Customer Sales Analytics Project

(SQL Analysis & Power BI Dashboard)

Prepared by: Deepak Petwal

Tools Used: SQL, Power BI

Problem Statement :

This project focuses on analyzing customer data to understand customer distribution, revenue patterns, and churn behavior. SQL is used for data cleaning and analysis, and insights are visualized using Power BI.

Dataset Overview :

The dataset contains approximately 1000 customer records.

Columns included:

- CustomerID
- Gender
- Age
- Location
- SubscriptionPlan
- TotalSpent
- Churned
- SignupDate

Data Preparation :

The dataset used for this project was already clean and did not require additional data cleaning steps. The data was reviewed for consistency and correctness before performing analysis.

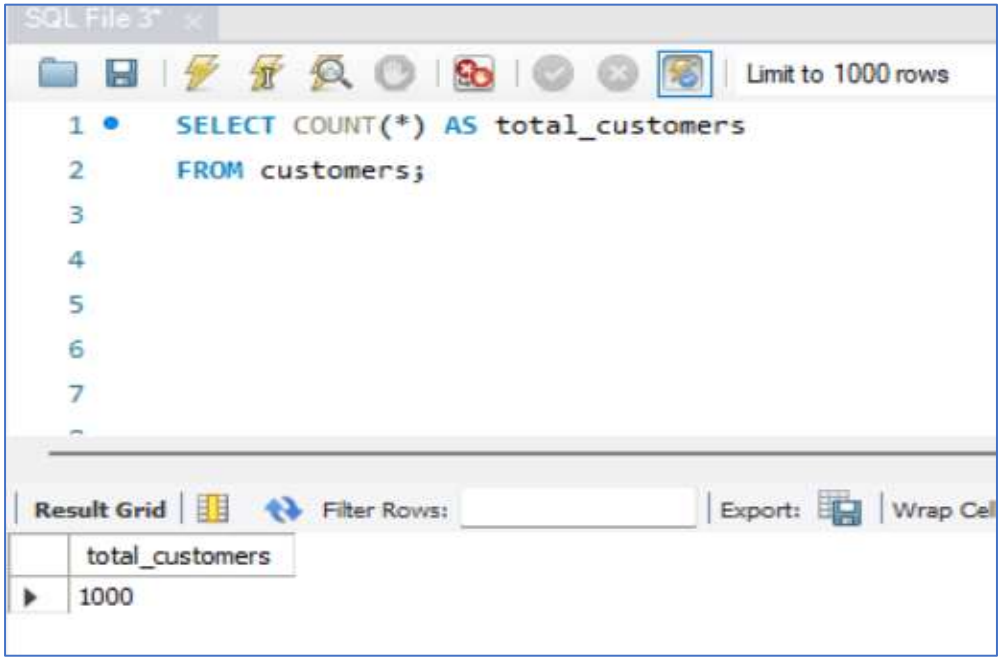
SQL Analysis :

Analysis 1: Total Customers

Objective:

Determine the total number of unique customers in the dataset**.**

SQL Query:



Insight:

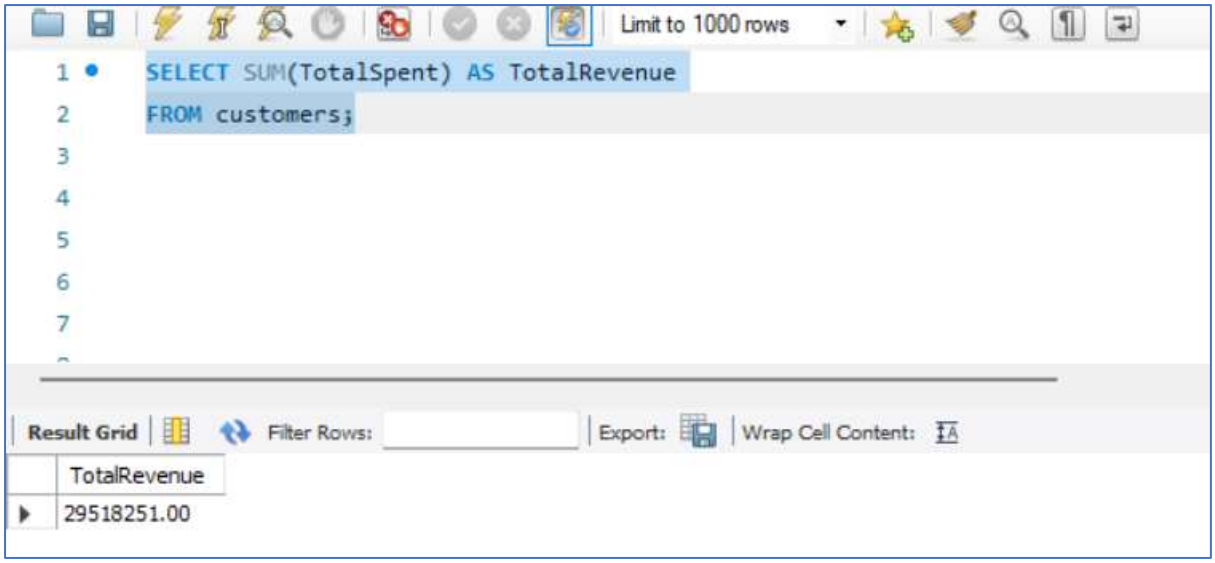
The dataset consists of 1,000 unique customers, which provides a sufficiently large and balanced base for analyzing revenue patterns, customer distribution, and churn behavior.

Analysis 2: Total Revenue

Objective:

Calculate the total revenue generated from all customers.

SQL Query:



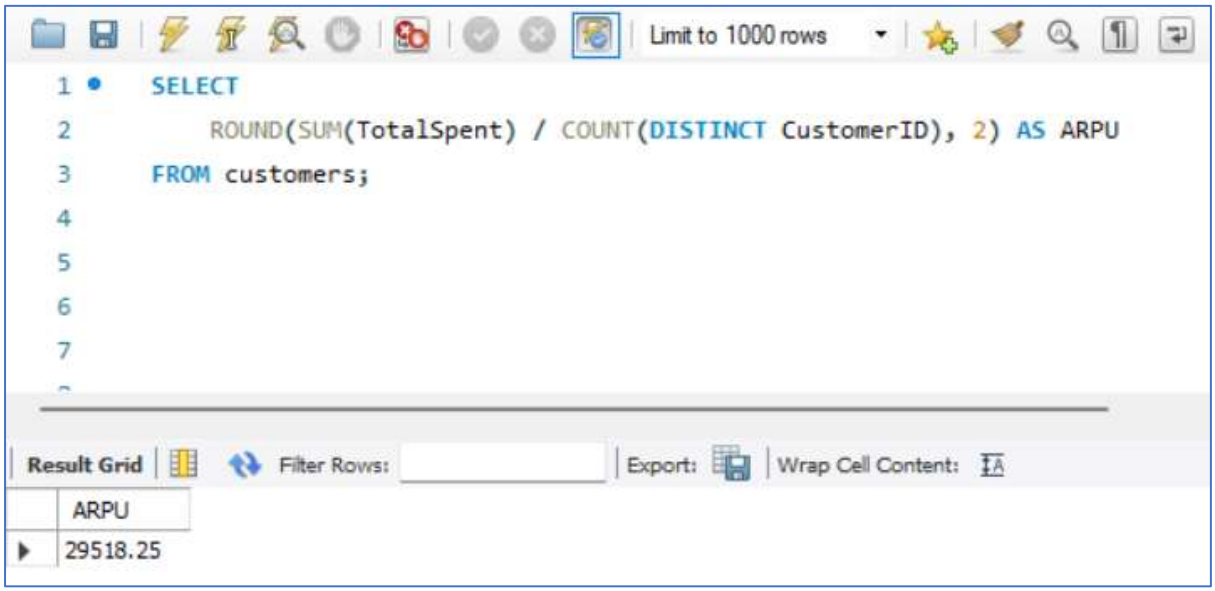
Insights : The total revenue generated from the customer base is 29,518,251, indicating a strong overall business value derived from 1,000 customers. This figure serves as a key financial benchmark for evaluating revenue contribution across different subscription plans, locations, and churn segments.

Analysis 3 : Average Revenue Per User (ARPU)

Objective:

Calculate the average revenue generated per customer.

SQL Query:



Insight:

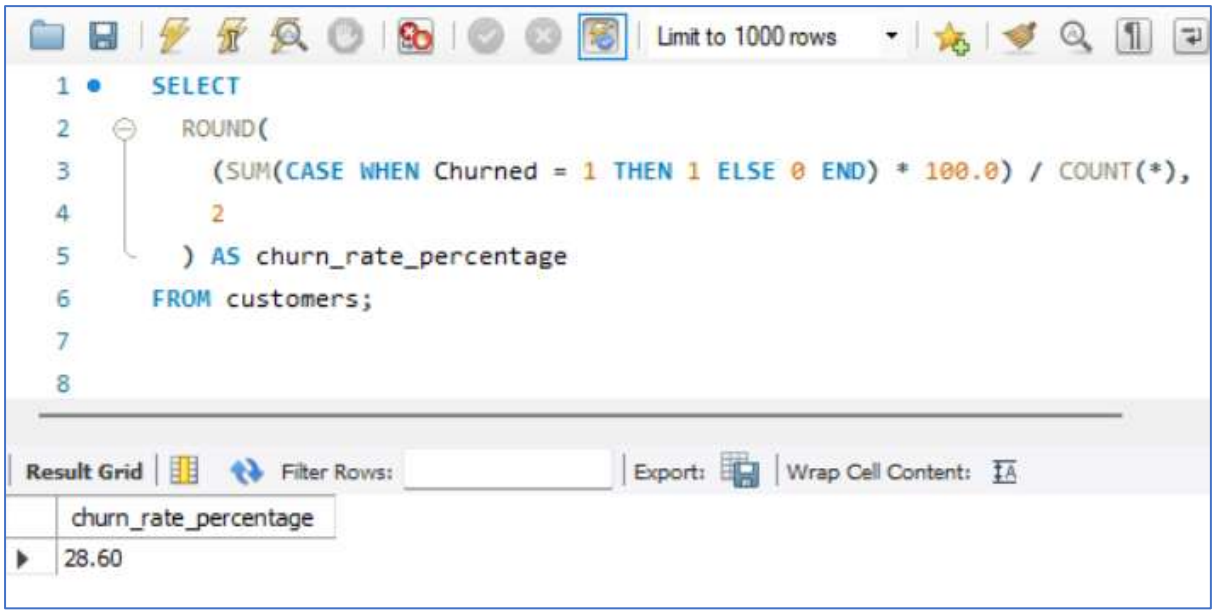
The Average Revenue Per User (ARPU) is 29,518, indicating that each customer contributes approximately this amount to the total revenue on average. This reflects the overall value of the customer base and helps assess revenue efficiency beyond just customer count.

Analysis 4: Churn Rate

Objective:

Calculate the percentage of customers who have churned to understand customer retention performance.

SQL Query:



Insight:

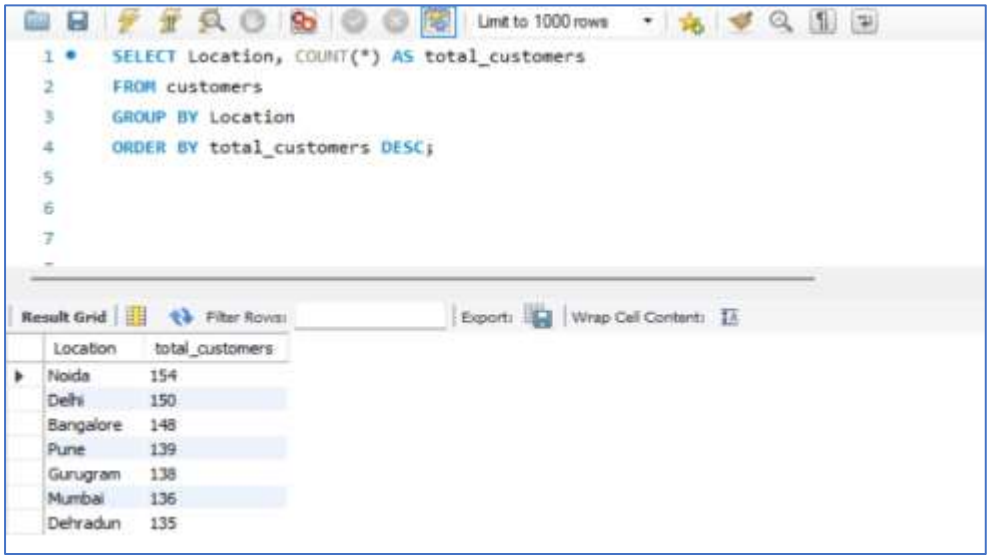
The churn rate of 28.60% indicates that more than a quarter of the customer base has stopped using the service. This level of churn suggests noticeable retention challenges and highlights the need for targeted customer engagement and retention strategies to reduce customer loss**.**

Analysis 5: Customer Distribution by Location

Objective:

Analyze the distribution of customers across different locations to identify regions with higher customer concentration.

SQL Query:



```
SELECT Location, COUNT(*) AS total_customers
FROM customers
GROUP BY Location
ORDER BY total_customers DESC;
```

Location	total_customers
Noida	154
Delhi	150
Bangalore	148
Pune	139
Gurugram	138
Mumbai	136
Dehradun	135

Insight:

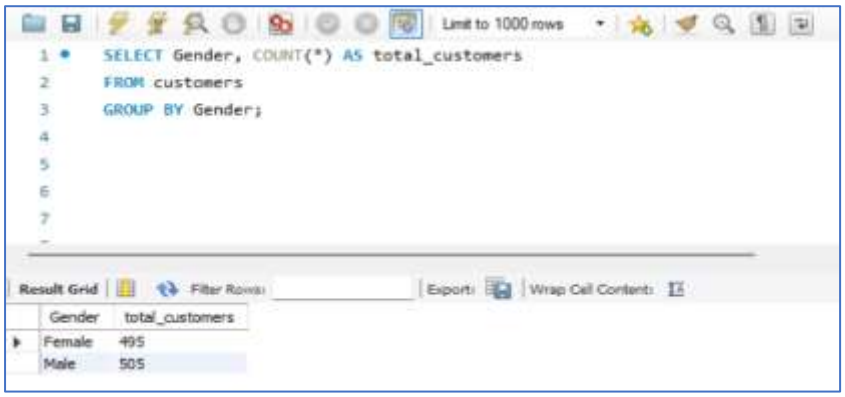
Customer distribution is relatively balanced across major cities, with Noida (154) having the highest number of customers, followed closely by Delhi (150) and Bangalore (148). Cities such as Pune (139), Gurugram (138), Mumbai (136), and Dehradun (135) also show comparable customer presence. This indicates a diversified geographic spread rather than dependency on a single location, reducing regional risk and offering opportunities for location-specific strategies.

Analysis 6: Customer Distribution by Gender

Objective:

Analyze the distribution of customers by gender to understand demographic composition.

SQL Query:



```
SELECT Gender, COUNT(*) AS total_customers
FROM customers
GROUP BY Gender;
```

Gender	total_customers
Female	495
Male	505

Insight:

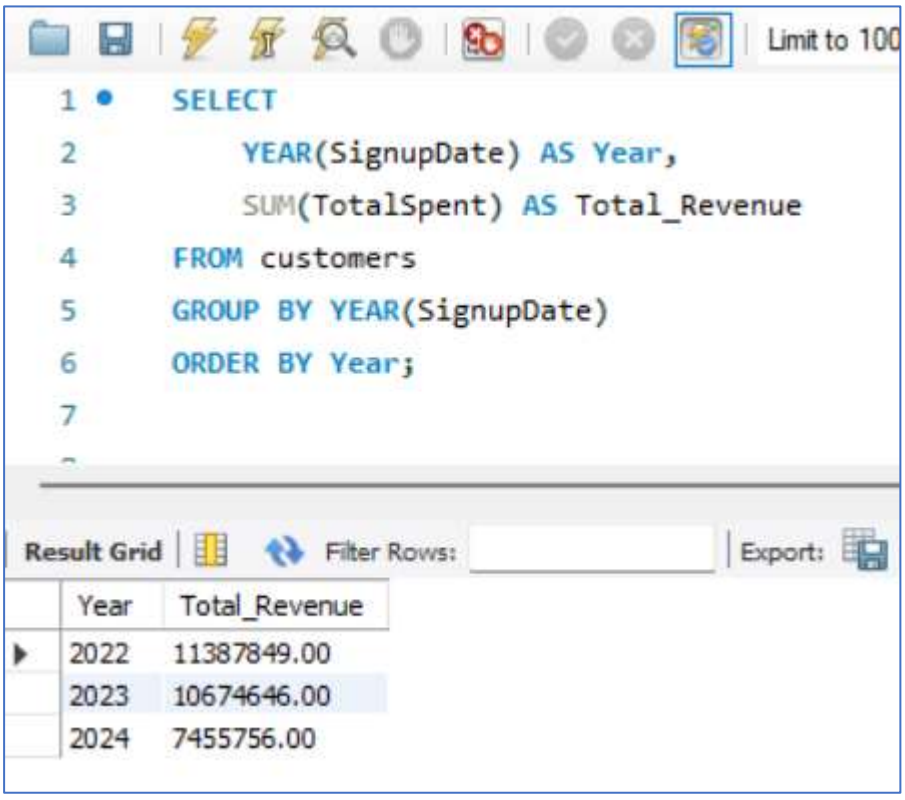
The customer base is almost evenly split by gender, with 505 male customers and 495 female customers. This near-equal distribution indicates balanced engagement across genders, suggesting that the product or service appeals broadly without a strong gender bias.

Analysis: Year-wise Revenue Trend

Objective:

Analyze how total revenue has changed over different years to understand overall business performance trends over time.

SQL Query:



Insight:

Year-wise revenue shows a declining trend over time, with revenue decreasing from 11,387,849 in 2022 to 10,674,646 in 2023, and further dropping to 7,455,756 in 2024. This consistent decline indicates a slowdown in revenue generation, which may be linked to increased customer churn, reduced customer spending, or lower customer acquisition in recent years. The trend highlights the

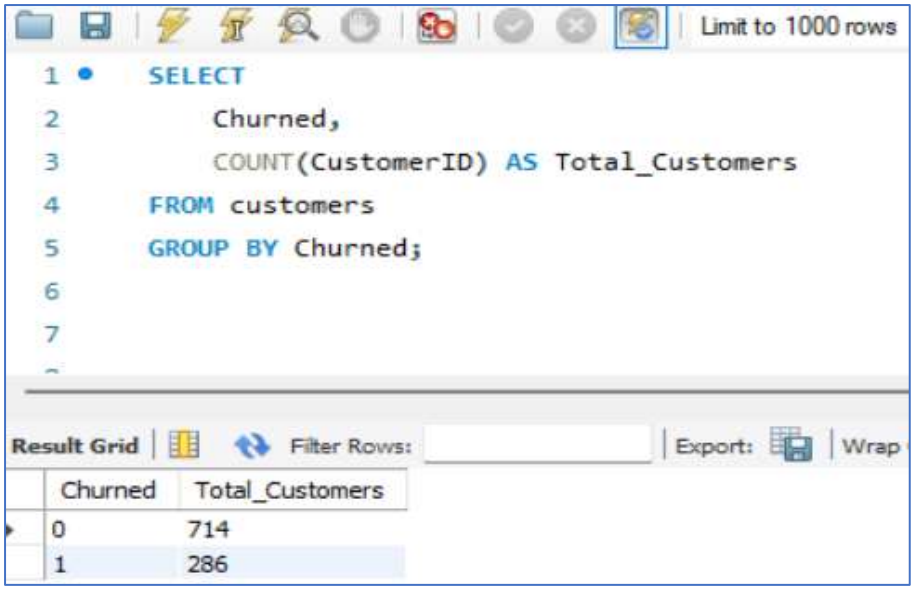
need to focus on retention strategies and revenue growth initiatives to stabilize and improve future performance

Analysis 7 : Customer Churn Distribution

Objective:

Determine the number of active and churned customers to understand customer retention levels.

SQL Query:



Insight:

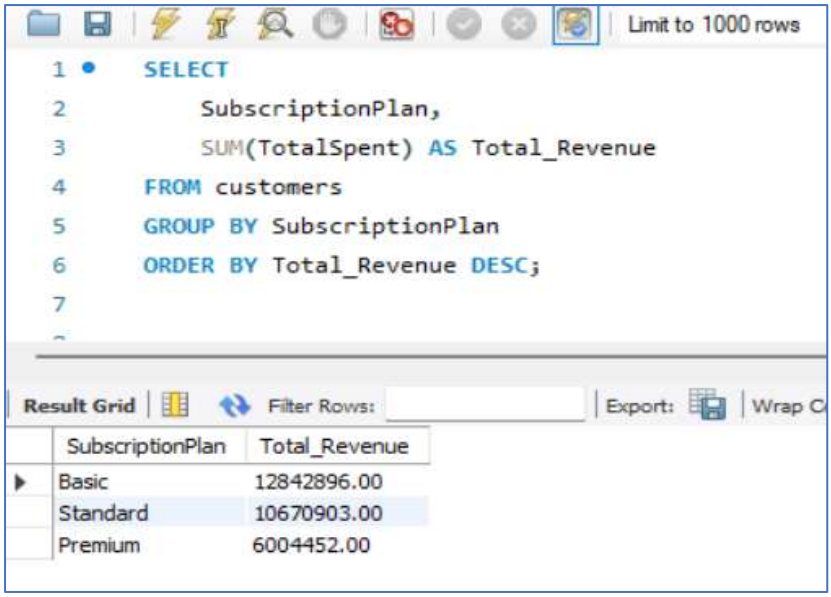
Out of 1,000 customers, 714 customers remain active (Churned = 0) while 286 customers have churned (Churned = 1). This confirms the churn rate of 28.6%, indicating that although a majority of customers are retained, a significant portion of the customer base is being lost and requires focused retention efforts.

Analysis 8 : Revenue by Subscription Plan

Objective:

Analyze how total revenue is distributed across different subscription plans to identify high-performing plans.

SQL Query:



Insight:

Revenue is primarily driven by the Basic plan (12,842,894), followed by the Standard plan (10,670,903), while the Premium plan (6,004,452) contributes comparatively less. This indicates that lower- and mid-tier plans have higher customer adoption and collectively generate the majority of revenue, whereas the Premium plan has a smaller but potentially high-value customer segment that could be expanded through targeted offerings or pricing strategies.

Final Insights Summary

- Customer Base**:**
  The analysis is based on a dataset of 1,000 customers, providing a stable foundation for evaluating customer behavior, revenue performance, and churn patterns.

- **Revenue Performance:**
  The total revenue generated is 29,518,251, with an Average Revenue Per User (ARPU) of 29,518, indicating that each customer contributes a significant average value to the business.

- **Subscription Plan Contribution:**
  Revenue is largely driven by the Basic plan (12,842,894) and Standard plan (10,670,903), which together contribute the majority of total revenue. The Premium plan (6,004,452) has a lower contribution, suggesting potential opportunities for upselling or targeted premium offerings.

- **Customer Retention:**
  Out of 1,000 customers, 714 are active while 286 have churned, resulting in a churn rate of 28.6%. This indicates noticeable retention challenges and highlights the importance of improving customer engagement and loyalty strategies.

- **Geographic Distribution:**
  Customers are evenly distributed across multiple cities, with Noida (154), Delhi (150), and Bangalore (148) having the highest counts. This balanced geographic spread reduces dependency on a single region and supports region-specific marketing strategies.

- **Demographic Distribution:**
  The customer base shows a nearly equal gender split, with 505 male and 495 female customers, indicating broad and gender-neutral product appeal.

Power BI Dashboard :-

The insights obtained from SQL analysis were visualized using Power BI to create an interactive customer analytics dashboard. The dashboard uses KPI cards to display key metrics such as total customers, total revenue, ARPU, and churn rate.

Charts are used to represent revenue distribution by subscription plan, customer distribution by location and gender, and churn status. These visuals help present complex analytical results in a simple and easy-to-understand format.

Overall, the dashboard enables quick interpretation of customer behavior and revenue patterns, supporting data-driven business decision-making.