SQL Project: Adidas Sales Data Analysis

This project showcases my SQL skills through an analysis of Adidas sales data. The dataset includes sales transactions, product details, retailers, and regional performance. The goal is to extract valuable insights and trends that can help drive business decisions related to product performance, regional sales, and customer behaviour.

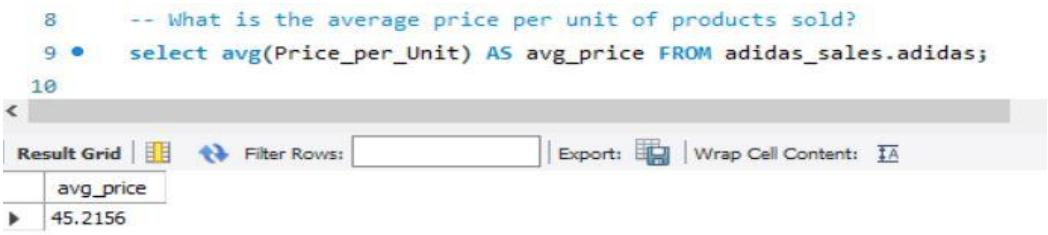
Project Objectives

- Perform detailed analysis of Adidas sales data using SQL.
- Identify key metrics such as total sales, average price per unit, and sales trends over time.
- Extract actionable insights to help optimize product offerings, improve sales strategies, and understand customer behaviour.

Key Analysis Queries

1. Average Price per Unit of Products Sold

Ans: - select avg (Price_per_Unit) AS avg_price from adidas_sales.adidas;



2. Total Units Sold

Ans: - select sum(Units_Sold) as Unit_Sold from adidas_sales.adidas;

3. Total Sales Amount for the Dataset

Ans: - select round(sum(Total_Sales),2) as Total_sales_amount from adidas_sales.adidas;

```
16      -- What is the total sales amount for the dataset?
17 •    select round(sum(Total_Sales),2) as Total_sales_amount from adidas_sales.adidas;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Total_sales_amount
89919212.5

4. Number of Unique Retailers

Ans: - select count(distinct(Retailer)) as unique_retail from adidas_sales.adidas;

```
20      -- How many unique retailers are there?
21 •    select count(distinct(Retailer)) as unique_retail from adidas_sales.adidas;
22
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

unique_retail
6

5. Monthly Sales Transactions Count

Ans: - select Month, count(Total_Sales) as transaction_count from adidas_sales.adidas group by Month;

```
23      -- How many sales transactions occurred in each month?
24 •    select Month, count(Total_Sales) as transaction_count from adidas_sales.adidas group by Month;
25
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Month	transaction_count
Jan	860
Feb	776
Mar	802
Apr	841
May	820
Jun	729
Jul	773
Aug	853
Sep	824
Oct	814
Nov	795
Dec	759

6. Top 5 Products by Sales

Ans: - select Product,round(sum(Total_Sales),2) as sales from adidas_sales.adidas group by Product order by sales DESC LIMIT 5;

```
26      -- Top 5 Products by Sales:
27 •    select Product,round(sum(Total_Sales),2) as sales from adidas_sales.adidas group by Product order by sales DESC LIMIT 5;
28
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

Product	sales
Men's Street Footwear	20882624.4
Women's Apparel	17903886
Men's Athletic Footwear	15367368
Women's Street Footwear	12800281.3
Men's Apparel	12247863.2

7. Monthly Sales Trends

Ans: - select Month, Round(sum(Total_Sales),2) as Sales from adidas_sales.adidas group by Month ;

```
29    -- Monthly Sales Trends:
30    select Month, Round(sum(Total_Sales),2) as Sales from adidas_sales.adidas group by Month ;
31
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Month	Sales
Jan	7096914.2
Feb	6110015.3
Mar	5680910.9
Apr	7233997
May	8050769.5
Jun	7474737.2
Jul	9528069.4
Aug	9216620.1
Sep	7766145.9
Oct	6391103.3
Nov	6785734
Dec	8584195.7

8. Sales by Region

Ans: - select Region , Round(sum(Total_Sales),0) as Sales from adidas_sales.adidas group by Region;

```
32    -- Sales by Region:
33    select Region,Round(sum(Total_Sales),0) as Sales from adidas_sales.adidas group by Region;
34
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Region	Sales
Northeast	18581407
West	26902568
Southeast	16317124
South	14387693
NA	170375
Midwest	13560046

9. Sales Growth Over Time (Yearly)

Ans: - select Year ,sum(Total_Sales) as Sale from adidas_sales.adidas group by Year;

```
35    -- Sales Growth Over Time:
36    select Year ,sum(Total_Sales) as Sale from adidas_sales.adidas group by Year;
37
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Year	Sale
2020	18137067.5
2021	71782144.99999999

10. Top 3 Products by Sales for Each Region in 2021

Ans: -

```sql
-- Calculate the monthly sales for each product in each region and find the top 3 products by sales amount for each region for the year 2021.
WITH Monthly_Sales AS (
  SELECT Month, Product, Region, SUM(Total_Sales) AS Sales
  FROM adidas_sales.adidas
  WHERE Year = 2021
  GROUP BY Month, Product, Region
),
Ranked_Sales AS (
  SELECT Month, Product, Region, Sales,
        RANK() OVER (PARTITION BY Month, Region ORDER BY Sales DESC) AS Sales_Rank
  FROM Monthly_Sales
)
SELECT Month, Product, Region, Sales
FROM Ranked_Sales
WHERE Sales_Rank <= 3
ORDER BY Month, Region, Sales_Rank;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Month	Product	Region	Sales
Apr	Men's Street Footwear	Midwest	145775.7
Apr	Women's Apparel	Midwest	121985.19999999998
Apr	Men's Apparel	Midwest	89412.29999999999
Apr	Men's Street Footwear	Northeast	217881.50000000003
Apr	Women's Apparel	Northeast	134442.19999999998
Apr	Men's Athletic Footwear	Northeast	95020.70000000001
Apr	Women's Apparel	South	242939
Apr	Men's Street Footwear	South	225383.6

11. Total Sales by Region and Product for Q1 2021

Ans: - select Region,Product ,round(sum(Total_Sales),0) as Sales from adidas_sales.adidas where Invoice_Date between '01-01-2021' and '31-03-2021' group by Region, Product;

```sql
-- Find the total sales for each region and product category for the first quarter of 2021.
select Region,Product ,round(sum(Total_Sales),0) as Sales from adidas_sales.adidas where Invoice_Date between '01-01-2021' and '31-03-2021'
group by Region, Product;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Region	Product	Sales
Northeast	Men's Athletic Footwear	2881261
Northeast	Men's Street Footwear	5039618
Northeast	Women's Street Footwear	2334117
Northeast	Women's Athletic Footwear	1977516
Northeast	Men's Apparel	2449575
Northeast	Women's Apparel	3732679
West	Men's Apparel	3533650
West	Women's Apparel	5137530
West	Men's Street Footwear	5360946
West	Men's Athletic Footwear	5000634
West	Women's Street Footwear	4252011
West	Women's Athletic Footwear	3451707
Northeast	Men's aparel	54000
Southeast	Men's Street Footwear	3601924
Southeast	Men's Athletic Footwear	2777702
Southeast	Women's Street Footwear	2311953

Result 34

12. Customers Who Purchased Both Online and In-store in 2021

Ans:- select distinct Retailer_ID,Sales_Method from adidas_sales.adidas where Year=2021 and Sales_Method in ('Online' ,'In-store') ;

```
60      -- Identify customers who made purchases in both online and retail channels in 2021.
61 •    select distinct Retailer_ID,Sales_Method from adidas_sales.adidas where Year=2021 and Sales_Method in ('Online' ,'In-store') ;
62
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Retailer_ID	Sales_Method
1128299	Online
1189833	Online
1185732	In-store
1185732	Online
1197831	Online
1128299	In-store

13. Average Sales per Transaction by Month in 2021

Ans:- create view max as select Month ,round(avg (Total_Sales),0) as Sales from adidas_sales.adidas where year=2021 group by Month;

select Month ,round(avg (Total_Sales),0) as avg_Sales,max(Total_Sales) as max_Sales from adidas_sales.adidas where year=2021 group by Month;

```
63      -- Calculate the average sales amount per transaction for each month in 2021.
64 •    create view max as select Month ,round(avg (Total_Sales),0) as Sales from adidas_sales.adidas where year=2021 group by Month;
65
66 •    select Month ,round(avg (Total_Sales),0) as avg_Sales,max(Total_Sales) as max_Sales from adidas_sales.adidas where year=2021 group by Month;
67
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Month	avg_Sales	max_Sales
Jan	7767	70000
Feb	6964	58500
Mar	5834	39150
Apr	6713	52000
May	8771	52250
Jun	9853	82500
Jul	11692	81000
Aug	10124	80750
Sep	8153	56375
Oct	7290	54250
Nov	8585	61875
Dec	11666	75250

14. Top 2 Customers by Total Sales Amount in 2021

Ans: - select Retailer_ID,round(sum(Total_Sales),0) as Sales from adidas_sales.adidas where year=2021 group by Retailer_ID order by Sales desc limit 2 ;

```
69      -- Find the top 2 customers by total sales amount in 2021.
70 •    select Retailer_ID,round(sum(Total_Sales),0) as Sales from adidas_sales.adidas where year=2021 group by Retailer_ID order by Sales desc limit 2
71
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

Retailer_ID	Sales
1185732	37369058
1128299	19258079

15. Total Number of Transactions and Sales by Product in 2021

Ans: - select count(*) as total_transaction ,Product, sum(Total_Sales) as Sales from adidas_sales.adidas where year=2021 group by Product;

```
72    -- Calculate the total number of sales transactions and the total sales amount for each product in 2021.
73 •  select count(*) as total_transaction ,Product, sum(Total_Sales) as Sales from adidas_sales.adidas where year=2021 group by Product;
74
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total_transaction	Product	Sales
1394	Men's Athletic Footwear	12187921.799999997
1390	Men's Apparel	9751166.8
1392	Women's Street Footwear	10057680.799999993
1389	Women's Apparel	14384852.80000001
1390	Women's Athletic Footwear	8300200.399999996
1391	Men's Street Footwear	17100322.399999995

16. Month with the Highest Sales in 2021

Ans: - select Month,sum(Total_Sales) as Sales from adidas_sales.adidas where year=2021 group by Month order by Sales desc limit 1;

```
75    -- Identify the month with the highest sales amount in 2021.
76 •  select Month,sum(Total_Sales) as Sales from adidas_sales.adidas where year=2021 group by Month order by Sales desc limit 1;
77
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

Month	Sales
Jul	7833468.099999996

Project Highlights

- **Comprehensive Sales Analysis**: By utilizing SQL, I explored key sales metrics and trends over time, identifying top-performing products, regions, and retailers.
- **Actionable Insights**: The analysis provided insights into monthly sales trends, return rates, and regional performance, helping to inform business strategies.
- **Advanced SQL Techniques**: I applied **window functions**, **aggregations**, and **common table expressions (CTEs)** to answer complex business questions, such as identifying top-selling products and analyzing customer behaviour across different sales channels.

Tools Used

- **SQL**: For querying the sales data and generating insights.
- **MySQL**: As the database system for managing and analyzing the dataset.

Conclusion

This project demonstrates my ability to work with real-world sales data, leveraging SQL to extract valuable insights and create meaningful reports that can be used to improve business strategies. It also highlights my proficiency in writing efficient and optimized SQL queries to solve various business problems.