Solid exploratory data analysis (EDA) and created insightful visualizations to help understand key trends and relationships within the data.

***KPI STORY ON SALES PROJECT***

Here’s how I would break down and organize the key components of sales project:

**1. Top/Bottom 5 Products by Sales/Profit/Quantity Sold**

* **Goal**: Identify the products with the highest and lowest sales, profit, and quantities sold.
* **Visualizations**:
  + Bar charts or horizontal bar charts are perfect for this. You could plot the top and bottom 5 products for each metric (sales, profit, quantity) in separate plots or as part of a dashboard.
  + A heatmap could also be used to represent the relationships between products and these metrics.

**2. Sales Trends Over Time (Daily, Monthly, Quarterly, Annually)**

* **Goal**: Track how sales evolve over different time periods to understand trends and seasonality.
* **Visualizations**:
  + Line graphs are ideal for showing trends over time. You can have separate plots for daily, monthly, quarterly, and annual sales.
  + A time series decomposition chart could also help visualize seasonal trends, cyclical patterns, and irregular trends.

**3. Relationship Between Sales and Profit**

* **Goal**: Show how sales and profit are related to each other.
* **Visualizations**:
  + A scatter plot is perfect for this. You can plot sales on the x-axis and profit on the y-axis to check the correlation.
  + A regression line could be added to the scatter plot to further emphasize the trend and the relationship.

**4. Compare Sales/Profit/Quantity Sold Between Two Periods Selected by the User**

* **Goal**: Allow the user to compare different time periods in terms of sales, profit, and quantities sold.
* **Visualizations**:
  + A grouped bar chart or side-by-side bar charts can work well here.
  + A line chart with two lines representing sales for the two selected periods could also help in comparing trends.

**5. Average Discount Offered in Each Discount Category**

* **Goal**: Understand how discounts vary by category and how they impact sales.
* **Visualizations**:
  + A box plot can show the distribution of discounts across different categories.
  + A bar chart can also represent the average discount per category.

**6. Total Number of Orders**

* **Goal**: Show the overall order volume.
* **Visualizations**:
  + A simple KPI card or a large number display is a good way to highlight this metric.
  + A bar chart could also be used to show orders over time or broken down by different categories.

**7. Sales/Profit/Discount/Net Sales/Other Fields for Each Order with Filters**

* **Goal**: Enable user interactivity and provide an in-depth look at each order with filters for various categories (e.g., product, date, customer ID, promotion).
* **Visualizations**:
  + A detailed table with filters (using a dashboard tool like Tableau or Power BI) would allow users to select specific products, dates, or customer IDs.
  + You could also use bar or line charts to show how sales, profit, and discounts vary across different filter criteria.

**8. Sales by Different Cities**

* **Goal**: Visualize sales performance across different geographic locations.
* **Visualizations**:
  + A map chart (choropleth map) can be used to show sales by city or region. Alternatively, a bar chart could show sales by city in descending order.

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