Project Title: Daily POS (Point of Sale) Sales Summary for Retail ERP

Project Scope:
This project simulates a **retail ERP environment** for large-format stores like **D-Mart, Big Bazaar, and DIY outlets**, focusing on the **Sales & Store Operations module**.
It involves:

1. **Database Design**
   - Creation of **Stores**, **Products**, and **Sales** tables.
   - Structuring data similar to ERP transaction logs.
2. **Artificial Data Generation**
   - 2 days of transactions for 3 stores.
   - Multiple products across Groceries, Electronics, Clothing, Household, and DIY Tools categories.
   - Randomized sales volume to mimic real-world variations.
3. **SQL Query Development**
   - Aggregating transactional POS data to produce **daily sales reports.**
   - Calculating:
     - Total sales value
     - Bill count (number of unique transactions)
     - Average bill value per store per day
4. **ERP Context**
   - This report would typically be used by **Store Managers, Regional Managers, and Finance Teams** in ERP systems to monitor performance and plan inventory replenishment.

Expected Result:

A **Daily Sales Summary Table** showing:

store_name	sale_date	bill_count	total_sales	avg_bill_value
Dmart Pune	2025-08-10	5	3,250.00	650.00
BigBazaar Mumbai	2025-08-10	4	2,720.00	680.00
DIY Hub Delhi	2025-08-10	6	4,500.00	750.00
...	...	...	...	...

Insights Derived:

- **Bill Count** shows customer traffic trends.
- **Total Sales** helps assess store performance daily.
- **Average Bill Value** indicates buying behaviour, Where higher values suggest more premium purchases.

Bills with One row receipt

Navigator

SCHEMAS

Filter objects

- ▶ batch
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  - Functions
- ▶ shop
- ▶ zomato

Administration   Schemas

Information

Schema: **dailyposales**

DPOS ×

Don't Limit

```
143        GROUP BY p.ProductName
144        ORDER BY TotalSold DESC;
145
146        -- Queries for deeper analysis--
147
148        -- Bills = one row per receipt
149 ●  SELECT
150            StoreID,
151            OrderDate,
152            COUNT(*) AS bill_count,
153            SUM(bill_value) AS total_sales,
154            ROUND(AVG(bill_value), 2) AS avg_bill_value
155    FROM (
156            SELECT
157                o.StoreID,
```

Result Grid   Filter Rows: Export: Wrap Cell Content:

StoreID	OrderDate	bill_count	total_sales	avg_bill_value
1	2025-08-10	1	1400.00	1400.00
2	2025-08-11	1	50000.00	50000.00

MySQL Workbench

unconnected ×   Local instance MySQL80 ×

File   Edit   View   Query   Database   Server   Tools   Scripting   Help

DPOS ×

Don't Limit

```
134 ●   SELECT p.ProductName, i.QuantityInStock
135     FROM Inventory i
136     JOIN Products p ON i.ProductID = p.ProductID
137     WHERE i.QuantityInStock < p.ReorderLevel;
138
139     -- 3. Best Selling Products
140 ●   SELECT p.ProductName, SUM(od.Quantity) AS TotalSold
141     FROM OrderDetails od
142     JOIN Products p ON od.ProductID = p.ProductID
143     GROUP BY p.ProductName
144     ORDER BY TotalSold DESC;
145
146     -- Queries for deeper analysis--
147
148     -- Bills = one row per receipt
```

Navigator

SCHEMAS

Filter objects

▶ ⊟ batch
▼ ⊟ dailyposales
    ⊡ Tables
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    ⊡ Stored Procedures
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▶ ⊟ zomato

Administration   Schemas

Information

Schema: dailyposales

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

	ProductName	TotalSold
▶	Rice 5kg Bag	4
	LED TV 42 inch	2

Result 3 ×   ⓘ Read Only

Output

Action Output

#	Time	Action	Message
✓ 15	23:29:13	INSERT INTO OrderDetails (OrderID, ProductID, Quantity, UnitPrice) VALUES (1, 1, 2, 350.00), (2, 2, 1,...	2 row(s) affected Records: 2 Duplicates: 0 Warnings: 0
✓ 16	23:29:18	SELECT s.StoreName, SUM(o.TotalAmount) AS TotalSales FROM Orders o JOIN Stores s ON o.StoreI...	2 row(s) returned
✓ 17	23:30:31	SELECT p.ProductName, i.QuantityInStock FROM Inventory i JOIN Products p ON i.ProductID = p.Prod...	0 row(s) returned
✓ 18	23:30:44	SELECT p.ProductName. SUM(od.Quantity) AS TotalSold FROM OrderDetails od JOIN Products p ON ...	2 row(s) returned

MySQL Workbench — DPOS query tab

```
204        ORDER BY o.OrderDate;
205
206        /* Store-wise Average Bill Value*/
207 •      SELECT
208            s.StoreName,
209            ROUND(SUM(o.TotalAmount) / COUNT(DISTINCT o.OrderID), 2) AS Avg_Bill_Value
210        FROM Orders o
211        JOIN Stores s ON o.StoreID = s.StoreID
212        GROUP BY s.StoreName
213        ORDER BY Avg_Bill_Value DESC;
214
215        /* Bill Count + Total Sales + Avg Bill Value in one query) */
216 •      SELECT
217            s.StoreName,
218            o.OrderDate,
```

Schema: dailyposales

StoreName	OrderDate	Bill_Count	Total_Sales	Avg_Bill_Value
Dmart Pune	2025-08-10	2	1400.00	700.00
BigBazaar Mumbai	2025-08-11	2	50000.00	25000.00

MySQL Workbench


```
167    GROUP BY StoreID, OrderDate
168    ORDER BY OrderDate, StoreID;
169
170
171    /* Store-wise Bill Count */
172  • SELECT
173        s.StoreName,
174        o.OrderDate,
175        COUNT(DISTINCT o.OrderID) AS Bill_Count
176    FROM Orders o
177    JOIN Stores s ON o.StoreID = s.StoreID
178    GROUP BY s.StoreName, o.OrderDate
179    ORDER BY o.OrderDate, s.StoreName;
180
181    /* Total Sales Store performance */
```

StoreName	OrderDate	Bill_Count
Dmart Pune	2025-08-10	2
BigBazaar Mumbai	2025-08-11	2

Schema: dailyposales