PAYTM MALL EPURCHASE DATA ANALYSIS

In our project, we learned how to use SQL to manage data in databases. We mastered about 17 different types of queries, which helped us find specific information, perform calculations, and organize data neatly.

We saw how SQL can be used for simple tasks like finding a name in a list, as well as for more complex tasks like analyzing large amounts of data. This project showed us how important it is to know SQL in today's world, where efficiently handling lots of data is crucial for businesses.

Now, we're applying our SQL skills to analyze Paytm e-purchase data, helping us uncover valuable insights to drive informed decision-making.

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1. What does the "Category_Grouped" column represent, and how many unique categories are there?

Each entry in this column indicates the category to which the purchased product belongs.

```
13 •    select distinct category_grouped
14      from paytm
15      where category_grouped <> "";
```

category_grouped
Others
Apparels
Shoes
Home

2. List the top 5 shipping cities in terms of the number of orders.

```
12 •    select shipping_city,count(*) as no_of_orders
13      from paytm
14      group by shipping_city
15      order by 2 desc;
16
17
```

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

shipping_city	no_of_orders
New Delhi	4560
Chennai	4254
Bangalore	3974
Mumbai	3159
Hyderabad	2849

Result 35

3. Show me a table with all the data for products that belong to the "Watches" category.

```
14 •    select * from paytm
15      where category ='WATCHES';
16
17
```

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

S.no	Name	Shipping_city	Category_Grouped	Category	Sub_category	Product_Gender	Segment	Class	Family	Brand	Brick	Item_NM
20	prabhakar reddy	Jhansi		WATCHES	WATCHES	MEN	WOMENS ACCESSORIES	WATCHES	NULL	PLAYBOY	ANALOG WATCH	Bpb-1004-C Silver/Bla
47	rohit gupta	Jaipur	Others	WATCHES	WATCHES	MEN	MENS ACCESSORIES	WATCHES	NULL	GIORDANO	CHRONOGRAPH WATCHES	Giordano Black Chrono
48	DHINAKARAN JAME	Chennai	Others	WATCHES	WATCHES	MEN	MEN	WATCHES	NULL	TOMMY HILFIGER	CHRONOGRAPH	Th1790787/D Sport Bl
76	sreebhanu vagir	Rajamundry	Others	WATCHES	WATCHES	WOMEN	WOMEN	WATCHES	NULL	MARC ECKO	ANALOG WATCH	E09525M1 White/Whi

4. Filter the data to show only rows with a "Sale_Flag" of 'Yes'.

```
18  ●    select * from paytm
19       where sale_flag ='On Sale';
20
21
```

Result Grid | ⊞ | ⇄ Filter Rows: [_____] | Export: 🖫 | Wrap Cell Content: 🗛 | Fetch rows: ⊞⇨

S.no	Name	Shipping_city	Category_Grouped	Category	Sub_category	Product_Gender	Segment	Class	Family	Brand	Brick	Item_NM
2	AMIT GALPHADE	Ahmedabad	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS	SKINS Navy Blue Tights
4	MALLIKARJUNA H	Bangalore	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS	SKINS Navy Blue Tights
10	ASHWIN GIDWANI	Pune	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS	SKINS Navy Blue Tights
16	Rompelli GopalK	Salem	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	ADIDAS	RUNNING SHOES	Adizero F50 2 M Black F
20	prabhakar reddy	Jhansi		WATCHES	WATCHES	MEN	WOMENS ACCESSORIES	WATCHES	NULL	PLAYBOY	ANALOG WATCH	Bpb-1004-C Silver/Blac
22	RAHUL SINGH PAT	Jabalpur	Others	Bags	Bags	WOMEN	WOMEN	NULL	NULL	HIDESIGN	HANDBAG	Downing Street 04 Blac

5. Sort the data by "Item_Price" in descending order. What is the most expensive item?

```
21 •    select *,item_price
22      from paytm
23      where sale_flag = 'On Sale'
24      order by 2 desc;
25
26
```

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

S.no	Name	Shipping_city	Category_Grouped	Category	Sub_category	Product_Gender	Segment	Class	Family	Brand	Brick	
16948	zen chandru	Mumbai		WATCHES	WATCHES	MEN	WOMENS ACCESSORIES	WATCHES	NULL	PLAYBOY	ANALOG WATCH	B
18106	Zeeshan Ahmed	Kanpur	Others	WATCHES	WATCHES	WOMEN	WOMEN	WATCHES	NULL	ESPRIT	ANALOG WATCH	E
9585	ZAFAR MOMBATTIW	Secunderabad	Others	WATCHES	WATCHES	MEN	MEN	WATCHES	NULL	TOMMY HILFIGER	CHRONOGRAPH	T
1248	YV RAO	Vishakapatnam	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS	S
19363	yuvaraj raj	Chennai		WATCHES	WATCHES	MEN	WOMENS ACCESSORIES	WATCHES	NULL	PLAYBOY	ANALOG WATCH	B
20978	vudhisthir moha	Raipur		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	PUMA	CRICKET	Ir

6. Which products have a 'Special_Price_effective' value of less than $5000 ?

```
26 •    select *
27      from paytm
28      where special_price_effective < 5000;
```

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

S.no	Name	Shipping_city	Category_Grouped	Category	Sub_category	Product_Gender	Segment	Class	Family	Brand	Brick	Item_NM
1	ABHINAV CHATTER	Jabalpur	Others	SUNGLASSES	SUNGLASSES	UNISEX	SUNGLASSES	AVIATOR	UNISEX	RAY BAN	AVIATOR	Rb3025 003/32 Grey Sun
2	AMIT GALPHADE	Ahmedabad	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS	SKINS Navy Blue Tights
3	PRABHU NAMBIAPP	Chennai	Others	Bags	Bags	UNISEX	UNISEX	NULL	NULL	VIP	STROLLEY	Black Soft Strolley
4	MALLIKARJUNA H	Bangalore	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS	SKINS Navy Blue Tights

7. Find the total sales value for each category.

```sql
31 •    Select category,count(*) as total_sales
32      from paytm
33      group by category
34      order by 2 desc;
35
```

Result Grid | Filter Rows: | Export: | W

category	total_sales
Men Footwear	17647
WATCHES	10440
Women Apparel	6931
SUNGLASSES	4030
Bags	3949
Sports Equipment	3614
Women Footwear	2347

8. Calculate the average "Quantity" sold for products in the "Home" category, grouped by "Product_Gender."

```sql
36  select round(avg(quantity),2) as  avg_category ,category
37  from paytm
38  where category = 'Home'
39  group by product_gender;
40
41
42
```

avg_category	category
1.00	Home

9.Find the top 5 products with the highest "Value_CM1" and "Value_CM2" ratios.

```
47  •      select category,value_CM1,value_CM2
48         from   paytm
49         order by (2/3) desc
50         limit 5;
51
```

category	value_CM1	value_CM2
SUNGLASSES	1722.77	1134.77
Sports Equipment	1499.87	876.87
Bags	1433.07	955.07
Sports Equipment	1499.87	876.87
Men Footwear	-198.99	-357.99

10. Identify the top 3 "Class" categories with the highest total sales.

```
51
52 ●     select category,sum(item_price) as total_price
53       from paytm
54       group by category
55       order by 2 desc
56       limit 3;
57
58
```

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

category	total_price
Men Footwear	101245089
WATCHES	62213793
Women Apparel	44010575

11. Find the total sales for each "Brand" and display the top 3 brands in terms of sales.

```
58  •   select brand, sum(quantity) as total_sales
59      from paytm
60      where sale_flag = 'On Sale'
61      group by brand
62      order by 2 desc
63      limit 3;
64
65
```

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

brand	total_sales
SKINS	3087
PLAYBOY	1529
NIKE	1330

12. Calculate the total revenue generated from "Bags" category products with a "Sale_Flag" of 'Yes'

```sql
65   select category, sum(paid_pr) as total_revenue
66   from paytm
67   where sale_flag = 'On Sale' and category = 'Bags';
```

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

category	total_revenue
Bags	2648015

13. Identify the top 5 shipping cities based on the average order value (total sales amount divided by the number of orders) and display their average order values.

```sql
69  select shipping_city, round(sum(paid_pr)/count(*),2) as avg_order_value
70  from paytm
71  group by shipping_city
72  order by 2 desc
73  limit 5 ;
74
```

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

shipping_city	avg_order_value
visakhapatnam	6580.00
PUTTAPARTHY	6580.00
Nidadavolu	6580.00
KANIHA	6580.00
chandraput	6580.00

14. Determine the total number of orders and the total sales amount for each "Product_Gender" within the "Clothing" category.

```
75 •    select product_gender,count(quantity) as no_of_orders, sum(paid_pr) as total_sa
76      from paytm
77      where category = 'Furniture'
78      group by product_gender;
```

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

product_gender	no_of_orders	total_sales
UNISEX	524	2401258

15.Calculate the percentage contribution of each "Category" to the overall total sales.

```
80 •     select category, sum(paid_pr) as total_sales,
81              round(sum(paid_pr)/(select sum(paid_pr) from paytm )* 100,2) as Per_contribution
82              from paytm
83              group by category;
84
```

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

category	total_sales	Per_contribution
SUNGLASSES	20372305	8.09
Sports Equipment	17485201	6.94
Bags	18949494	7.52
Men Footwear	85645319	34.01
Women Footwear	11801140	4.69
WATCHES	51219020	20.34
Women Apparel	37533749	14.90

16. Identify the "Category" with the highest average "Item_Price" and its corresponding average price.

```sql
85  •    select category, round(avg(item_price),2) as avg_item_price
86       from paytm
87       group by category
88       order by 2 desc
89       limit 1;
90
```

category	avg_item_price
Furniture	7560.60

```sql
91 •     select segment, sum(paid_pr) as total_sales ,round(avg(quantity),1) as avg_sold_quantity
92       from paytm
93       group by segment;
```

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

segment	total_sales	avg_sold_quantity
SUNGLASSES	17630835	1.0
MENS WEAR	14507006	1.0
UNISEX	13812634	1.0
MENS FOOTWEAR	85645319	1.0
LADIES FOOTWEAR	11801140	1.0
WOMEN	22829399	1.0
WOMENS ACCESSORIES	6812453	1.0