PIZZA SALES REPORT

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ABSTRACT

This study explores various aspects of pizza sales data. We investigate key metrics including total revenue, average order value, total pizzas sold, and total orders. We delve deeper to understand customer behavior by analyzing average pizzas per order, daily and hourly order trends.

To gain insights into product preferences, the analysis explores the percentage of sales by pizza category and size. We further identify the top 5 and bottom 5 best sellers based on total pizza sold, providing a comprehensive picture of customer preferences.

CHAPTER 1

INTRODUCTION

Over the past decade, the pizza industry has boomed, fueled by evolving customer tastes, tech leaps, and new ways people dine. This report uses SQL Server 2022 to analyze 2015 sales data from a major pizza chain. With online ordering booming and exciting new toppings and crusts emerging, understanding sales trends and customer behavior is vital to stay ahead of the competition in the pizza game. By harnessing the powerful querying tools of SQL Server 2022, we'll uncover valuable insights into sales performance, who our customers are, and what pizzas they love.

Through this analysis, we seek to answer key questions such as:

- Find the Total Revenue
- Find Average Order Value
- Find Total Pizza Sold
- Find Total Orders
- Find Average Pizzas Per Order
- Daily Trend for Total Orders
- Find Hourly trend for Orders
- Find the Percentage (%) of Sales by Pizza Category
- Find the Percentage (%) of Sales by Pizza Size
- Total Pizza Sold by pizza Category
- Top 5 Best Sellers by Total Pizza Sold
- Bottom 5 Best Sellers by Total Pizza Sold

This report tackles these questions and more to deliver practical info that can guide smart business decisions, pinpoint the right customers for promotions, and ultimately give the pizza chain a stronger edge. By combining SQL queries, data visualizations, and crunching the numbers, we'll create a complete picture of the 2015 pizza sales scene and pinpoint areas for growth and improvement.

CHAPTER 2

DATA SOURCE

2.1 Pizza Sales Dataset Description:

- Pizza ID: Unique identifier for each pizza order.
- Order ID: Unique identifier for each pizza order.
- Order Date: Date and time when the order was placed.
- Order Time: Time when the order was placed.
- Pizza Name: Type of pizza ordered (e.g., Margherita, Pepperoni, etc.,).
- Pizza Size: Size of the pizza ordered (e.g., Small, Medium, Large).
- Unit Price: Total amount paid for the order.
- Total Price: Total amount paid for the order.
- Pizaa Category: Pizza Category (e.g., Veggie, Supreme, Chicken, etc.,)
- Pizaa Ingredients: What are the Ingredients are used in the pizaa.

The dataset may have been collected from the pizza chain's internal sales database.

2Data Preprocessing:

The dataset might require preprocessing steps such as handling missing values, standardizing data formats, and removing duplicate entries.

FOLLOWING STEPS ARE FOLLOWED:

Initially SSES (SQL Server Integration Services) Connected to the SSMS (SQL Server Management Studio)

STEP 1: Import the dataset into the excel

STEP 2: Change data type

STEP 3: After that save as (File name).csv

STEP 4: Connect the databases to the SQL server .

STEP 5: Import the csv file into the sql server

STEP 6: Change the data type in the dataset.

STEP 7: Click Finish

STEP 8: Start to code execute.

CHAPTER 3

REQUIREMENTS

3.1 SOFTWARE REQUIREMENTS:

-MICROSOFT SQL SERVER MANAGEMENT STUDIO

(version 20)

- SQL Server Integration Services

Microsoft SQL Server Management Studio (SSMS) is a comprehensive integrated environment for accessing, configuring, managing, and developing SQL Server databases. It provides a wide range of tools and features to facilitate database administration, development, and analysis tasks. Here's an overview of SSMS version 2022

Object Explorer: Allows users to browse, manage, and administer database objects such as tables, views, stored procedures, and functions.

Query Editor: Provides a powerful interface for writing and executing SQL queries, stored procedures, and scripts. It supports syntax highlighting, IntelliSense, and code debugging.

Database Diagrams: Enables users to visualize and design database schemas using graphical representations of tables, relationships, and constraints.

CHAPTER 4

QUERY AND RESULT

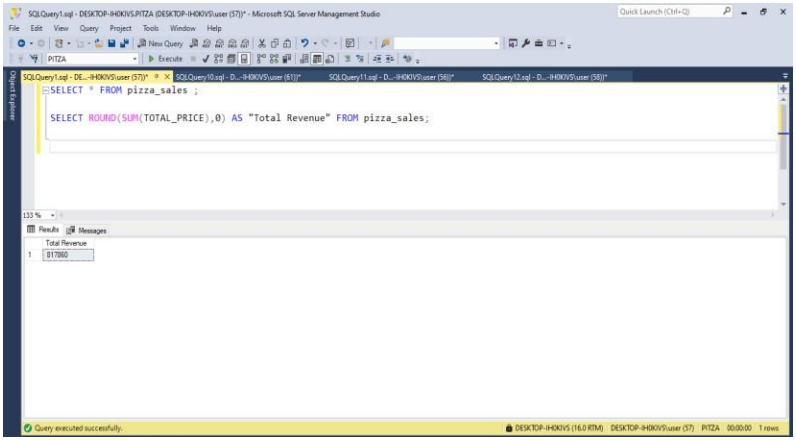
Total Revenue

Total revenue serves as a primary measure of financial performance, crucial for assessing sales trends, profitability, and making informed business decisions.

1. Find the Total Revenue
2. Find Average Order Value
3. Find Total Pizza Sold
4. Find Total Orders
5. Find Average Pizzas Per Order
6. Daily Trend for Total Orders
7. Find Hourly trend for Orders
8. Find the Percentage(%) of Sales by Pizza Category
9. Find the Percentage(%) of Sales by Pizza Size
10. Total Pizza Sold by pizza Category
11. Top 5 Best Sellers by Total Pizza Sold
12. Bottom 5 Best Sellers by Total Pizza Sold

QUERY

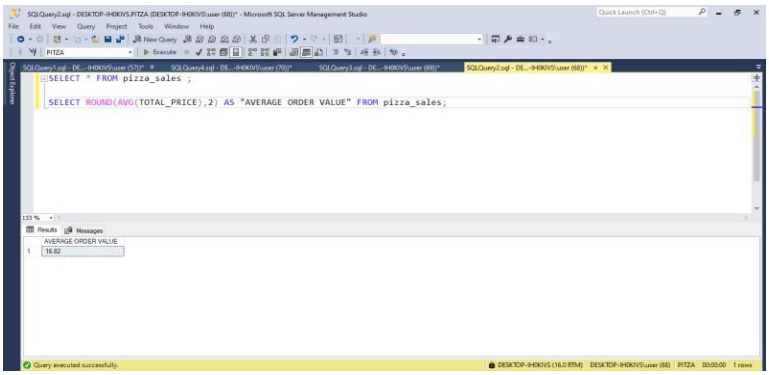
“ SELECT ROUND(SUM(TOTAL_PRICE),0) AS "Total Revenue" FROM pizza_sales;”



Average Order Value

Average order value provides insight into customer purchasing behavior and helps assess the effectiveness of upselling strategies, ultimately guiding decisions to increase revenue and profitability.

QUERY



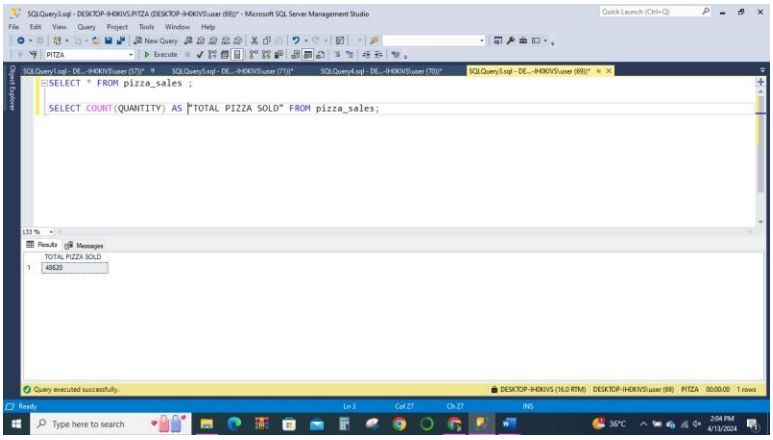
“SELECT ROUND(AVG(TOTAL_PRICE),2) AS "AVERAGE ORDER VALUE" FROM pizza_sales;”

Total Pizza Sold

Total pizzas sold is essential for evaluating demand trends, understanding product popularity, and optimizing inventory management and production planning to meet customer needs efficiently.

QUERY:

```
"SELECT COUNT(QUANTITY) AS "TOTAL PIZZA SOLD" FROM pizza_sales;"
```

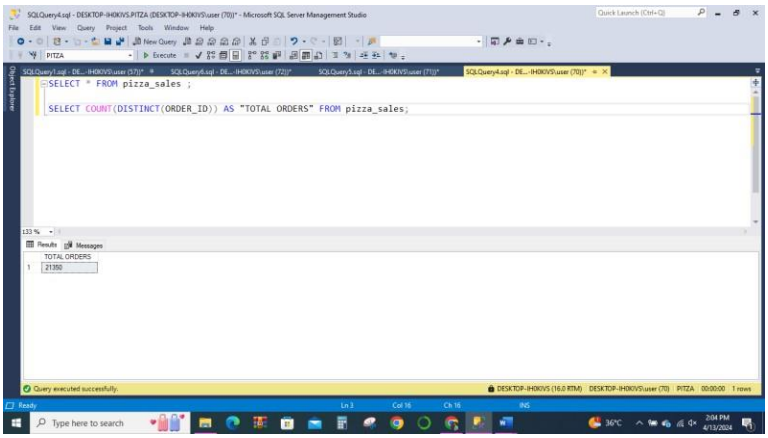


Total Orders

Finding total orders is crucial for understanding customer transaction volume, evaluating business performance, and identifying opportunities for improving operational efficiency and customer service.

QUERY:

```
"SELECT COUNT(DISTINCT(ORDER_ID)) AS "TOTAL ORDERS" FROM pizza_sales;"
```

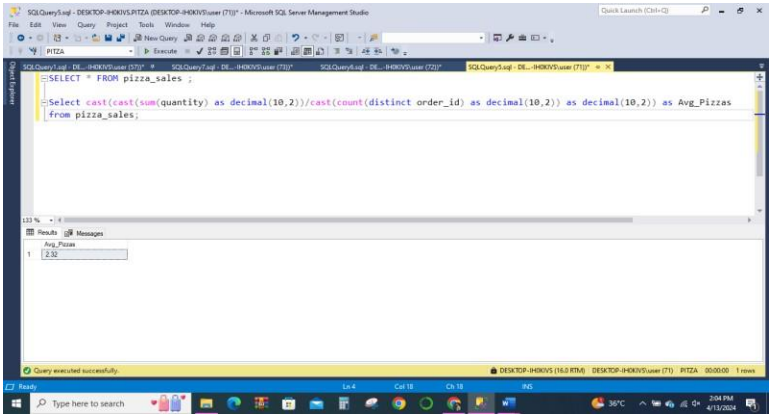

SELECT * FROM pizza_sales ;
SELECT COUNT(DISTINCT(ORDER_ID)) AS "TOTAL ORDERS" FROM pizza_sales;
TOTAL ORDERS
21350

Average Pizzas Per Order

Finding the average number of pizzas per order helps gauge customer preferences, optimize menu offerings, and tailor promotional strategies to increase order size and revenue.

QUERY:

```
"Select cast(cast(sum(quantity) as decimal(10,2))/cast(count(distinct order_id) as decimal(10,2)) as decimal(10,2)) as Avg_Pizzas from pizza_sales;"
```

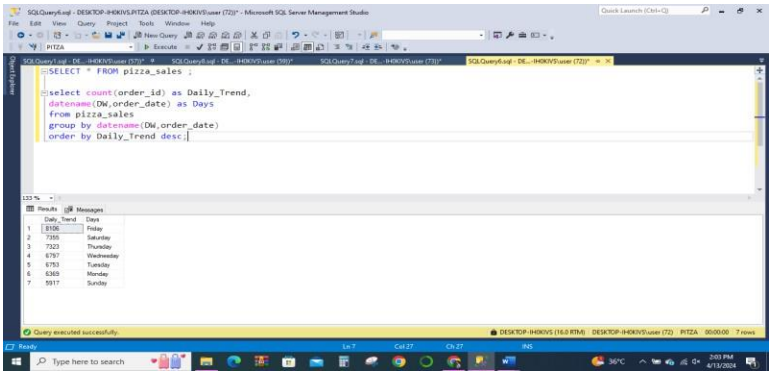


Daily Trend for Total Orders

Analyzing the daily trend for total orders per day provides insights into peak demand periods, facilitating resource allocation, staffing decisions, and operational planning to meet customer needs effectively.

QUERY:

```
"select count(order_id) as Daily_Trend,datename(DW,order_date) as Days from pizza_sales group by datename(DW,order_date) order by Daily_Trend desc;"
```

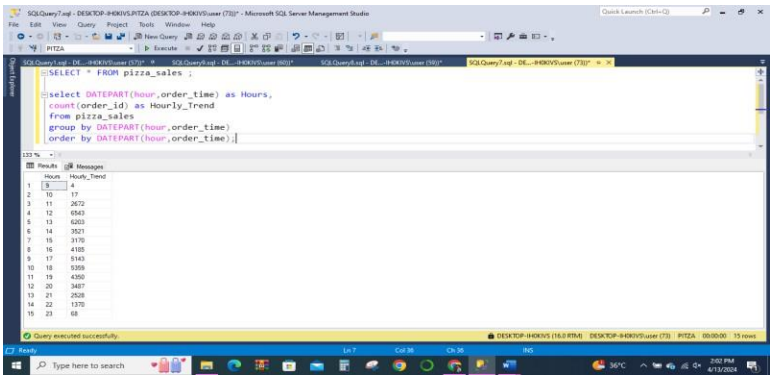


Hourly trend for Orders

Analyzing the hourly trend for orders offers insights into peak hours of customer activity, aiding in staffing optimization, delivery scheduling, and resource allocation for enhanced service efficiency.

QUERY:

```
“select DATEPART(hour,order_time) as Hours,count(order_id) as Hourly_Trend from pizza_sales group by DATEPART(hour,order_time) order by DATEPART(hour,order_time);”
```

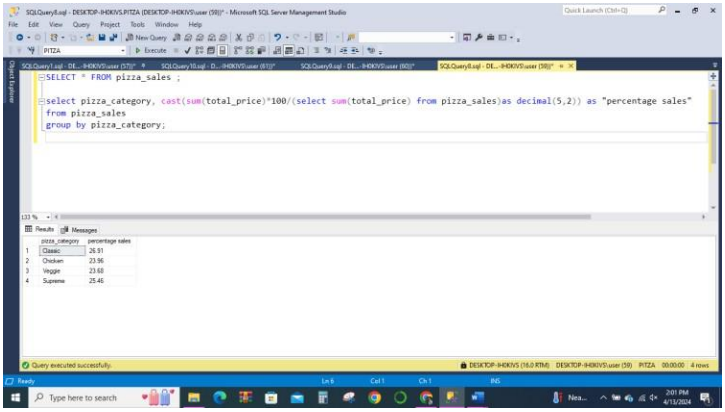


The Percentage(%) of Sales by Pizza Category

Analyzing the percentage of sales by pizza category helps identify popular menu items, guide inventory management decisions, and tailor marketing efforts to maximize revenue from high-demand pizza varieties.

QUERY:

```
“select pizza_category, cast(sum(total_price)*100/(select sum(total_price) from pizza_sales)as decimal(5,2)) as "percentage sales"
from pizza_sales group by pizza_category;”
```

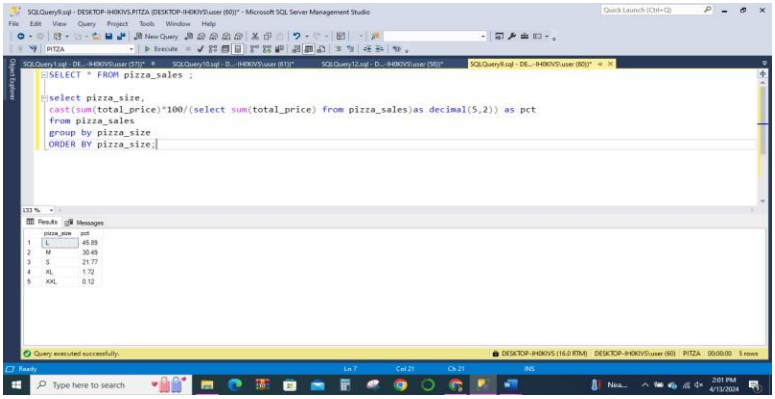

SELECT * FROM pizza_sales ;
select pizza_category, cast(sum(total_price)*100/(select sum(total_price) from pizza_sales)as decimal(5,2)) as "percentage sales"
from pizza_sales
group by pizza_category;
Results
Messages
pizza_category
percentage sales
1 Classic 26.91
2 Chicken 23.96
3 Veggie 23.68
4 Supreme 25.46
Query executed successfully.

Find the Percentage(%) of Sales by Pizza Size

Analyzing the percentage of sales by pizza size reveals customer preferences, assists in optimizing portioning and pricing strategies, and informs inventory management decisions to meet demand effectively.

QUERY:

```
“
  select pizza_size,cast(sum(total_price)*100/(select sum(total_price) from Pizza_sales
) as decimal(5,2)) as pct from pizza_sales group by pizza_size ORDER BY pizza_size;”
```

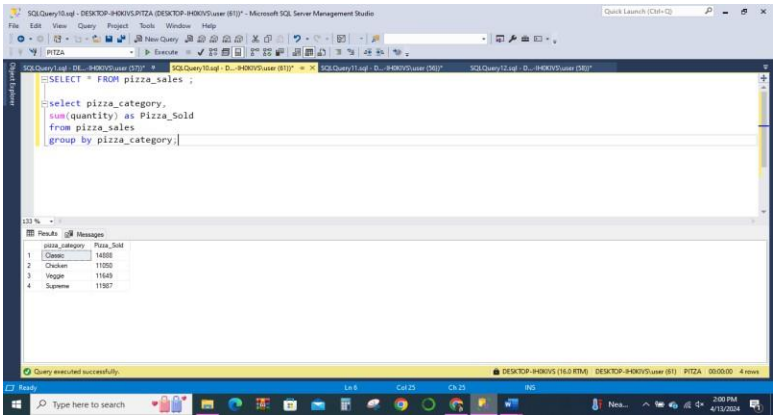


Total Pizza Sold by pizza Category

Analyzing total pizzas sold by pizza category provides insights into the popularity of different menu items, informs inventory management decisions, and helps tailor marketing strategies to capitalize on high-demand categories, ultimately optimizing sales and profitability.

QUERY:

```
“
  select pizza_category,sum(quantity) as Pizza_Sold from pizza_sales group by
pizza_category;”
```

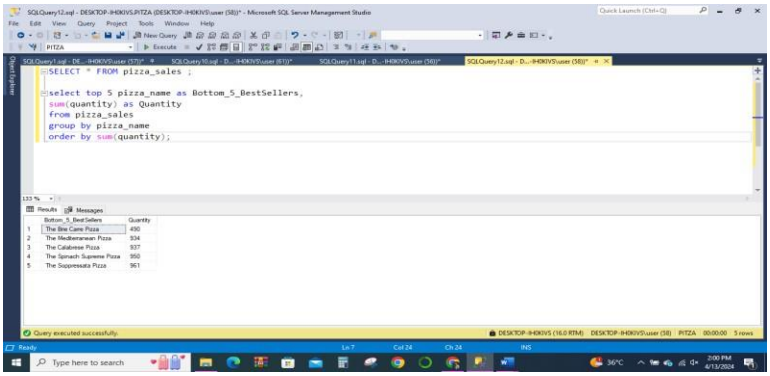


Top 5 Best Sellers by Total Pizza Sold

Identifying the top 5 best-selling pizzas by total units sold allows businesses to focus on popular menu items, optimize production planning, and strategically allocate resources to meet customer demand effectively, driving sales and customer satisfaction.

QUERY:

```
"select top 5 pizza_name as Bottom_5_BestSellers,sum(quantity) as Quantity from pizza_sales
group by pizza_name order by sum(quantity) DESC;"
```

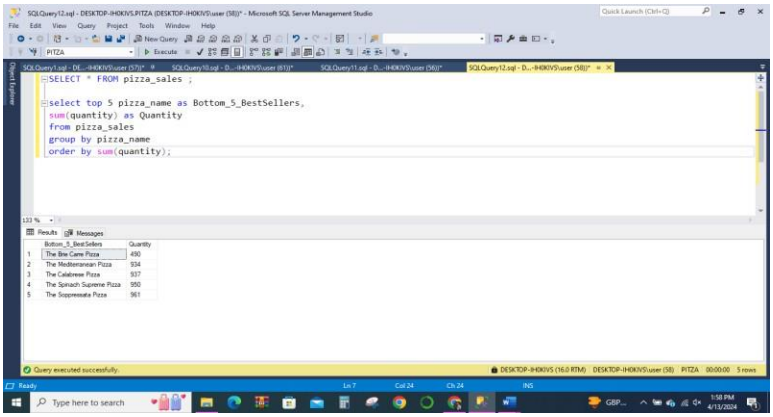


Bottom 5 Best Sellers by Total Pizza Sold

Analyzing the bottom 5 best-selling pizzas by total units sold helps businesses identify underperforming menu items, refine product offerings, and implement targeted marketing strategies to boost sales and optimize profitability by addressing low-demand items.

QUERY:

```
"select top 5 pizza_name as Bottom_5_BestSellers,sum(quantity) as Quantity from pizza_sales
group by pizza_name order by sum(quantity);"
```


SELECT * FROM pizza_sales ;
select top 5 pizza_name as Bottom_5_BestSellers,
sum(quantity) as Quantity
from pizza_sales
group by pizza_name
order by sum(quantity);
Results
Messages
Bottom_5_BestSellers
Quantity
The Brie Carre Pizza
490
The Mediterranean Pizza
934
The Calabrese Pizza
937
The Spinach Supreme Pizza
950
The Soppressata Pizza
961
Query executed successfully.

CHAPTER 5

CONCLUSION

The analysis of the 2015 annual pizza sales report using SQL Server Management Studio (SSMS) yielded comprehensive insights into various facets of the pizza chain's performance. By leveraging SSMS's querying and visualization capabilities, we uncovered critical metrics such as total revenue, average order value, and total pizza sold, providing a holistic view of sales dynamics. Furthermore, daily and hourly trends for total orders highlighted peak demand periods, facilitating efficient staffing and resource allocation.

Additionally, the analysis revealed the distribution of sales by pizza category and size, enabling the identification of popular menu items and informing inventory management decisions. The identification of top and bottom 5 best sellers by total pizza sold further guided strategic decisions regarding product offerings and marketing efforts.

Overall, SSMS proved instrumental in extracting actionable insights from the 2015 pizza sales data, empowering the pizza chain to make informed decisions aimed at enhancing sales performance, optimizing operations, and driving customer satisfaction. Through this analysis, SSMS demonstrated its value as a powerful tool for data-driven decision-making, equipping businesses with the insights needed to thrive in the competitive pizza market.