

SDB: Quarterly Sales Analysis Documentation

Overview:

The **Quarterly Sales Analysis** system is designed to provide insights into dealer invoicing, sales comparisons, dealer activity, and movements across different states and regions. The system processes and provides dynamic data for the current and previous fiscal years, segmented by quarters (Q1, Q2, Q3, and Q4).

The core functionality revolves around fetching detailed reports based on dynamic inputs such as states, fiscal years, and quarters. This documentation explains the understanding and design of the system, covering its structure, data flow, and analysis features.

Data Structure and Categories:

The system handles multiple types of sales and dealer data. Below is a breakdown of the key data categories:

1. Unique Dealer Invoicing:

- a. Tracks the number of unique dealers invoiced across different states for each month in the current financial year.
- b. States and regions are tracked separately, showing how the number of unique dealers varies across months.
- c. This data is primarily used to analyze dealer growth or decline in various geographical regions.

2. Regular Dealers Analysis:

- a. This category tracks the dealer activity during the financial quarter, categorizing dealers based on how many months they have lifted products (i.e., dealers who have lifted in 1, 2, or 3 months of the quarter).
- b. It provides insights into the consistency of dealer engagement during the quarter, helping to identify strong performers and underperformers.

3. Quarterly Sales Comparison:

- a. A comparative analysis between the sales in the current quarter (Q1 of FY 24-25) and the corresponding quarter of the previous year (Q1 of FY 2023-24).
- b. This comparison shows the growth or decline in sales and dealer invoicing across states.

- c. It helps in assessing year-over-year performance and understanding the regional distribution of growth.

4. Dealer Movement Analysis:

- a. Tracks the movement of dealers from month to month in a given quarter, categorizing them as:
 - i. Dealers who have lifted in all three months of the quarter.
 - ii. Dealers who have lifted in two months.
 - iii. Dealers who have lifted only in one month.
 - iv. Dealers who are new, revived, or have stopped lifting altogether.
- b. This data gives insight into the dealer engagement dynamics and can help identify market trends, areas requiring support, and successful retention strategies.

Key Concepts:

1. Quarterly Reporting:

- a. The analysis is divided into four quarters: Q1, Q2, Q3, and Q4. These are defined as per the fiscal year and correspond to the months of April–June (Q1), July–September (Q2), October–December (Q3), and January–March (Q4).
- b. The reports are flexible and can dynamically fetch data for any specific quarter (e.g., Q1, Q2) based on the user's request.

2. State-Specific Data:

- a. The data can be filtered based on one or more states. Each state's performance can be analyzed separately, which allows for regional-level insights.
- b. States are represented by state IDs, and users can specify multiple states to compare performance across regions.

3. Time-Based Analysis:

- a. The reports are based on the current financial year and the previous financial year.
- b. The system allows fetching data dynamically for different months within a quarter, enabling comparisons between multiple periods within the same quarter or across quarters.

4. Dynamic Data Fetching:

- a. The system dynamically fetches data based on the user's request. This includes the selection of states, specific months within a quarter, and comparison between current and previous financial years.

- b. This allows the generation of personalized and time-specific reports.

Workflow and Functionality:

1. Unique Dealer Invoicing:

- **Input:** The system accepts a list of state IDs (optional). Based on these inputs, the system will fetch the unique dealer invoicing data for each month (April–June, for example) of the selected quarter.
- **Output:** A detailed report showing the number of unique dealers invoiced in each state per month. This helps to identify states with the highest growth or decline in dealer involvement.

2. Regular Dealer Analysis:

- **Input:** The user selects the quarter of interest (e.g., Q1 of FY 24-25). Based on the data, the system categorizes dealers into those who have lifted products in one, two, or all three months of the quarter.
- **Output:** A comprehensive report showing the number of dealers lifting products in each category across the selected quarter. This data helps to assess dealer activity consistency.

3. Quarterly Sales Comparison:

- **Input:** The system fetches data for the selected states, comparing sales and dealer invoicing in the current quarter (Q1 of FY 24-25) against the previous fiscal year's corresponding quarter.
- **Output:** A detailed comparison report showing the percentage changes in sales and dealer numbers, highlighting regional variations and growth patterns.

4. Dealer Movement Analysis:

- **Input:** The user can specify a quarter (e.g., Q1) and a list of states for which to fetch the dealer movement data. The data includes dealer performance for each month within the quarter.
- **Output:** A detailed analysis of dealer movements, showing the number of dealers who lifted products in all, two, or just one month. Additionally, the system tracks new and revived dealers.

API Integration:

The system integrates multiple endpoints to retrieve the required data dynamically. Each API call processes the relevant query parameters (such as states, months, or quarters) and generates a report with the necessary data.

- **Dynamic State Filtering:** State-specific data is retrieved by specifying state IDs as a query parameter. The system ensures that the requested data is processed and returned based on the user's inputs.
- **Quarter-based Data Filtering:** The system fetches data dynamically based on the specified quarter (e.g., Q1), making it possible to compare sales, dealer activity, and other metrics for any given quarter.
- **Comparative Reports:** For analysis between two time periods (e.g., current vs. previous fiscal year), the system calculates percentage changes and presents the differences in dealer and sales performance.

Conclusion:

The **Quarterly Sales Analysis** system enables dynamic and detailed insights into dealer invoicing, sales performance, and dealer movements across different regions and timeframes. The ability to filter reports based on states, months, and fiscal years ensures that stakeholders have the flexibility to analyze data as per their needs. The system's flexibility and efficiency help provide actionable insights that can drive business strategies and improve regional performance.