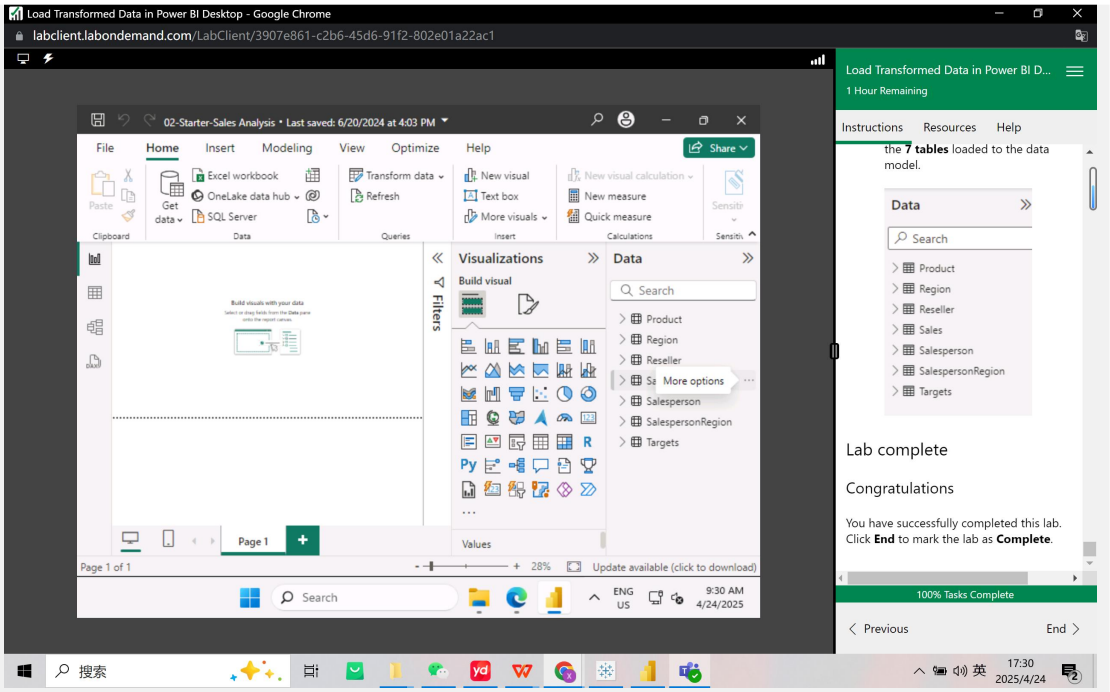
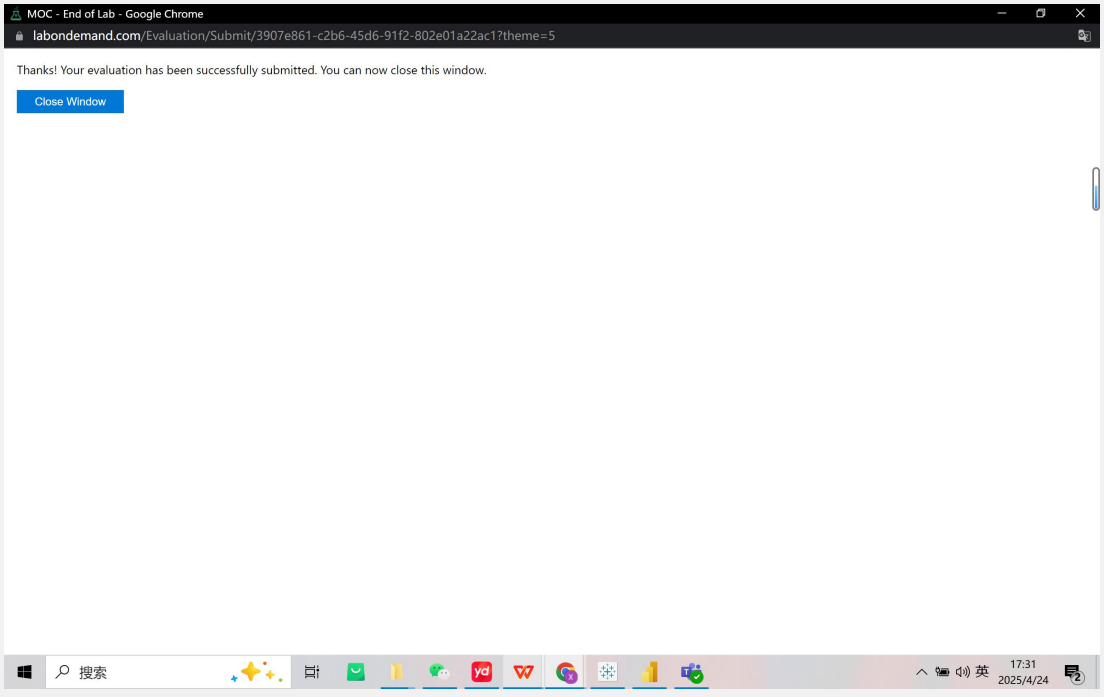
Paste your completed lab here



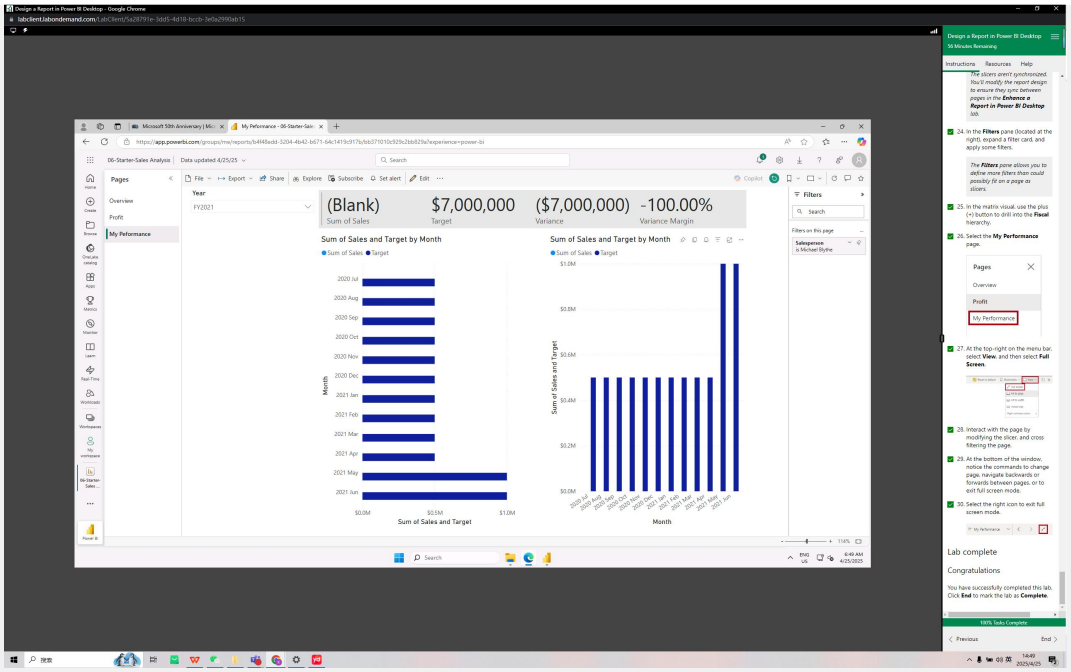


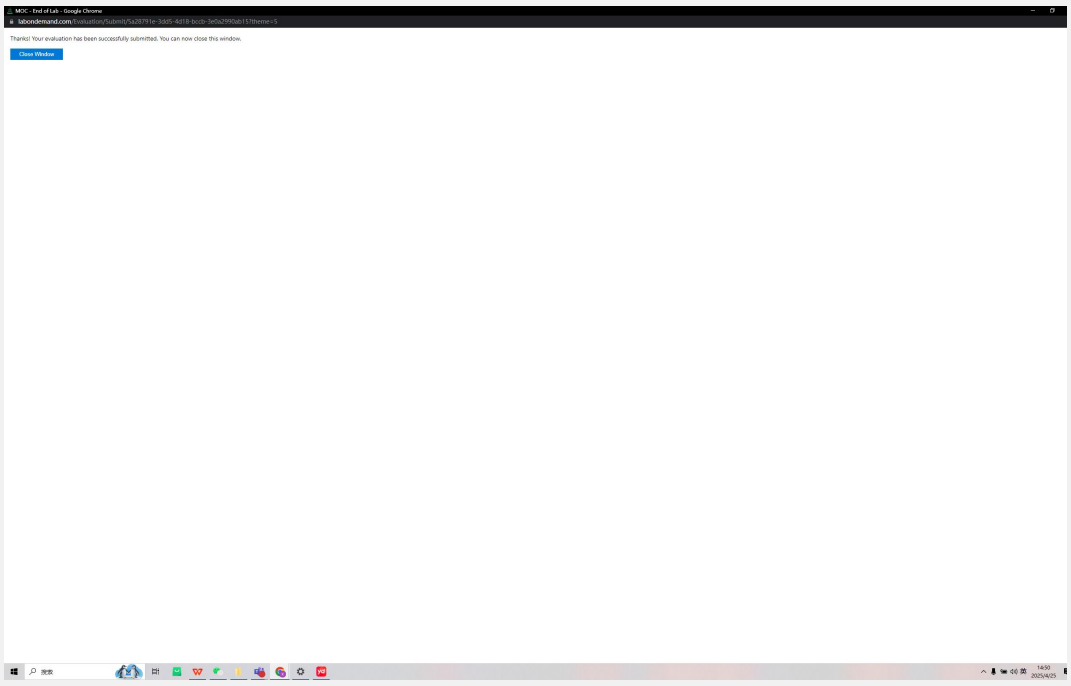
Day 4: Task 1

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 completed lab here



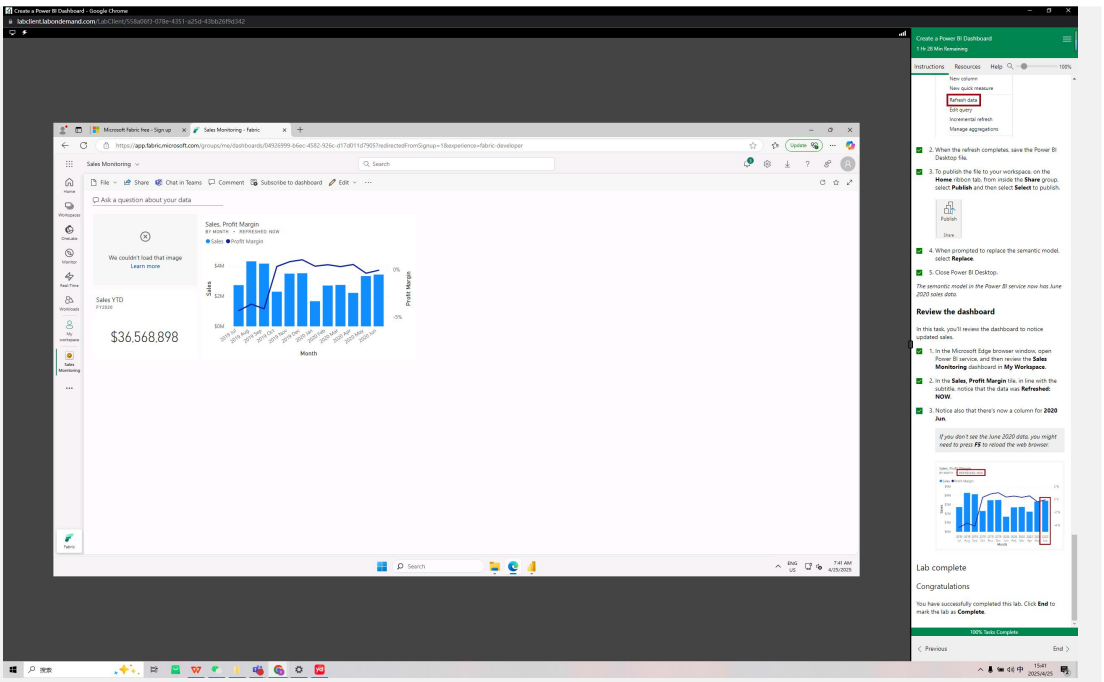


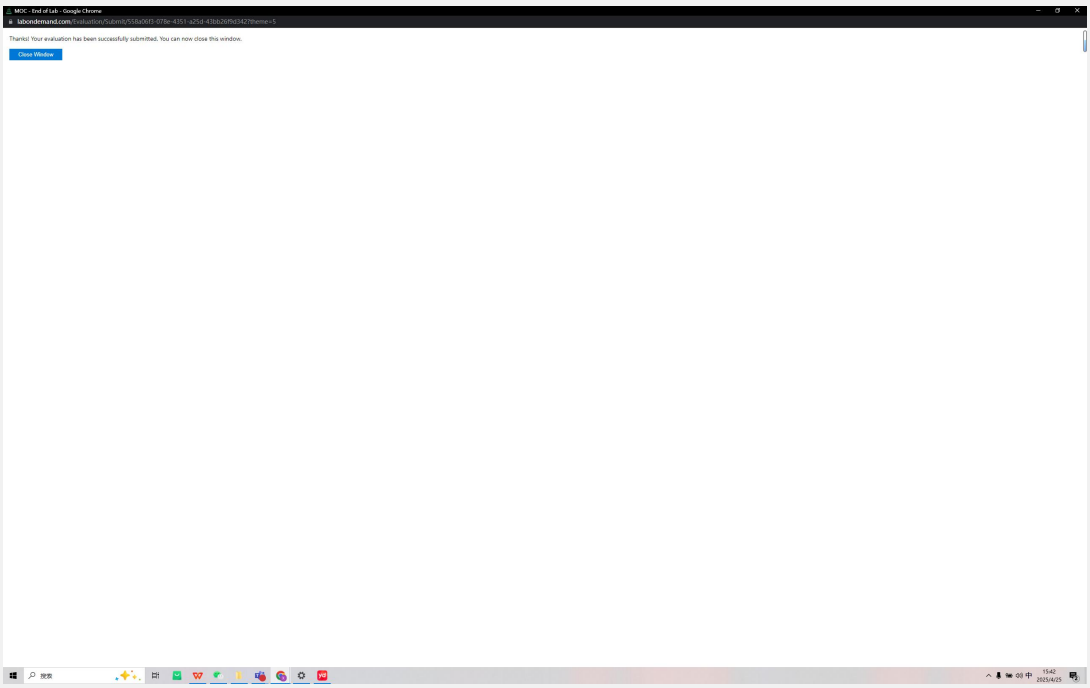
Day 4: Task 2

Please complete Lab 10 ‘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 completed lab here





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.