Just IT

B2W group

Apprenticeships | Training | Recruitment

Data Technician

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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	The different versions of Tableau: *Tableau Desktop* - the full paid version of Tableau used by individual users to create, explore and analyse visualisations. It supports a wide range of data sources such as Excel, SQL, cloud databases, big data platforms etc. Users can save workbooks locally, making data and visualisations private. It has data preparation tools like Tableau Prep Builder for cleaning and transforming data. It is able to create complex dashboards, interactive visualisations and has a full set of analytics and data modelling features. However, as it is paid, it can be expensive for individuals and small businesses. *Tableau Server* – is a centralised sharing and collaboration platform on-premise, designed for enterprises and teams, which

allows secure access to data and workbooks. Permissions management, user roles, and content management. Scalable, can support a large number of users. Integration with enterprise systems and databases. However, it requires IT infrastructure and maintenance, therefore for larger organisations, it can be a significant investment.

Tableau Online – is a cloud-based version of Tableau Server allowing organisations, enterprises and teams to share, collaborate, and access Tableau dashboards online without needing on-premise infrastructure. As it is cloud-based, it is accessible from anywhere. It has a similar functionality to Tableau Server but without the need for in-house hardware or maintenance. It is secure in sharing, collaborating, and viewing and integrates with cloud data sources (e.g., Google Analytics, Amazon Redshift, etc.). However, it's a subscription-based service, so it's not free, and it's still an enterprise-level tool, which may not be suitable for smaller teams or individuals.

Tableau Prep - is a separate stand-alone tool focused on data preparation and cleaning. It allows users to reshape, clean, and structure data before it's imported into Tableau for analysis. Has a drag-and-drop interface for easy manipulation of data. It also helps to automate data transformation processes. However, it's primarily focused on data prep; it doesn't offer the full suite of analytics or visualisation features like Tableau Desktop or Tableau Server.

Tableau Public - the free version of Tableau created for sharing public data visualisations. It allows you to create and publish visualisations to the Tableau Public server and users can embed the graphs/tables they create into blogs or sites. It comes with all the core data visualisation functionalities of Tableau Desktop but has a few limitations:

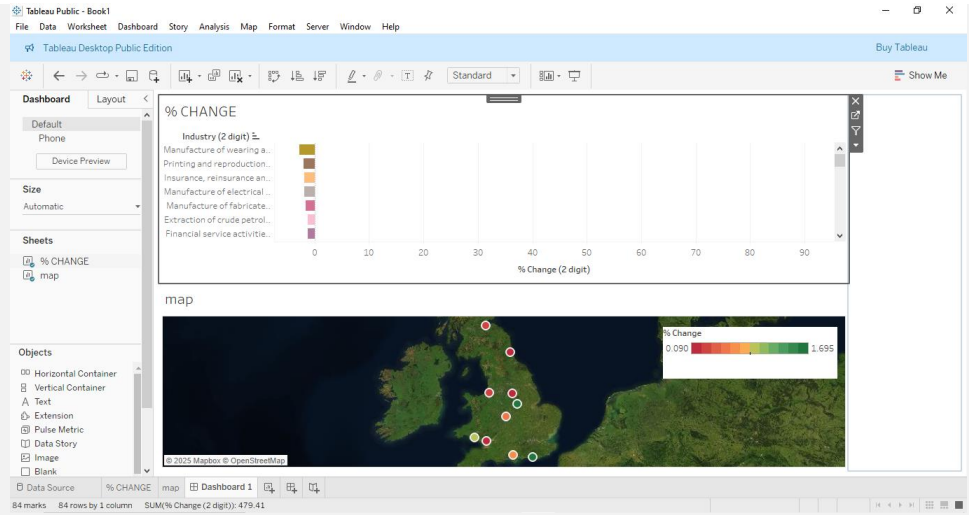
- everything you create and publish is publicly accessible so you can't privately store data on your computer, which also means that there's no built-in feature for collaboration or sharing privately with specific people

- you can connect to files such as Google Sheets, Excel and a few other formats but not all the ones that Tableau Desktop offers
- data may be limited in complexity or volume
- Tableau Public doesn't have the powerful data preparation features that paid versions like Tableau Prep offers

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:

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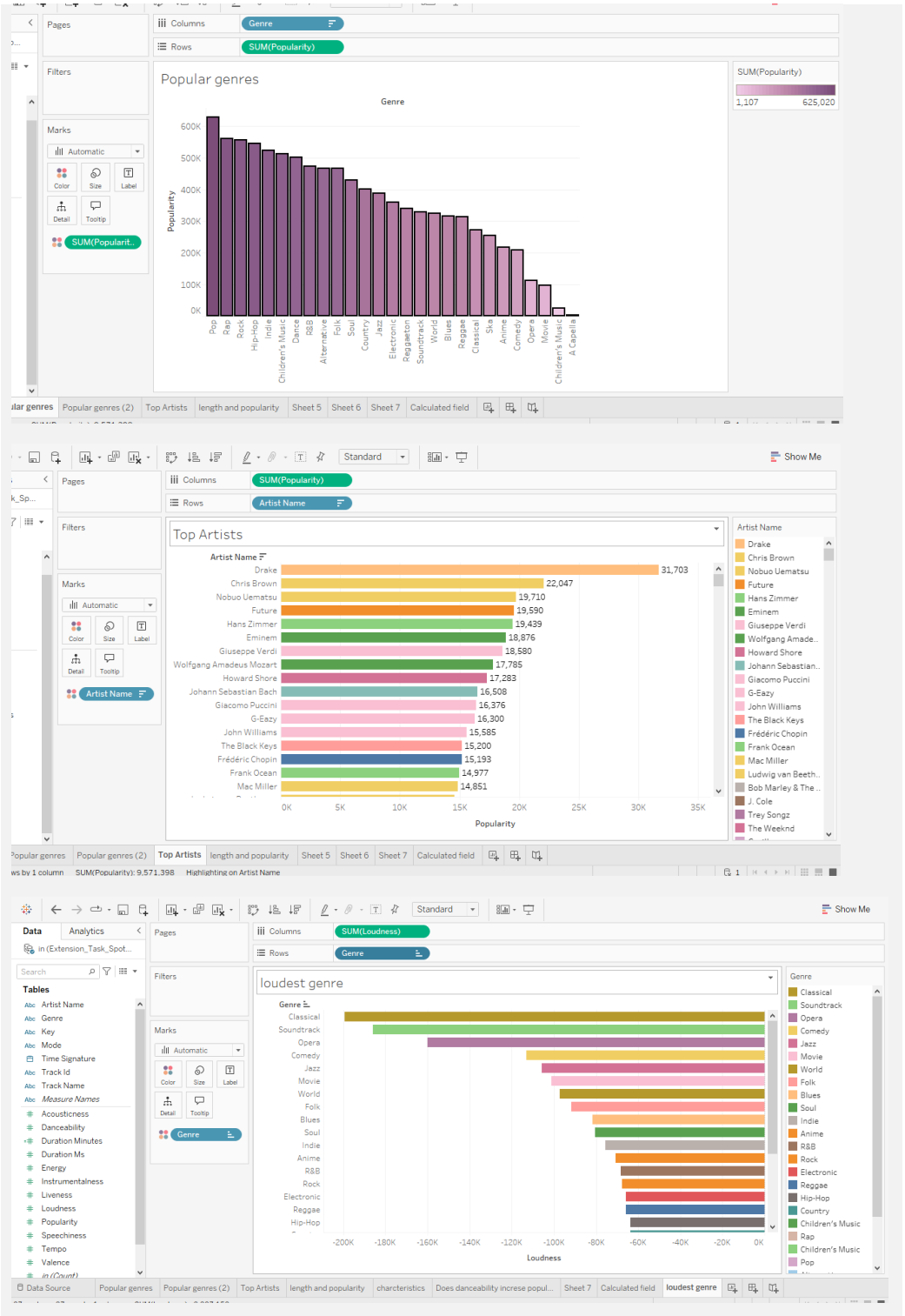

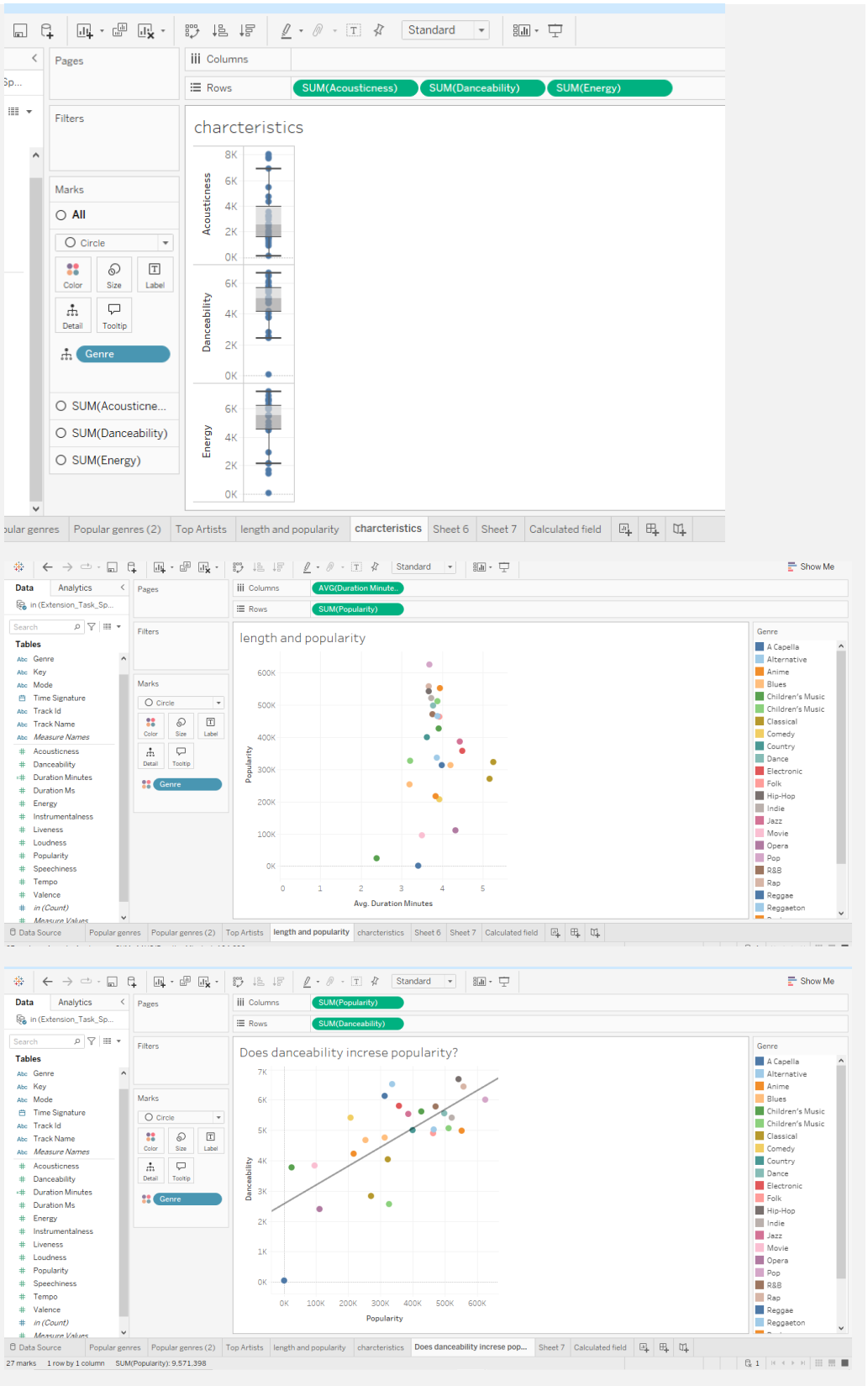

What did you find?

When analysing the Spotify spreadsheet and creating visualisations, I came up with the following conclusions:

- The most popular genres are Pop, Rap, Rock, Hip-Hop and Indie

- Top artists are Drake, Chris Brown, Nobuo Uematsu, Future, Hans Zimmer and Eminem
- The top 3 loudest genres were Classical, Soundtrack and Opera
- The box plot showed the median and outliers of all genres, in the danceability, energy and acousticness subcategories
- There is a weak correlation between the length of a song and how popular it is, therefore that scatter graph has no trend line. The most popular songs aren't always the longest. Majority of the popular songs/genres are between 3 and a half minutes to 4 minutes long.
- The scatter graph showing danceability and popularity shows a positive correlation as we can see that the more 'dancier' a song is, the more popular it is.

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.

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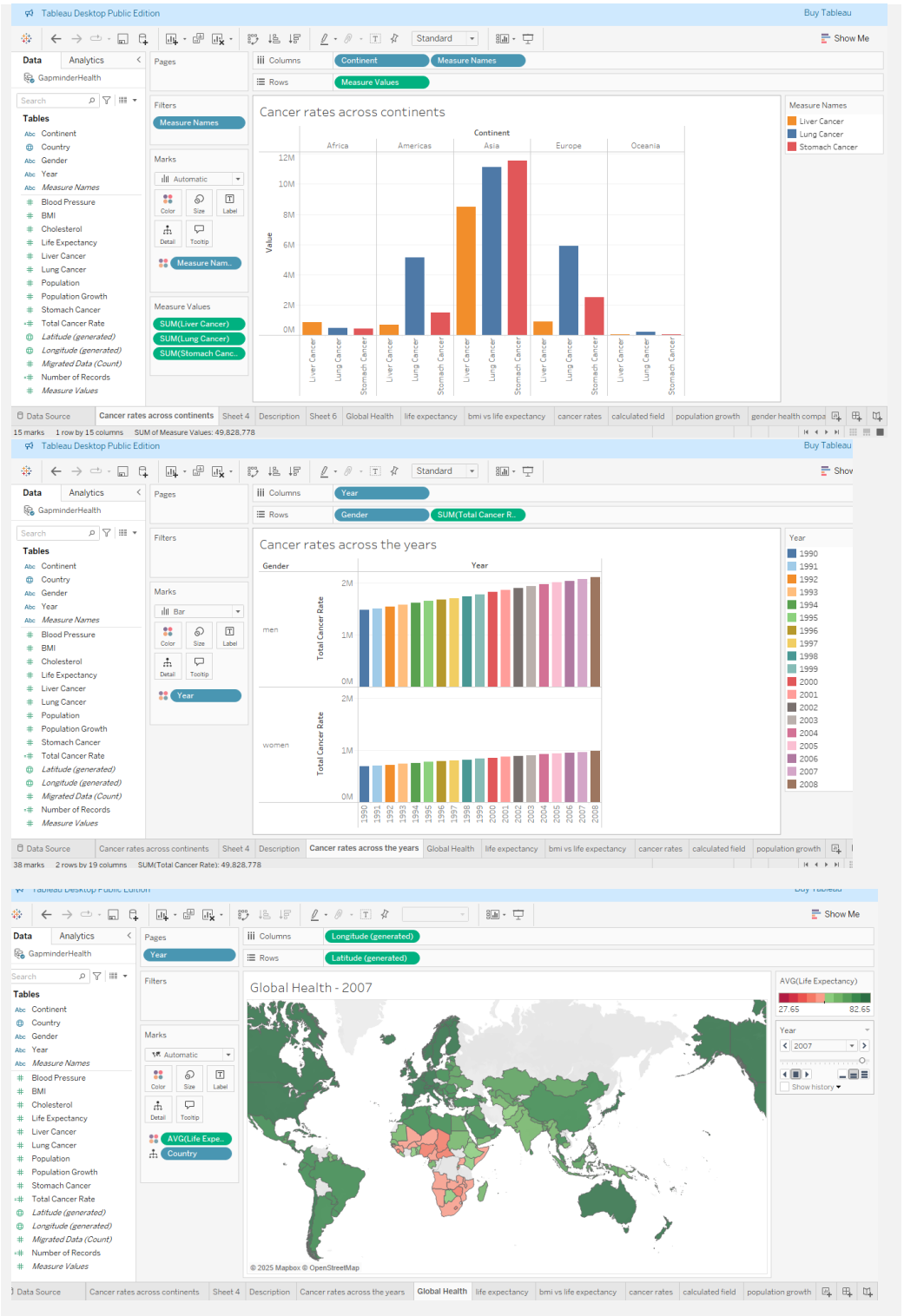

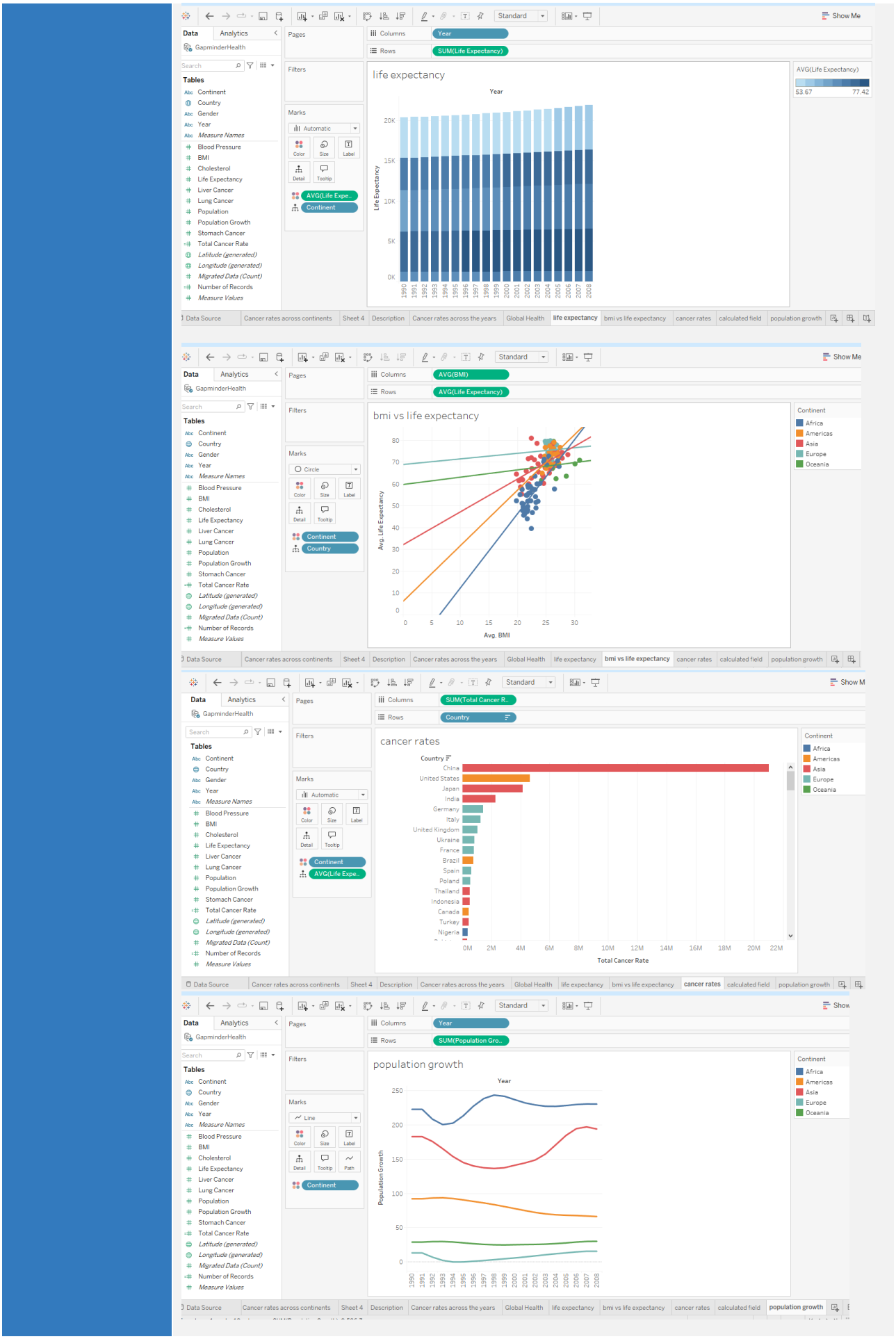
life expectancy
Year
Life Expectancy
bmi vs life expectancy
Avg. Life Expectancy
Avg. BMI
cancer rates
Country
Total Cancer Rate
population growth
Year
Population Growth

What did you find and any reflections on how the NHS could use this?	Based on the analysis of the Health Survey spreadsheet and creating visualisations, I came up with the following conclusions: • Oceania is wildly under-represented across the dataset • When looking at the bar chart for cancer rates across the continents, Asia had the highest rates with the highest being stomach cancer in China. • Total cancer rates have significantly risen throughout the years, with more men getting it than women. • Looking at the average life expectancy across the world, Japan has the highest (80) and Sierra Leone has the lowest (with 39). • Higher BMI doesn't necessarily mean higher life expectancy, e.g. if you look at Sierra Leone and Japan, their average BMI is relatively similar, however their life expectancy differs drastically. This could be due to other risk factors and qualities of life e.g. civil wars, The NHS could use this dataset and visualisations to launch early intervention campaigns, for example if there is a rise of a particular illness such as lung cancer, more public health programs can focus on promoting certain lifestyle such as discouraging smoking or helping people increase physical activity. The data may suggest a need for more specialised healthcare providers like endocrinologists, cardiologists etc in particular countries where there is a high amount of blood pressure, cholesterol, cancer etc rates. Trends in BMI, cholesterol and blood pressure can guide public health campaigns targeting early screenings, and education programs to reduce the risk of chronic diseases. Insights into health disparities across continents can help the NHS across inequalities, ensuring more equitable access to care and targeted support for vulnerable groups. It also allows the NHS to forecast future health challenges, such as rising cancer rates, and proactively design interventions to mitigate risks

Comparing UK health data with global trends enables the NHS to benchmark performance, identify best practices from other countries, and adopt innovative healthcare models, especially from those with high life expectancy.

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.