Pizza Company PowerBI Dashboard Report

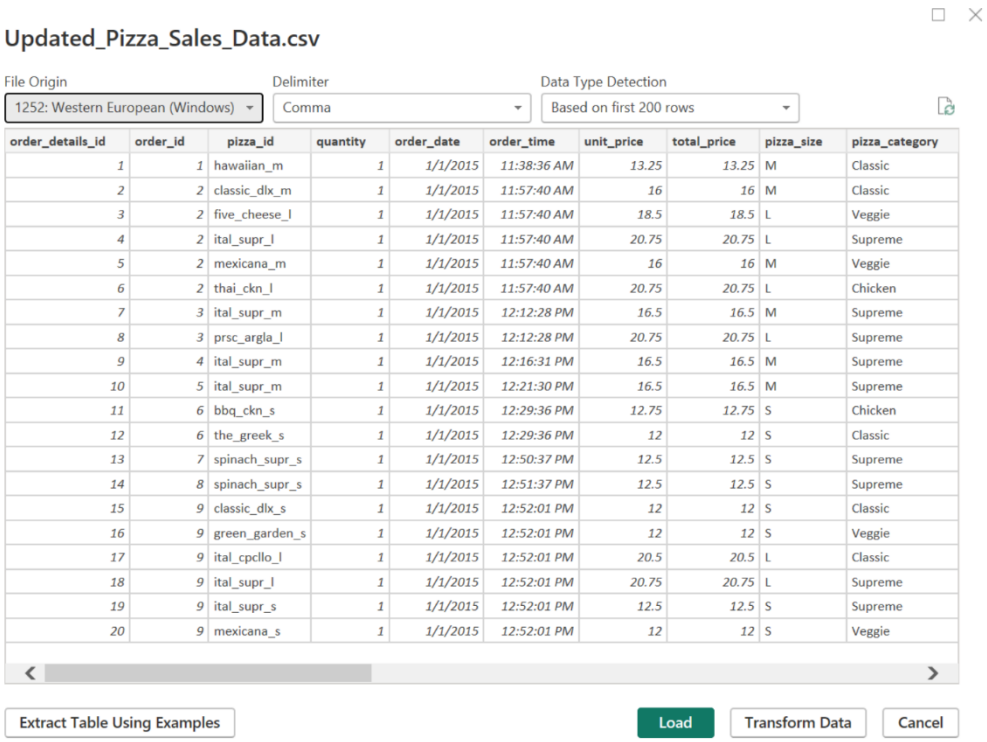
Introduction

This dashboard is designed to provide comprehensive insights into the sales performance of a pizza company. By leveraging the power of Power BI, we have developed an interactive and dynamic dashboard that enables users to monitor revenue, track orders, and gain valuable insights into customer behavior and operational efficiency. The primary objective of this dashboard is to facilitate data-driven decision-making by visualizing key metrics such as total revenue, order counts, customer demographics, sales channels, and the impact of promotions. This tool is an essential resource for managers and stakeholders aiming to optimize business operations, enhance customer satisfaction, and drive growth.

Steps:

1. Loading and Transforming Data into PowerBI:

- Utilize Microsoft Power BI to import the CSV file containing Sales data.
- Transform the data as needed to create a suitable data model for visualization.
- Load the transformed data into Power BI for further analysis and visualization.



order_details_id	order_id	pizza_id	quantity	order_date	order_time	unit_price	total_price	pizza_size	pizza_category
1	1	hawaiian_m	1	1/1/2015	11:38:36 AM	13.25	13.25	M	Classic
2	2	classic_dlx_m	1	1/1/2015	11:57:40 AM	16	16	M	Classic
3	2	five_cheese_l	1	1/1/2015	11:57:40 AM	18.5	18.5	L	Veggie
4	2	ital_supr_l	1	1/1/2015	11:57:40 AM	20.75	20.75	L	Supreme
5	2	mexicana_m	1	1/1/2015	11:57:40 AM	16	16	M	Veggie
6	2	thai_ckn_l	1	1/1/2015	11:57:40 AM	20.75	20.75	L	Chicken
7	3	ital_supr_m	1	1/1/2015	12:12:28 PM	16.5	16.5	M	Supreme
8	3	prsc_argla_l	1	1/1/2015	12:12:28 PM	20.75	20.75	L	Supreme
9	4	ital_supr_m	1	1/1/2015	12:16:31 PM	16.5	16.5	M	Supreme
10	5	ital_supr_m	1	1/1/2015	12:21:30 PM	16.5	16.5	M	Supreme
11	6	bbq_ckn_s	1	1/1/2015	12:29:36 PM	12.75	12.75	S	Chicken
12	6	the_greek_s	1	1/1/2015	12:29:36 PM	12	12	S	Classic
13	7	spinach_supr_s	1	1/1/2015	12:50:37 PM	12.5	12.5	S	Supreme
14	8	spinach_supr_s	1	1/1/2015	12:51:37 PM	12.5	12.5	S	Supreme
15	9	classic_dlx_s	1	1/1/2015	12:52:01 PM	12	12	S	Classic
16	9	green_garden_s	1	1/1/2015	12:52:01 PM	12	12	S	Veggie
17	9	ital_cpcllo_l	1	1/1/2015	12:52:01 PM	20.5	20.5	L	Classic
18	9	ital_supr_l	1	1/1/2015	12:52:01 PM	20.75	20.75	L	Supreme
19	9	ital_supr_s	1	1/1/2015	12:52:01 PM	12.5	12.5	S	Supreme
20	9	mexicana_s	1	1/1/2015	12:52:01 PM	12	12	S	Veggie

2. Design and add visuals:

- Design interactive visuals within Power BI to represent key insights from the Sales data.
- Select appropriate visualizations such as bar charts, line graphs, or scatter plots to convey insights effectively.
- Incorporate elements such as color coding and labeling to enhance the clarity and understanding of the visuals.

3. Implement DAX Code to link visuals:

- Write Data Analysis Expressions (DAX) code within Power BI to create calculated columns, measures, and other data calculations.
- Use DAX functions to link visuals and perform advanced data manipulations, such as aggregations or comparisons.

Uses of DAX:

1. Data Calculations: Create calculated columns and measures to perform dynamic calculations on your data.
2. Data Analysis: Aggregate and analyze data, such as computing sums, averages, and other statistics.
3. Data Filtering: Apply filters and conditions to data for focused analysis and reporting.
4. Time Intelligence: Perform complex time-based calculations, like year-to-date, month-over-month growth, and moving averages.
5. Custom Tables: Generate custom tables for more advanced data modeling and analysis.

Following are few examples of DAX code:

```
1  Order_Hour = HOUR(Pizza Sales[order_time])
2
```

- Purpose: This DAX formula creates a calculated column called `Order_Hour` that extracts the hour part from the `order_time` column in the `Pizza_Sales` table.

- Use: This calculated column can be used in Power BI visualizations to analyze and display data based on the hour of the day when orders were placed. For example, you can create charts to see peak order times throughout the day.

```
1  Weekend_Weekday = IF(
2      WEEKDAY(Pizza_Sales[order_date], 2) >= 6,
3      "Weekend",
4      "Weekday"
5  )
6
```

- Purpose: This DAX formula creates a calculated column called `Weekend_Weekday` that categorizes each `order_date` in the `Pizza_Sales` table as either "Weekend" or "Weekday"

- Components:
  - WEEKDAY(Pizza_Sales[order_date], 2): This function returns a number representing the day of the week for the `order_date`. The second argument `2` makes Monday = 1, Tuesday = 2, ..., Sunday = 7.

  - IF(... >= 6, "Weekend", "Weekday"): The `IF` function checks if the day number is 6 (Saturday) or 7 (Sunday). If true, it assigns "Weekend"; otherwise, it assigns "Weekday".

-Use:
- This calculated column can be used in Power BI visualizations to analyze and display data based on whether the order was placed on a weekend or a weekday. For example, you can create charts to compare order volumes between weekends and weekdays.

```
1  Selected_Month_Orders =
2  IF(
3      ISFILTERED(Pizza_Sales[Month]),
4      SUM(Pizza_Sales[Line_Chart.OrderCount]),
5      CALCULATE(
6          AVERAGE(Pizza_Sales[Line_Chart.OrderCount]),
7          ALL(Pizza_Sales[Month])
8      )
9  )
10
```

- Purpose: This DAX formula creates a measure called `Selected_Month_Orders` that dynamically calculates the sum of orders for the selected month(s) or the average number of orders across all months if no month is selected.

- Components:
  - ISFILTERED(Pizza_Sales[Month]):
Checks if the `Month` column in the `Pizza_Sales` table is filtered.

  - SUM(Pizza_Sales[Line_Chart.OrderCount]):
If the `Month` column is filtered, it sums the `OrderCount` from the `Line_Chart` table.

- CALCULATE(AVERAGE(Pizza_Sales[Line_Chart.OrderCount]),ALL(Pizza_Sales[Month])):
If the `Month` column is not filtered, it calculates the average `OrderCount` from the `Line_Chart` table, considering all months by removing any filters on the `Month` column.

Use: This measure can be used in Power BI visualizations to show either the sum of orders for the currently selected month(s) or the average number of orders across all months when no specific month is selected. This allows for dynamic comparison and analysis of order patterns based on user selections.

4. Dashboard Design:

- Arrange the created visuals within Power BI to design an intuitive and user-friendly dashboard.
- Consider factors such as layout, navigation, and interactivity to optimize the user experience.
- Customize dashboard elements, such as titles, headers, and filters, to enhance visual appeal and usability.