# Distributor MOU Dealer wise Documentation

## 1. Overview

The **Distributor MOU Dealerwise** functions are used to retrieve detailed reports for dealers based on MOU (Memorandum of Understanding) information and distributor data. The two key methods, `getDealerMouReport` and `getDealerMouSummary`, are designed to fetch comprehensive dealer data, their performance, and MOU details.

- **getDealerMouReport**: Retrieves detailed data for each dealer based on MOU status, performance (target, achievement, etc.), and other relevant parameters.
- **getDealerMouSummary**: Summarizes the MOU-related details of dealers, categorizing them into MOU signed and MOU not signed, and providing aggregated statistics.

## 2. Methods

### 2.1 getDealerMouReport

***Description***

This method fetches detailed information on dealers, including:

- Financial year-related data
- MOU status (signed or not signed)
- Sales performance metrics (targets, achievements, lifted CM, etc.)
- Distributor status for dealers

***Parameters***

- `p_dealer_id`: ID of the dealer whose data is to be fetched.
- `mouSigned`: MOU status filter (`'1'` for signed, `'0'` for not signed).

- **lifted_cm**: Condition to filter dealers based on the lifted CM (either `'1'` for lifted or `'0'` for not lifted).
- **isExcel**: Flag indicating whether the result should be converted to an Excel file (default is 0 for no, 1 for yes).

### *Flow*

1. **Financial Year Data**: The current and previous financial year dates are fetched based on the current date.
2. **MOU Filter**: Depending on the `mouSigned` parameter, dealers are filtered by whether they have signed an MOU or not.
3. **Lifted CM Filter**: If the `lifted_cm` parameter is provided, dealers are filtered by whether they have lifted CM or not.
4. **SQL Query**: A complex SQL query joins several tables to fetch the necessary details of the dealers, including monthly target, achievement, lifted CM, etc.
5. **Excel Generation**: If `isExcel = 1`, the function converts the fetched data into an Excel file and uploads it, returning the URL for download.

### *Response Format*

- **For non-Excel response**:
  - A JSON object containing detailed dealer information.
- **For Excel response**:
  - A JSON object containing:
    - `details`: The list of dealer data.
    - `isExcel`: The flag indicating whether it's an Excel export.
    - `excelReport`: The URL to the generated Excel report.

## 2.2 getDealerMouSummary

### *Description*

This method provides a summary of MOU-related information for dealers:

- Categorizes dealers into MOU signed and not signed.
- Provides total values for key metrics (targets, achievements, lifted CM, etc.) based on MOU status.

- `p_dealer_id`: The dealer ID to fetch the MOU summary for.

*Flow*

1. **Financial Year Data**: Fetch the start and end dates of the current and previous financial years.
2. **SQL Query**: A SQL query is executed to gather data for each dealer, including whether they have signed an MOU and their performance (monthly target, achievement, lifted CM, etc.).
3. **Data Aggregation**: The dealers are split into two categories: MOU signed and MOU not signed.
4. **Total Calculations**: The totals for various metrics (sales target, base quantity, achievement, CM month target, CM achievement, etc.) are calculated for both categories (MOU signed and not signed).
5. **Final Output**: The final output includes:
   a. Total count of dealers with MOU signed and not signed.
   b. Totals for each metric (e.g., total sales target, total lifted CM, etc.) for MOU signed and not signed dealers.

*Response Format*

- A JSON object containing:
  - **mouSignedCount**: The count of dealers with MOU signed.
  - **mouNotSignedCount**: The count of dealers without MOU signed.
  - **signed**: A list of totals for MOU signed dealers.
  - **not_signed**: A list of totals for MOU not signed dealers.

# 3. Error Handling

Both functions use try-catch blocks to handle errors:

- If financial year data is not found, an error is thrown.
- If no dealer data is returned from the SQL query, an error is thrown.
- Errors are logged, and the error is rethrown to the calling function.

# 4. SQL Queries

Both methods rely on SQL queries to fetch data from multiple tables:

- `tbl_financial_years`: Stores financial year information.
- `dealer_master`: Contains information about dealers.
- `tbl_dealer_target_monthwise_mou`: Contains dealer targets related to MOU.
- `dispatch_item`: Contains item dispatch information to calculate achievements.
- `dealer_partner_fn`: Links dispatch items to dealers.

The SQL queries join these tables based on various conditions, such as dealer IDs, dates, and other filters (like MOU status or lifted CM).

# 6. Conclusion

The **Distributor MOU Dealerwise** functions are powerful tools for analyzing dealer performance, MOU status, and achieving sales targets. These functions provide flexibility in filtering based on MOU status and CM performance, and can return data in both JSON and Excel formats.