



# PSYLIQ

**INTERNSHIP PROJECT**

**PAYTM EPURCHASE DATA  
ANALYSIS USING SQL**

**BY**

**SHARUMATHI C**

## LOADING THE DATA

```
LOAD DATA INFILE 'C:\\ProgramData\\MySQL\\MySQL Server  
8.0\\Uploads\\paytm_epurchase_data_psyliq.csv'
```

```
INTO TABLE paytm_tb
```

```
FIELDS TERMINATED BY ','
```

```
ENCLOSED BY ''''
```

```
LINES TERMINATED BY '\\n'
```

```
IGNORE 1 ROWS;
```

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	NALE	NALE	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	NALE	SPORTS	NIKE	BASKETBALL SHOES
6	SITAL DE	Aalo	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NALE	SPORTS	REEBOK	RUNNING SHOES
7	Abdul Qadir Sha	Kalyan		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NALE	CASUAL	CLARKS	LOAFERS
8	kunal lavelkar	Pune	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NALE	SPORTS	NIKE	RUNNING SHOES
9	Hardeep Mohan	Bangalore	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NALE	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	NALE	SPORTS	NIKE	RUNNING SHOES
12	JAYAKISHOR RACH	Hyderabad		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NALE	SPORTS	NIKE	RUNNING SHOES
13	parmendra kumar	New Delhi		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NALE	CASUAL	WOOD...	BOOTS
14	SANJAY SAINI	New Delhi		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NALE	SPORTS	NIKE	RUNNING SHOES
15	Parameswaran A.	Bangalore	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTWEAR	NALE	SPORTS	NIKE	RUNNING SHOES
16	Rompell GopalK	Salem	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NALE	SPORTS	ADIDAS	RUNNING SHOES
17	BOBBY ANTONY	Dhanbad	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTWEAR	NALE	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
```

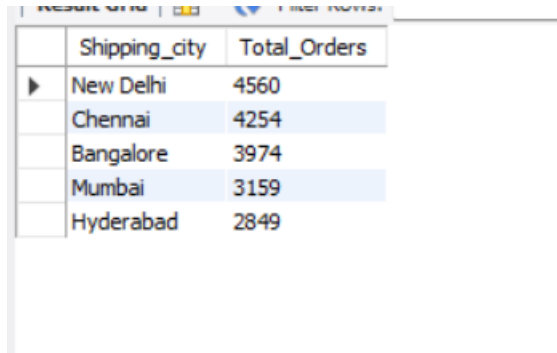
```
group by category_grouped
```

```
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?

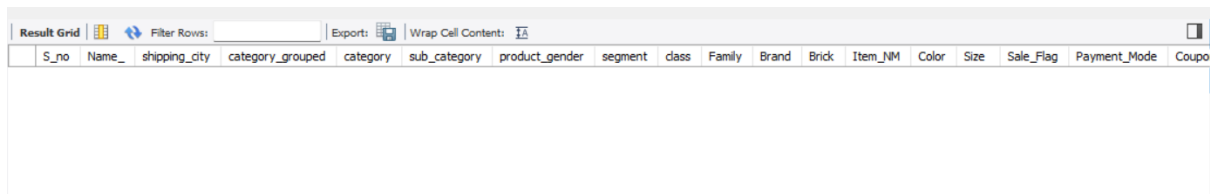
```
SELECT Shipping_city ,COUNT(Shipping_city) as Total_Orders  
  
FROM paytm_tb  
  
GROUP BY Shipping_city  
  
ORDER BY Total_Orders desc  
  
LIMIT 5 ;
```



	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";
```



S_no	Name_	shipping_city	category_grouped	category	sub_category	product_gender	segment	class	Family	Brand	Brick	Item_NM	Color	Size	Sale_Flag	Payment_Mode	Coupo
------	-------	---------------	------------------	----------	--------------	----------------	---------	-------	--------	-------	-------	---------	-------	------	-----------	--------------	-------

## 4. Filter the data to show only rows with a "Sale\_Flag" of 'Yes'.

```
SELECT * FROM paytm_tb  
  
WHERE Sale_Flag LIKE "Sale" ;
```



S_no	Name_	shipping_city	category_grouped	category	sub_category	product_gender	segment	class	Family	Brand	Brick	Item_NM	Color	Size	Sale_Flag	Payment_Mode	Coupo
------	-------	---------------	------------------	----------	--------------	----------------	---------	-------	--------	-------	-------	---------	-------	------	-----------	--------------	-------

**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:	Export
	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 Contents:	Fetch rows:					
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	SPORT & ADVENTURE	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 lavelkar	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 GIDIWANI	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	JAYAKSHOR RACH	Hyderabad		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE	RUNNING SHOES
13	paramendra 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	Rompell 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	HIDEDESIGN	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...	PLAYBOY	ANALOG WATCH	

**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	sakdiah 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
--	-------



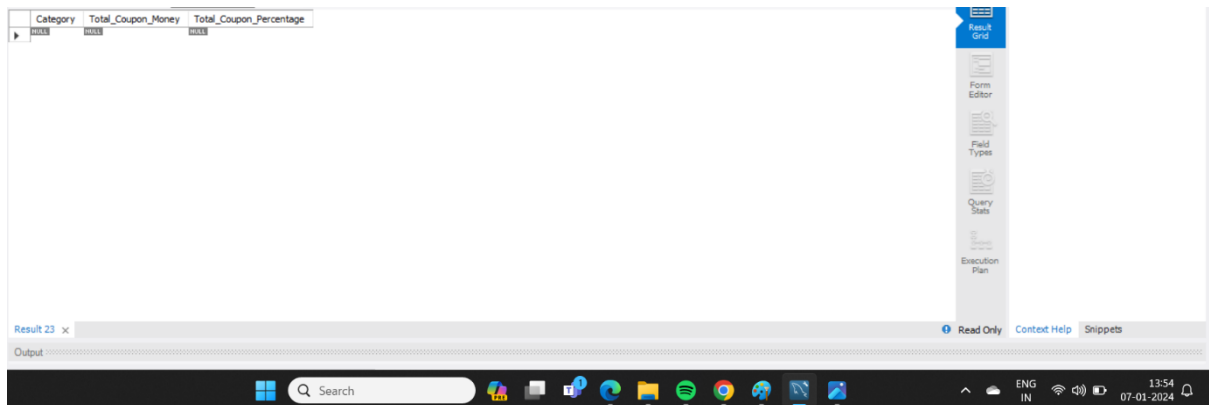
**15. Calculate the total "coupon\_money\_effective" and "Coupon\_Percentage" for products in the "Electronics" category.**

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

```
Total_Coupon_Percentage
```

```
FROM paytm_tb
```

```
WHERE Category = "Electronics" ;
```



The screenshot shows a database interface with a query result grid. The grid has three columns: Category, Total\_Coupon\_Money, and Total\_Coupon\_Percentage. The first row shows 'Electronics' for Category, '251829461' for Total\_Coupon\_Money, and '1' for Total\_Coupon\_Percentage. The interface includes a sidebar with options like Result Grid, Form Editor, Field Types, Query State, and Execution Plan. The bottom status bar shows 'Result 23 x', 'Read Only', 'Context Help', 'Snippets', and a Windows taskbar at the bottom with the date 07-01-2024 and time 13:54.

Category	Total_Coupon_Money	Total_Coupon_Percentage
Electronics	251829461	1

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

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

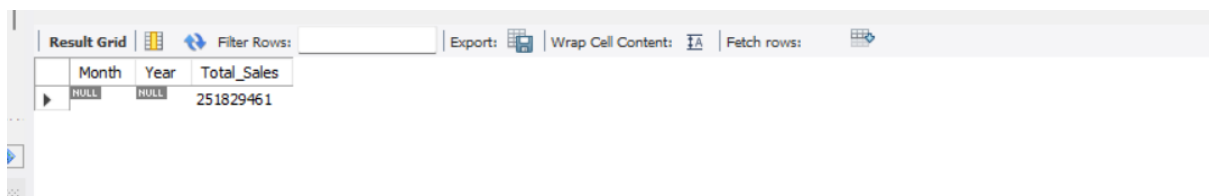
```
extract(Year from Sale_Flag) as Year , Sum(Paid_pr) as Total_Sales
```

```
from paytm_tb
```

```
group by Month,Year
```

```
order by Total_Sales desc
```

```
limit 1;
```



The screenshot shows a database interface with a query result grid. The grid has three columns: Month, Year, and Total\_Sales. The first row shows '12' for Month, '2023' for Year, and '251829461' for Total\_Sales. The interface includes a sidebar with options like Result Grid, Filter Rows, Export, Wrap Cell Content, and Fetch rows. The bottom status bar shows 'Result 23 x', 'Read Only', 'Context Help', 'Snippets', and a Windows taskbar at the bottom with the date 07-01-2024 and time 13:54.

Month	Year	Total_Sales
12	2023	251829461

**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	9166SI04 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 x

**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 ;
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
Color	Total_Sales			
BLACK	15039825			
NAVY BLUE	22614700			
BLUE	9073153			
MULTI	6589440			
GREEN	2891719			