**Power BI Project Solution**

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|  | **About Dataset** |
|  | The TechnoEdge Financial Details dataset contains information related to the sales of different products in various countries and segments. It includes data on the number of units sold, manufacturing and sale price, gross sales, discounts, COGS, profit, and date of sale. The dataset is organized by month and discount band. |
|  | **DATA SET** |
|  | We have chosen a finance domain dataset with 18 columns and 300 rows to create a Power BI dashboard report. This size of data is optimal for our project as it strikes a balance between reducing optimization performance and increasing readability of end users. However, for learners' preference, they can use up to 1000 rows of data. Our dataset includes important parameters such as customer details, banking information, and more, which can be used to generate valuable insights. |
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|  | **PROJECT TASKS** |
| **A** | **Installation** |
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| **Q** | Downloading **Power BI Desktop.** |
| 1 | [Go to https://powerbi.microsoft.com/en-us/desktop/ and select "Power BI Desktop" from the "Products" tab.](https://powerbi.microsoft.com/en-us/desktop/) |
| 2 | Go to the Power BI Desktop download page |
| 3 | Click "Download free" |
| 4 | Select your system version (32-bit or 64-bit) |
| 5 | Click "Download" |
| 6 | Locate the downloaded file in your downloads folder |
| 7 | Double-click to start the installation |
| 8 | Follow on-screen instructions |
| 9 | Launch Power BI Desktop from the desktop shortcut or the Windows Start menu. |
| Instruction: | Download and install Power BI Desktop from Instruction: Download and install Power BI Desktop from the official website and start exploring its features for creating impactful reports. |
| **B** | **Data Cleaning** |
| 1 | Show me how to append the sales table from 2022-2023 into one table? |
| Hint | To combine multiple tables in Power Query of Power BI, use the "Append Queries" feature and select the relevant tables, ensuring they have the same structure. Renaming tables and organizing them in folders can help with navigation. |
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| 2 | Display the new data types for each column in the dataset after applying changes in Power Query. |
| Hint | Use the "Change Type" option in Power Query to alter data types for each column. |
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| 3 | Recreate the Country Name column in Power Query by capitalizing each word. |
| Hint | Utilize the "Replace Values" option in Power Query to edit the Country Name column to have each word capitalized. |
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| 4 | Show the number of duplicate values removed from the dataset using Power Query. |
| Hint | Use the "Remove Duplicates" option in Power Query to remove duplicate values from the dataset. |
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| 5 | Create a conditional column in Power Query that shows the sales ratio (low, average, high) based on the sales column in the dataset. |
| Hint | Create a conditional column using the "Add Conditional Column" option in Power Query and set the condition to display the sales ratio based on the sales column. |
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| 6 | How to eliminate null values in dataset rows? |
| Hint | Filter the dataset to remove rows with null values. |
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| 7 | Explain how to use the Power Query Date function to extract the Day from a date column in the dataset. |
| Hint | Access the "Transform Data" tab in Power Query and choose the "Date. Year" function to extract the Day from a date column. |
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| **C** | **Data view** |
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| 1 | Display all geographical datasets in Power BI along with their corresponding data categories, such as city, country, state, and region. |
| Hint | To show geographic data with its categories like city, country, state, and region, use Power BI's map visual. It's an easy and effective way to analyze and display geographical information. |
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| **D** | **Visual Insights** |
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| 1 | Create visual was used to represent the top 5 monthly sales? |
| Visual Used | Stacked Bar Chart |
| Hint | The chart shows the total sales for each month, and the top 5 months with the highest sales are highlighted in the chart. |
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| 2 | Display the distribution of sales across different discount bands using which visual? |
| Visual Used | Donut Chart |
| Hint | The chart shows the distribution of sales across different discount bands. |
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| 3 | Show the proportion of sales contributed by each segment using what kind of visual? |
| Visual Used | Pie Chart |
| Hint | The chart shows the proportion of sales contributed by each segment. |
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| 4 | View the comparison of sales and COGS for different countries using which visual? |
| Visual Used | Area Chart |
| Hint | The chart shows the comparison of sales and COGS for different countries. |
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| 5 | Display the trend of sales and profit over time using which visual? |
| Visual Used | Line & Clustered Column Chart |
| Hint | The chart shows the trend of sales and profit over time. |
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| 6 | Create a visual that shows the flow of sales from different products. |
| Visual Used | Funnel |
| Hint | The chart shows the flow of sales from different products, with the top-selling product at the top of the funnel. |
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| 7 | Display the report title using which visual? |
| Visual Used | Text Box |
| Hint | The visual is used to display the title of the report. |
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| 8 | Create a button that triggers an action to show a summary of the data. |
| Visual Used | Button |
| Hint | The button is used to trigger an action that shows a summary of the data. |
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| **E** | **Published Report** |
| 1 | Power BI reports can be published and shared with others, making it easy to collaborate and work with others on data analysis projects. |
| Hint | Power BI's ability to publish and share reports facilitate seamless collaboration and teamwork in data analysis projects. |