PSYLIQ

INTERNSHIP PROJECT

PAYTM EPURCHASE DATA ANALYSIS USING SQL

BY

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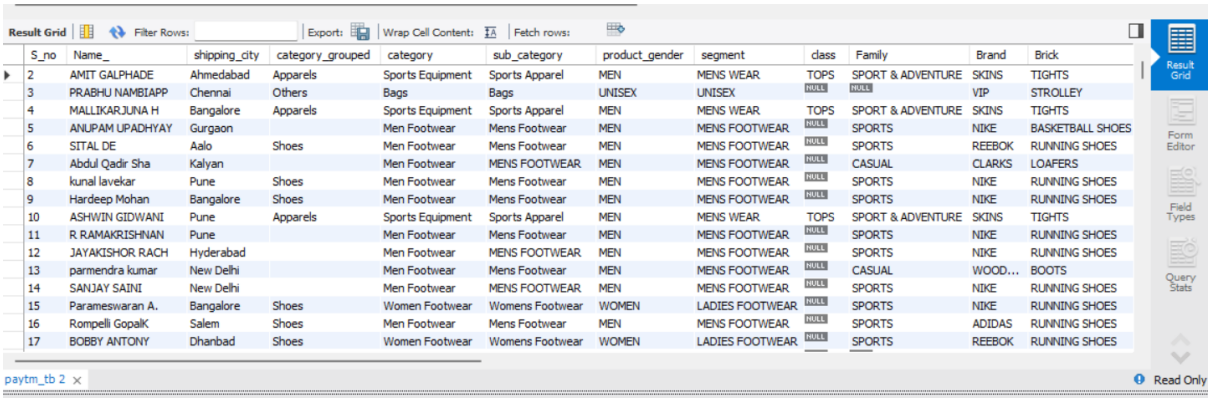
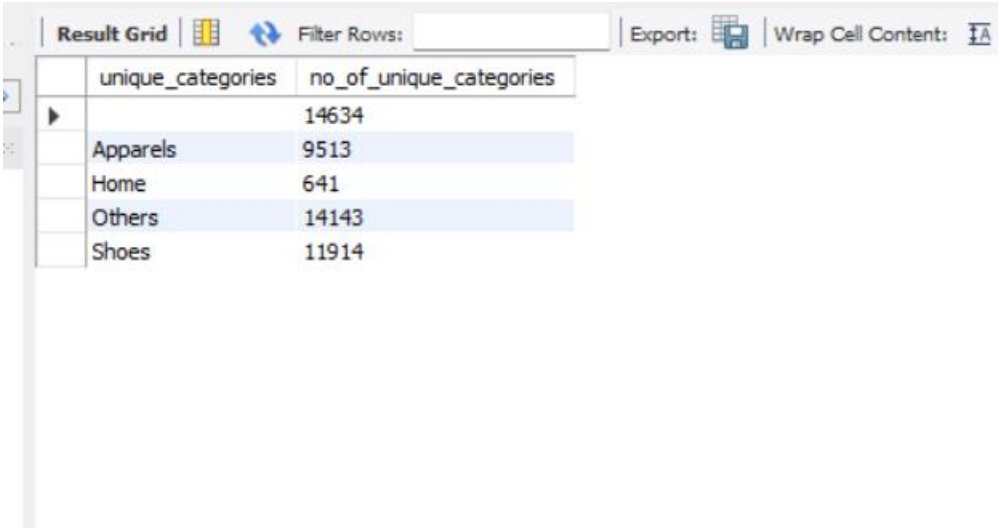
LOADING THE DATA



S_no	Name_	shipping_city	category_grouped	category	sub_category	product_gender	segment	class	Family	Brand	Brick
2	AMIT GALPHADE	Ahmedabad	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS
3	PRABHU NAMBIAPP	Chennai	Others	Bags	Bags	UNISEX	UNISEX	NULL	NULL	VIP	STROLLEY
4	MALLIKARJUNA H	Bangalore	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS
5	ANUPAM UPADHYAY	Gurgaon		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	BASKETBALL SHOES
6	SITAL DE	Aalo	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	REEBOK	RUNNING SHOES
7	Abdul Qadir Sha	Kalyan		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	CASUAL	CLARKS	LOAFERS
8	kunal lavekar	Pune	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
9	Hardeep Mohan	Bangalore	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
10	ASHWIN GIDWANI	Pune	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS
11	R RAMAKRISHNAN	Pune		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
12	JAYAKISHOR RACH	Hyderabad		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
13	parmendra kumar	New Delhi		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	CASUAL	WOOD...	BOOTS
14	SANJAY SAINI	New Delhi		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
15	Parameswaran A.	Bangalore	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
16	Rompelli GopalK	Salem	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	ADIDAS	RUNNING SHOES
17	BOBBY ANTONY	Dhanbad	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTWEAR	NULL	SPORTS	REEBOK	RUNNING SHOES

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

```
select distinct(category_grouped)as unique_categories,count(*)as no_of_unique_categories
from paytm_tb
group by category_grouped
order by unique_categories;
```



unique_categories	no_of_unique_categories
	14634
Apparels	9513
Home	641
Others	14143
Shoes	11914

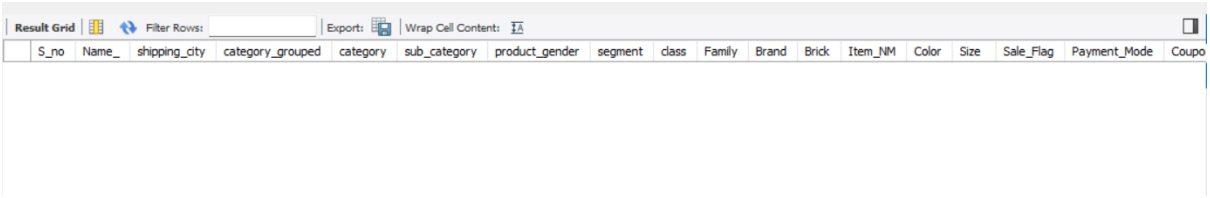
2. Can you list the top 5 shipping cities in terms of the number of orders?

```
SELECT Shipping_city ,COUNT(Shipping_city) as Total_Orders
FROM paytm_tb
GROUP BY Shipping_city
ORDER BY Total_Orders desc
LIMIT 5 ;
```

Shipping_city	Total_Orders
New Delhi	4560
Chennai	4254
Bangalore	3974
Mumbai	3159
Hyderabad	2849

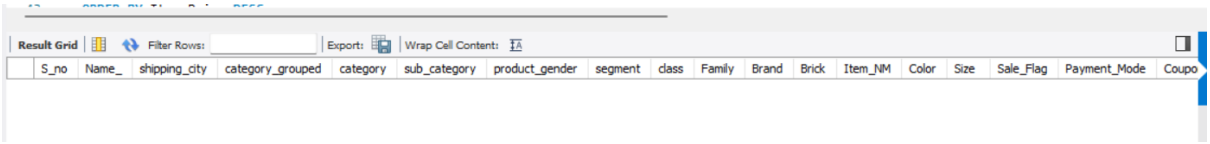
3. Show me a table with all the data for products that belong to the "Electronics" category.

```
SELECT * FROM paytm_tb

WHERE Category = "Electronics";
```



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

```
SELECT * FROM paytm_tb

WHERE Sale_Flag LIKE "Sale" ;
```



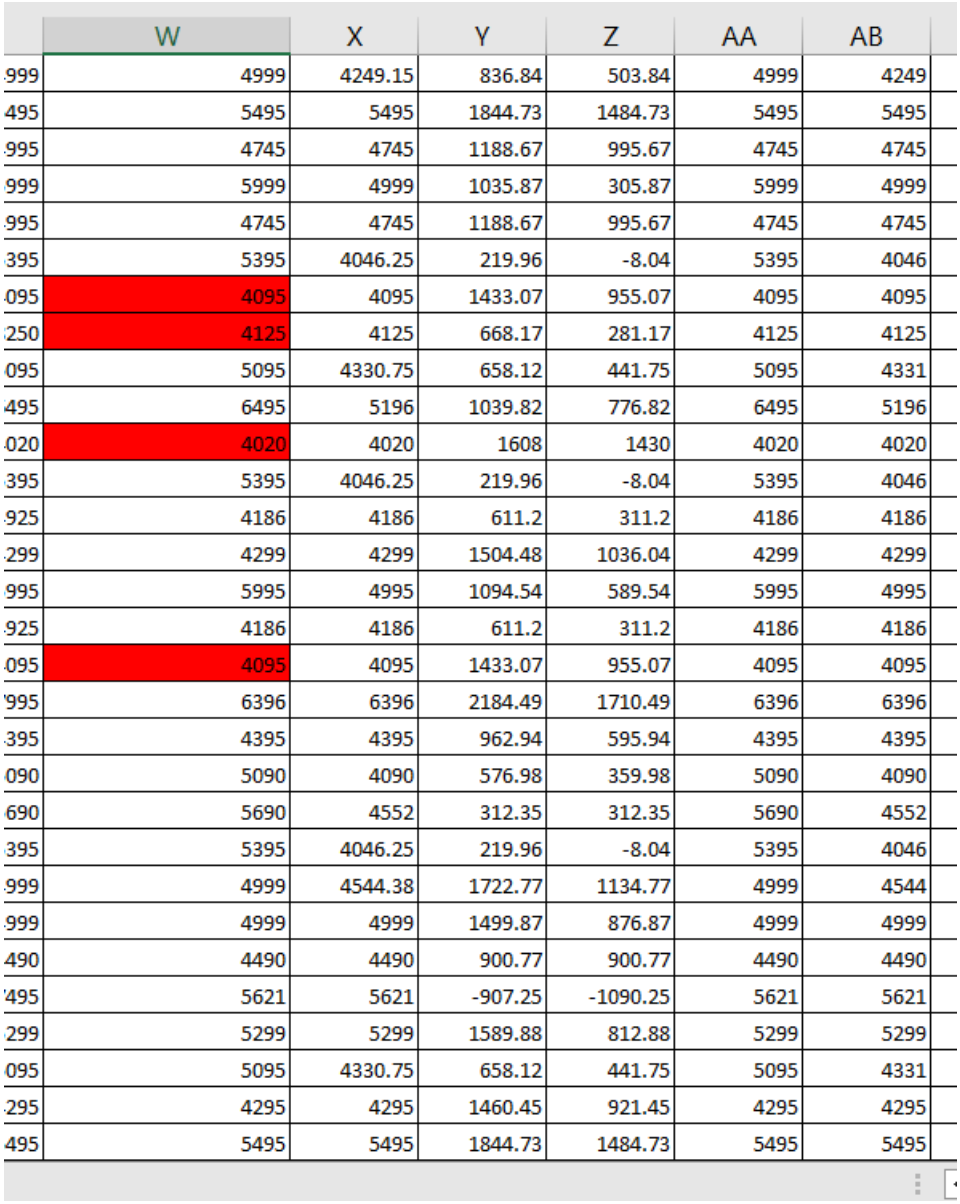
5. Sort the data by "Item_Price" in descending order. What is the most expensive item?

```
SELECT Item_NM , Item_Prize

FROM paytm_tb

ORDER BY Item_Prize DESC

 LIMIT 1 ;
```

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

Item_NM	Item_Prize
Street Tuneo Mid Black Sneakers	13500

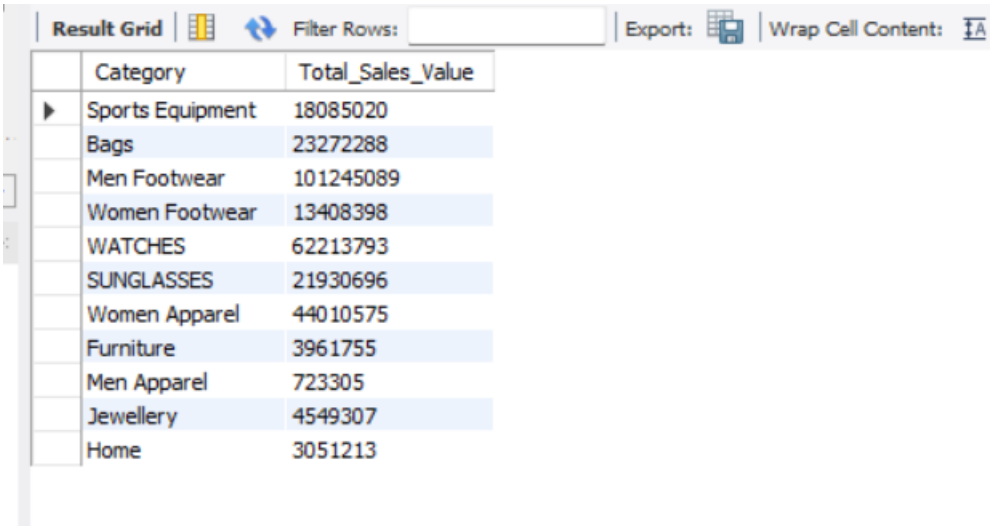
6. Apply conditional formatting to highlight all products with a "Special_Price_effective" value below $50 in red.



	W	X	Y	Z	AA	AB
999	4999	4249.15	836.84	503.84	4999	4249
495	5495	5495	1844.73	1484.73	5495	5495
995	4745	4745	1188.67	995.67	4745	4745
999	5999	4999	1035.87	305.87	5999	4999
995	4745	4745	1188.67	995.67	4745	4745
395	5395	4046.25	219.96	-8.04	5395	4046
095	4095	4095	1433.07	955.07	4095	4095
250	4125	4125	668.17	281.17	4125	4125
095	5095	4330.75	658.12	441.75	5095	4331
495	6495	5196	1039.82	776.82	6495	5196
020	4020	4020	1608	1430	4020	4020
395	5395	4046.25	219.96	-8.04	5395	4046
925	4186	4186	611.2	311.2	4186	4186
299	4299	4299	1504.48	1036.04	4299	4299
995	5995	4995	1094.54	589.54	5995	4995
925	4186	4186	611.2	311.2	4186	4186
095	4095	4095	1433.07	955.07	4095	4095
995	6396	6396	2184.49	1710.49	6396	6396
395	4395	4395	962.94	595.94	4395	4395
090	5090	4090	576.98	359.98	5090	4090
690	5690	4552	312.35	312.35	5690	4552
395	5395	4046.25	219.96	-8.04	5395	4046
999	4999	4544.38	1722.77	1134.77	4999	4544
999	4999	4999	1499.87	876.87	4999	4999
490	4490	4490	900.77	900.77	4490	4490
495	5621	5621	-907.25	-1090.25	5621	5621
299	5299	5299	1589.88	812.88	5299	5299
095	5095	4330.75	658.12	441.75	5095	4331
295	4295	4295	1460.45	921.45	4295	4295
495	5495	5495	1844.73	1484.73	5495	5495

7. Create a pivot table to find the total sales value for each category.

```
SELECT Category , SUM(Item_Prize) as Total_Sales_Value

FROM paytm_tb

Group by Category ;
```

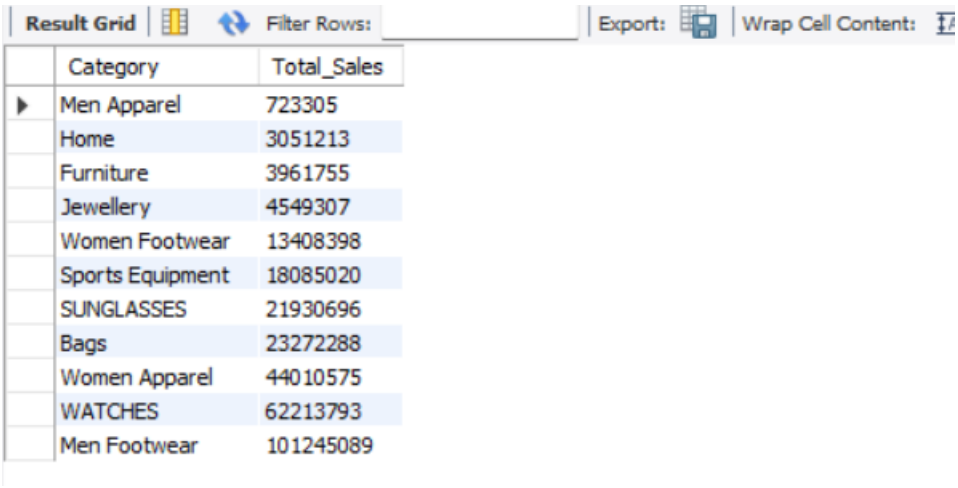


Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Category	Total_Sales_Value
Sports Equipment	18085020
Bags	23272288
Men Footwear	101245089
Women Footwear	13408398
WATCHES	62213793
SUNGLASSES	21930696
Women Apparel	44010575
Furniture	3961755
Men Apparel	723305
Jewellery	4549307
Home	3051213

8. Create a bar chart to visualize the total sales for each category

```
SELECT Category , SUM(Item_Prize) as Total_Sales

FROM paytm_tb

Group by Category

ORDER BY Total_Sales;
```

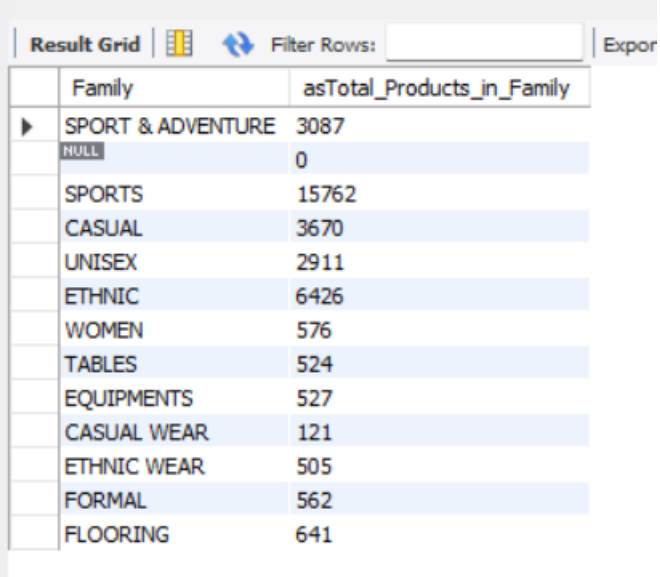


Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Category	Total_Sales
Men Apparel	723305
Home	3051213
Furniture	3961755
Jewellery	4549307
Women Footwear	13408398
Sports Equipment	18085020
SUNGLASSES	21930696
Bags	23272288
Women Apparel	44010575
WATCHES	62213793
Men Footwear	101245089

9. Create a pie chart to show the distribution of products in the "Family" category.

```
SELECT Family ,COUNT(Family)asTotal_Products_in_Family

FROM paytm_tb

Group by Family ;
```

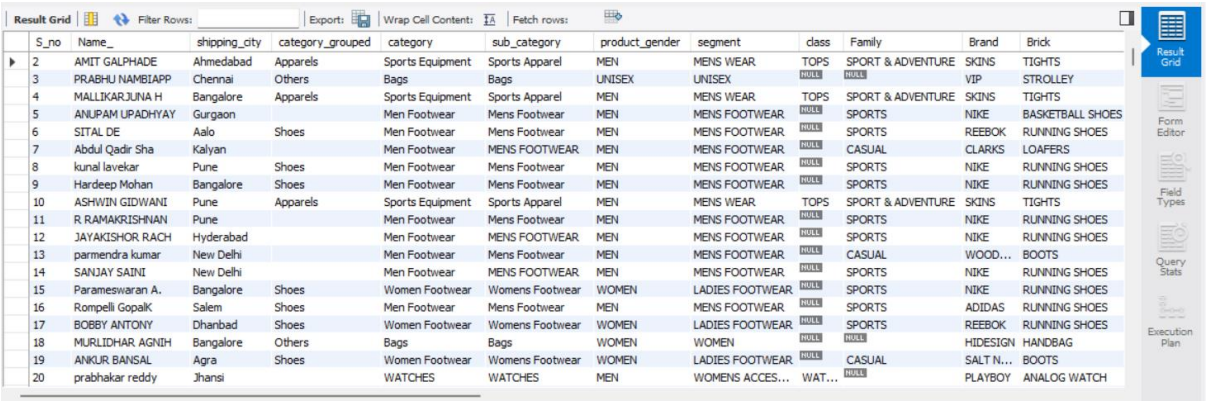


Result Grid | Filter Rows: | Expor

Family	asTotal_Products_in_Family
SPORT & ADVENTURE	3087
NULL	0
SPORTS	15762
CASUAL	3670
UNISEX	2911
ETHNIC	6426
WOMEN	576
TABLES	524
EQUIPMENTS	527
CASUAL WEAR	121
ETHNIC WEAR	505
FORMAL	562
FLOORING	641

10. Ensure that the "Payment_Method" column only contains valid payment methods (e.g., Visa, MasterCard)

```
select *
 from paytm_tb
 where Payment_Mode in ("COD","Prepaid");
```



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
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3	PRABHU NAMBIAPP	Chennai	Others	Bags	Bags	UNISEX	UNISEX	NULL	NULL	VIP	STROLLEY
4	MALLIKARJUNA H	Bangalore	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS
5	ANUPAM UPADHYAY	Gurgaon		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	BASKETBALL SHOES
6	SITAL DE	Aalo	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	REEBOK	RUNNING SHOES
7	Abdul Qadir Sha	Kalyan		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	CASUAL	CLARKS	LOAFERS
8	kunal lavekar	Pune	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
9	Hardeep Mohan	Bangalore	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
10	ASHWIN GIDWANI	Pune	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS	TIGHTS
11	R RAMAKRISHNAN	Pune		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
12	JAYAKISHOR RACH	Hyderabad		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
13	parmendra kumar	New Delhi		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	CASUAL	WOOD...	BOOTS
14	SANJAY SAINI	New Delhi		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
15	Parameswaran A.	Bangalore	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
16	Rompelli GopalK	Salem	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	ADIDAS	RUNNING SHOES
17	BOBBY ANTONY	Dhanbad	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTWEAR	NULL	SPORTS	REEBOK	RUNNING SHOES
18	MURLIDHAR AGNIH	Bangalore	Others	Bags	Bags	WOMEN	WOMEN	NULL	NULL	HIDESIGN	HANDBAG
19	ANKUR BANSAL	Agra	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTWEAR	NULL	CASUAL	SALT N...	BOOTS
20	prabhakar reddy	Jhansi		WATCHES	WATCHES	MEN	WOMENS ACCES...	WAT...	NULL	PLAYBOY	ANALOG WATCH

Result Grid | Form Editor | Field Types | Query Stats | Execution Plan

11. Calculate the average "Quantity" sold for products in the "Clothing" category, grouped by "Product_Gender."

```
SELECT Product_Gender , AVG(Quantity) as Total_Quantity_Sold
FROM paytm_tb
WHERE Category_Grouped ="Apparels"
GROUP BY Product_Gender;
```

Result Grid | Filter Rows:

	Product_Gender	Total_Quantity_Sold
▶	MEN	1.0000
	WOMEN	1.0000

12. Find the top 5 products with the highest "Value_CM1" and "Value_CM2" ratios. Create a chart to visualize this data.

```
SELECT *, ROUND((Value_CM1/Value_CM2),2) AS Ration

FROM paytm_tb

ORDER BY Ration DESC

LIMIT 5 ;
```

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
▶	393	sakkiah vinayag	Chennai	Others	WATCHES	WATCHES	MEN	MENS ACCESSORIES	WATCHES	NULL	GIORDANO	CHRONOGRAPH WATCHES
	47	rohit gupta	Jaipur	Others	WATCHES	WATCHES	MEN	MENS ACCESSORIES	WATCHES	NULL	GIORDANO	CHRONOGRAPH WATCHES
	280	Neeraj Pandey	Gurgaon		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	PUMA	CRICKET
	328	mayank bajaj	Gwalior		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	PUMA	CRICKET
	53	HARANESWARAN tH	Chennai		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	PUMA	CRICKET

13. Identify the top 3 "Class" categories with the highest total sales. Create a stacked bar chart to represent this data.

```
SELECT Class, SUM(Item_Prize) AS Total_Sales

FROM paytm_tb

Group by Class

Order by Total_Sales DESC

LIMIT 3 ;
```

	Class	Total_Sales
▶	NULL	170968090
	WATCHES	62213793
	SETS	25529167

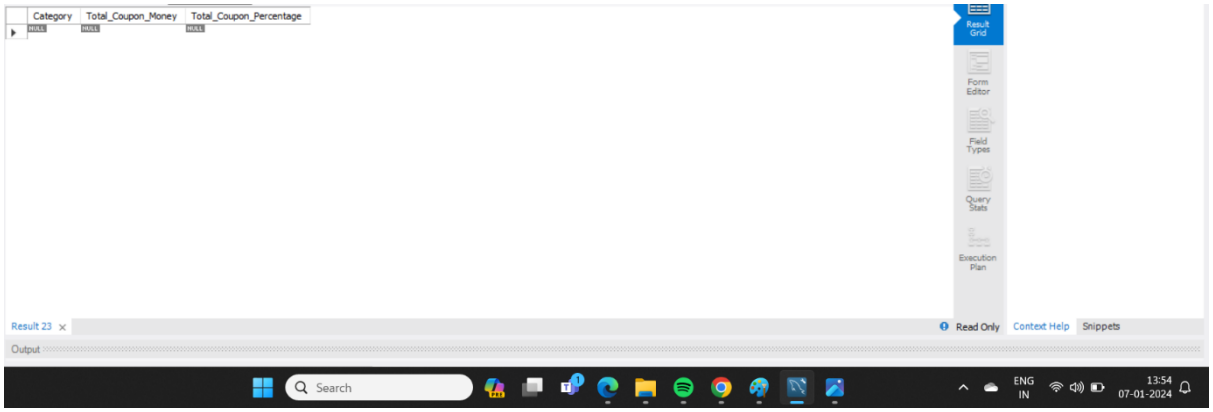
14. Use VLOOKUP or INDEX-MATCH to retrieve the "Color" of a product with a specific "Item_NM."

```
select Color

from paytm_tb

where Item_NM ="your specific Item_NM";
```

	Color

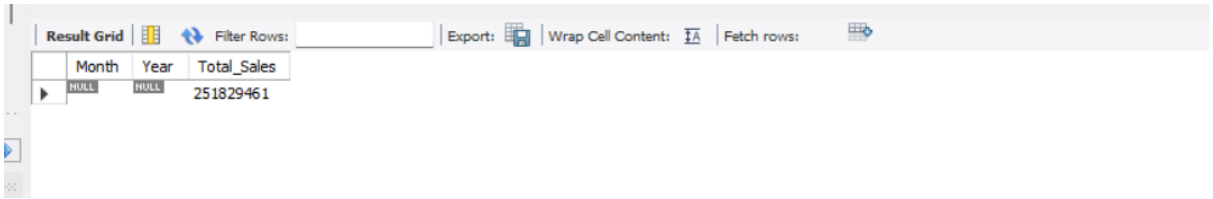
15. Calculate the total "coupon_money_effective" and "Coupon_Percentage" for products in the "Electronics" category.

```
SELECT Category , SUM(coupon_money_effective) AS Total_Coupon_Money
,SUM(Coupon_Percentage) AS

Total_Coupon_Percentage

FROM paytm_tb

WHERE Category = "Electronics" ;
```



16. Perform a time series analysis to identify the month with the highest total sales.

```
select extract(Month from Sale_Flag) as Month,

extract(Year from Sale_Flag) as Year , Sum(Paid_pr) as Total_Sales

from paytm_tb

group by Month,Year

order by Total_Sales desc

limit 1;
```



17. Calculate the total sales for each "Segment" and create a scatter plot to visualize the relationship between "Item_Price" and "Quantity" in this data.

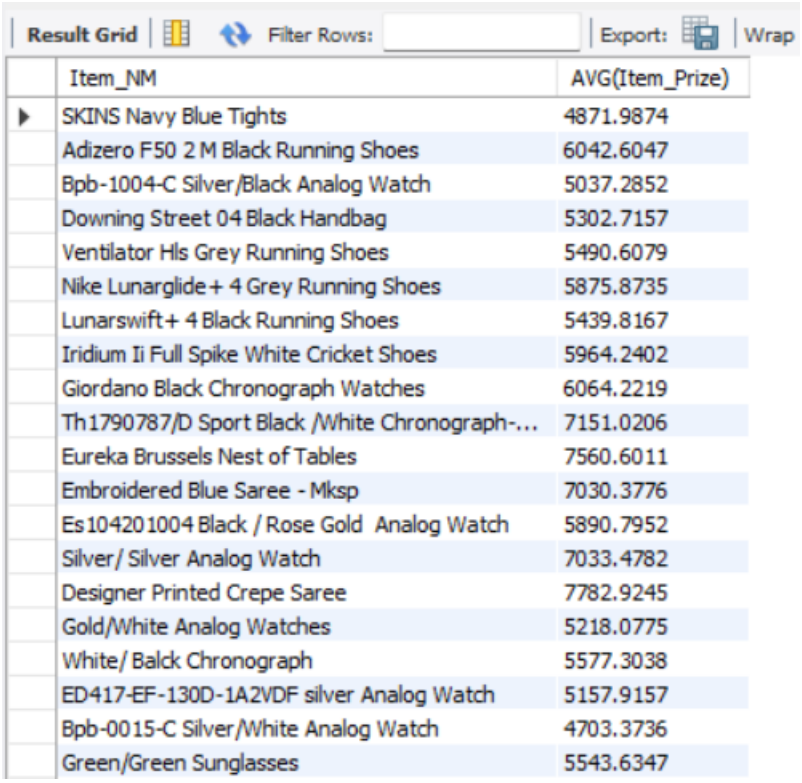
```
SELECT Segment , SUM(Item_Prize) AS Total_Sales
FROM paytm_tb
GROUP BY Segment;
```

Result Grid | Filter Rows: | E

Segment	Total_Sales
MENS WEAR	15039825
UNISEX	15519256
MENS FOOTWEAR	101245089
LADIES FOOTWEAR	13408398
WOMEN	30013131
WOMENS ACCESSORIES	7386940
SUNGLASSES	18926046
WOMENS WEAR	44010575
MENS ACCESSORIES	13279676
MEN	22291728
LIVING	3961755
OUTDOOR & HIKING	3045195
MENS APPARELS	723305
WOMENS JEWELLERY	4549307
HOME FURNISHING	3051213

18. Use the AVERAGEIFS function to find the average "Item_Price" for products that have a "Sale_Flag" of 'Yes.'

```
SELECT Item_NM,AVG(Item_Prize)
FROM paytm_tb
WHERE Sale_Flag="ON Sale"
Group by Item_NM ;
```



Result Grid | Filter Rows: | Export: | Wrap

Item_NM	AVG(Item_Prize)
SKINS Navy Blue Tights	4871.9874
Adizero F50 2 M Black Running Shoes	6042.6047
Bpb-1004-C Silver/Black Analog Watch	5037.2852
Downing Street 04 Black Handbag	5302.7157
Ventilator Hls Grey Running Shoes	5490.6079
Nike Lunarglide+ 4 Grey Running Shoes	5875.8735
Lunarswift+ 4 Black Running Shoes	5439.8167
Iridium Ii Full Spike White Cricket Shoes	5964.2402
Giordano Black Chronograph Watches	6064.2219
Th1790787/D Sport Black /White Chronograph-...	7151.0206
Eureka Brussels Nest of Tables	7560.6011
Embroidered Blue Saree - Mksp	7030.3776
Es104201004 Black / Rose Gold Analog Watch	5890.7952
Silver/ Silver Analog Watch	7033.4782
Designer Printed Crepe Saree	7782.9245
Gold/White Analog Watches	5218.0775
White/ Balck Chronograph	5577.3038
ED417-EF-130D-1A2VDF silver Analog Watch	5157.9157
Bpb-0015-C Silver/White Analog Watch	4703.3736
Green/Green Sunglasses	5543.6347

19. Identify products with a "Paid_pr" higher than the average in their respective "Family" and "Brand" groups.

```
select Family , Brand , Item_NM,Paid_pr
from paytm_tb
where paid_pr >( select avg(paid_pr)
 from paytm_tb)
 group by Family,Brand , Item_NM,Paid_pr
 order by Paid_pr desc ;
```

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

Family	Brand	Item_NM	Paid_pr
UNISEX	RAY BAN	Rb3025 W3172 Brown Sunglasses	6580
NULL	CASIO	Sheen Silver/Black Analog Watch	6580
ETHNIC	FNF	Embroidered Blue Dress Material - Mksp	6580
SPORTS	PUMA	Street Tuneo Mid Black Sneakers	6495
NULL	FOSSIL	CH2573 Black Chronograph Watches	6495
CASUAL	SALT N PEPPER	Knee-Length Brown Boots	6495
CASUAL	PAVERS ENGLAND	Coffee Loafers	6480
NULL	FOSSIL	CH2573 Black Chronograph Watches	6480
NULL	MARC ECKO	White/ White Analog Watch	6480
NULL	Titan	9166Sl04 Black Analog Watch	6480
ETHNI...	ISHIN	Embroidered Black Saree	6480
ETHNIC	SANGRIA	Navy Blue Georgette Brocade Neck & ...	6396
SPORTS	PUMA	Street Tuneo Mid Black Sneakers	6396
SPORTS	NIKE	Nike Lunarglide+ 4 Grey Running Shoes	6396
SPORTS	REEBOK	Reebok Sports Shoes Black	6200
NULL	AMERICAN TOUR...	Houston Black Soft Strolley	6200
TABLES	TRUHOME	Eureka Brussels Nest of Tables	6200
ETHNIC	ETHNIC CLOSET	Ethnic Closet Sarees Green	6200
NULL	CASIO	ED417-EF-130D-1A2VDF silver Analog ...	6200
SPORTS	REEBOK	Realflex Optimal Yellow Running	6117

paytm_tb 28

20. Create a pivot table to show the total sales for each "Color" within the "Clothing" category and use conditional formatting to highlight the highest sales.

```
SELECT DISTINCT Color ,SUM(Item_Prize) AS Total_Sales

FROM paytm_tb

WHERE Category_Grouped = "Apparels"

GROUP BY Color ;
```

Color	Total_Sales
BLACK	15039825
NAVY BLUE	22614700
BLUE	9073153
MULTI	6589440
GREEN	2891719