**Documentation for E-commerce Domain : Olist Marketplace Sales Analysis**  
 **Project Documentation: Olist E-Commerce Sales and Customer Insights Analysis**

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**Project Overview:**

This project analyzes sales, customer behavior, and shipping performance using the Olist Brazilian E-Commerce dataset. The goal is to provide actionable insights through data cleaning, querying, and visualizations using Python, MySQL, and Tableau.  
  
Steps:

**Environment Setup:**  
1. Installed Python with necessary libraries .  
2. Installed and configured MySQL for data storage and querying.  
3. Installed Tableau for creating interactive dashboards.  
  
   
**Dataset Download:**Dataset: Olist Brazilian E-Commerce Public Dataset from Kaggle.

**Data Cleaning, Prepossessing, Data Transformation (Python)**

Loaded dataset into Python using Pandas.  
 Handled missing values  
 Converted date fields   
 Removed duplicate records   
 Handled white spaces and case sensitivity issues.  
 Merged all relevant datasets.  
 Calculated total order value, order processing time, shipping time .  
 Extracted date components (year, month, day of the week).  
 Create Customer Segmentation Features:

Exported the cleaned data for MySQL.

**Database Setup and Querying (MySQL)**:  
  
 Created MySQL database and set up tables (Orders, Customers, Products, etc.).  
 Inserted cleaned data into the database.  
 Ran SQL queries to analyze:  
  
 1. Total sales by product category and region.  
 2. Customer segmentation based on purchase frequency and spending.

**Data Visualization (Tableau):**

Connected Tableau to the MySQL database.

Created dashboards:  
 1. Sales Trends: Showed sales over time by product category and region.  
 2. Customer Insights: Displayed customer segmentation and geographical spending patterns.  
 3. Shipping Performance: Visualized average delivery time.