3/23/2024

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**Assignment 1 Data Visualization**

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# **Task 1**

## Policies and Procedures

When working with data, it's important to adhere to certain policies to ensure data privacy, security, and ethical use. Here are some of the most important policies to consider:

1. Data privacy policy: This policy outlines how personal data will be collected, stored, processed, and shared, and how individuals can access, control, and delete their data.
2. Data security policy: This policy sets out the measures that will be taken to protect data from unauthorized access, disclosure, and theft, including encryption, access controls, and regular security assessments.
3. Data retention policy: This policy defines how long data will be stored, how it will be archived or deleted, and the criteria for determining when data is no longer needed.
4. Data quality policy: This policy establishes the standards for data accuracy, completeness, consistency, and relevance, and the processes for validating and correcting data.
5. Data access and sharing policy: This policy determines who has access to data, under what conditions, and for what purposes, and the procedures for sharing data with third parties.
6. Data ethics policy: This policy outlines the ethical principles that govern the collection, use, and sharing of data and the processes for identifying and mitigating any ethical concerns.
7. Compliance policy: This policy ensures that data management practices align with legal, regulatory, and contractual obligations, such as GDPR, HIPAA, or PCI-DSS.

**Why do these policies have to be adhered to while using the data?**

Adhering to these policies can help ensure that data is used responsibly and ethically and that the risks associated with data management are minimized.

**Why is it important to know these policies as a data analyst?**

Being aware of data policies is important for data analysts because it ensures legal compliance, addresses ethical considerations, provides guidelines for data security, and enables effective decision-making about data collection, analysis, and reporting. By adhering to data policies, data analysts can ensure that they are protecting personal information, maintaining trust with stakeholders, and avoiding legal and reputational risks. In summary, data policies help data analysts ensure that data is being collected, analysed, and reported responsibly and ethically.

# **Task 2**

## Excel

### Set a password to protect the workbook.

To protect the workbook, you can either select 'Review' and then choose 'Protect

Workbook' to input the password, or alternatively, navigate to the File tab, proceed to

the Info section and select "Protect Workbook".

Note: To open Excel password is: 123

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## 2. Highlight column C and change the data to display in British Pound symbol

To highlight column C, right-click, select "Format," then navigate to the "Format cells"

window. In the "Number" section, choose the "Currency" category, and adjust the

currency format to pounds.

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### Turn the GDP sheet into a table.

To modify the data values in the table, use the Ctrl + A shortcut to highlight all the data, followed by the Ctrl + T shortcut. Then, select the option "My table has headers."

A screenshot of a spreadsheet

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### Filter the table to display only the values for the year 2019

To filter the data by the year 2019, select the filter option for Column D, then choose the year 2019 from the filter options. Finally, click "OK" to apply the filter.

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### Create a chart displaying only the Rank, Country, and GDP per capita (PPP) data.

For ease of filtering through the data, I copied the relevant data from 2019 into a new tab. After highlighting the data, I navigated to the Insert toolbar section and selected "Insert recommended chart." Then, I chose the clustered columns chart.

### Using creative skills edit the chart.

I have added the title, axis labels, and legend to the chart. Additionally, I selected a combo chart with the rank displayed as a line and the GDP as columns. To refine the chart further, I right-clicked on the chart, chose the "Select Data" options, and separated the data series for Rank and GDP per capita. Following this, I changed the chart type to a combo chart, utilizing Rank as a secondary axis.

A screenshot of a chart type

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### Move the chart to a new sheet tab and label it with a suitable name.

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### Create a sort for the top 20 highest-ranking countries.

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### Creating a Bar Chart for the Top 20 Highest-Ranking Countries and Positioning It Underneath the Table

Create a new bar chart to visualize the 20 highest-ranking countries from your

sorted data, then relocate the chart to be positioned underneath the table.

### Colour the background by highlighting the area underneath the table. Find the add a fill colour icon and select a colour.

After using the filter sort option for the Rank column and selecting numbers equal to or smaller than 20, the chart has been updated accordingly. Additionally, the background behind the chart has been highlighted with the colour orange.

A screenshot of a graph

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### The next task is to create 3 macro buttons, print the sheet, Save the file, and copy the sheet.

To create macros, we begin by pressing 'record macros' and then perform the actions we wish to automate, followed by stopping the recording. Once a shape is drawn, right-clicking on the shape allows us to assign macros to it.A screenshot of a computer

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### Copying Sheet and Pasting into a New Word Document with Formatting, Titled 'GDP (Gross Domestic Product)

Using the copy macro, copy the sheet and then paste it into a new Word document keeping the formatting. Give the page the title ‘GDP (Gross domestic product)’.

### Save the document as ‘Word Gross Domestic Product Report 1’

A screenshot of a computer

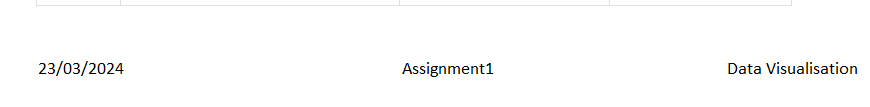
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### Incorporating Header and Footer in the 'Gross Domestic Product' in Excel Sheet

Before finalizing our Excel table titled 'Gross Domestic Product,' incorporate a header and footer by navigating to the 'View' tab, locating the 'Workbook views' area, and selecting 'Page Layout.'

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In the header section, input your name and "GLA DATA 1" across the three boxes. In the footer, include today's date followed by "Assignment 1" and finally "Data Visualization”.

A screenshot of a chart

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### Saved table as ‘Excel Gross domestic product report 1’

# Task 3

## Tableau

1. Import Data “The Wealth of Nations” Excel sheet into Tableau.
2. Set Relationships: Data has been imported and given relationships in order.

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1. I have created colourblind-friendly charts for GDP, life expectancy, and smartphone usage for the top 20 ranked countries. Dashboard with the statistics: https://public.tableau.com/app/profile/iswarya.gudala/viz/Asignment1DataVisualisation/WealthofNationsDashboard?publish=yes

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