Executive Summary:

♤Data Extraction and Preparation

♤Data Source: CSV files loaded into Power Query Editor in Excel.

♤Data Cleaning Steps:

♤Date Format Standardization: Fixed data format from dd/mm/yy to a standardized format.

♤Handling Null Values: Identified that 1% of the data was null, equating to 12,234 records with 137 empty item_id values. These null values were deleted.

♤Data Enrichment: Merged queries to add prices to order details from the menu table based on item_id.

♤Additional Columns: Added columns for month name, weekday, weekend, and hours.

♤ Data Modification: Adjusted and cleaned the data for accurate analysis.

Data Analysis Insights

♤Food Orders and Sales Trends:

♤**Popularity of Asian Food**: Asian food received the highest number of orders but Italian food led in sales.

♤**Day-wise Order Distribution**:

♤**Peak Days**: Monday saw the maximum number of orders, followed by Saturday.

♤**Busiest Hours**: The highest volume of orders occurred at 12 PM, with significant activity between 12-2 PM and 4-7 PM.

♤**Top Food Items**: The top 5 ordered items were

1. Hamburger

2. Edamame

3. Korean Beef Bowl

4. Cheese Burger

5. French Fries

♤**Valentine's Day Trends**: On Valentine's Day, there was a noticeable spike in orders during the evening, with a preference for Italian and Mexican cuisines.

Business Solutions and Recommendations

♤**Pricing Strategy**: Increase the price of Asian food by 5% to capitalize on its high demand.

♤**Promotional Strategies for Italian Food**: Introduce offers to boost the sales of Italian food.

♤**Weekend Sales Boost**: Implement promotions and special offers during weekends to drive higher sales.

Interactive Dashboard Features

To support the above analysis and provide dynamic insights, the interactive dashboard includes:

♤**Date Range Selector**: Allows users to filter data by specific dates.

♤**Food Category Filter**: Enables the analysis of different food categories.

♤**Order Trends Visualization** Displays trends in orders by day and time.

♤**Top Items Chart**: Highlights the most ordered food items.

♤**Sales Comparison**: Compares sales of different cuisines.

♤**Valentine's Day Special**: A dedicated section showing trends and preferences on Valentine's Day.

By implementing this interactive dashboard, stakeholders can gain actionable insights to make data-driven decisions, optimize pricing strategies, and enhance promotional activities to maximize sales and customer satisfaction.