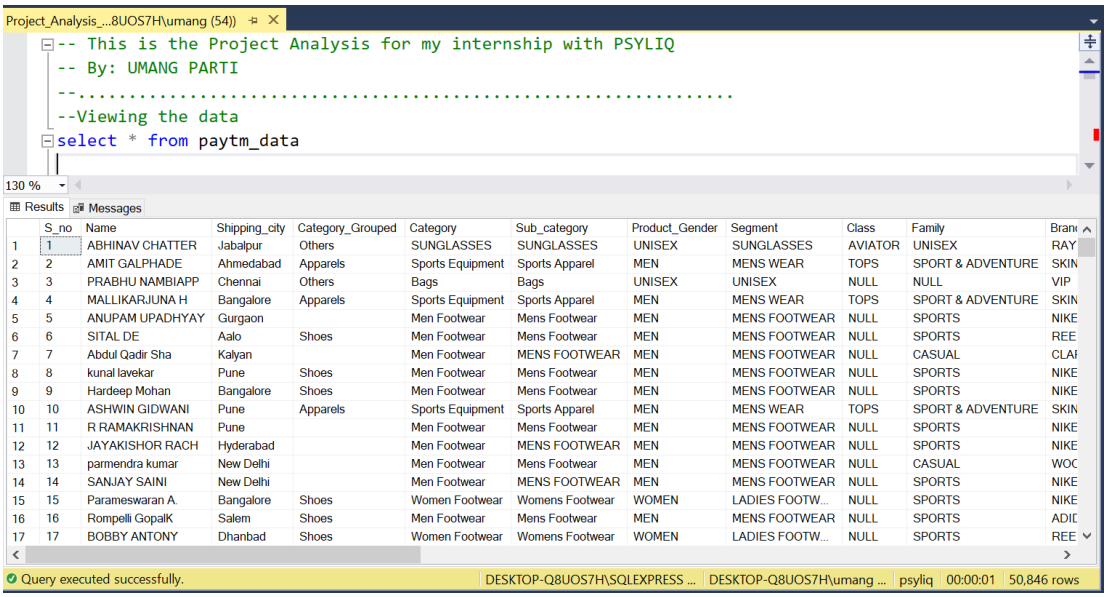
Project -2

```
-- This is the Project Analysis for my internship with PSYLIQ
-- By: UMANG PARTI
--.....................................................................................
--Viewing the data
select * from paytm_data
```



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```
-- This is the Project Analysis for my internship with PSYLIQ
-- By: UMANG PARTI
--.....................................................
--Viewing the data
select * from paytm_data
```

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Results | Messages

	S_no	Name	Shipping_city	Category_Grouped	Category	Sub_category	Product_Gender	Segment	Class	Family	Brand
1	1	ABHINAV CHATTER	Jabalpur	Others	SUNGLASSES	SUNGLASSES	UNISEX	SUNGLASSES	AVIATOR	UNISEX	RAY
2	2	AMIT GALPHADE	Ahmedabad	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKIN
3	3	PRABHU NAMBIAPP	Chennai	Others	Bags	Bags	UNISEX	UNISEX	NULL	NULL	VIP
4	4	MALLIKARJUNA H	Bangalore	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKIN
5	5	ANUPAM UPADHYAY	Gurgaon		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE
6	6	SITAL DE	Aalo	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	REE
7	7	Abdul Qadir Sha	Kalyan		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	CASUAL	CLAI
8	8	kunal lavekar	Pune	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE
9	9	Hardeep Mohan	Bangalore	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE
10	10	ASHWIN GIDWANI	Pune	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKIN
11	11	R RAMAKRISHNAN	Pune		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE
12	12	JAYAKISHOR RACH	Hyderabad		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE
13	13	parmendra kumar	New Delhi		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	CASUAL	WOC
14	14	SANJAY SAINI	New Delhi		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE
15	15	Parameswaran A.	Bangalore	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTW...	NULL	SPORTS	NIKE
16	16	Rompelli GopalK	Salem	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	ADID
17	17	BOBBY ANTONY	Dhanbad	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTW...	NULL	SPORTS	REE

Query executed successfully. | DESKTOP-Q8UOS7H\SQLEXPRESS ... | DESKTOP-Q8UOS7H\umang ... | psyliq | 00:00:01 | 50,846 rows

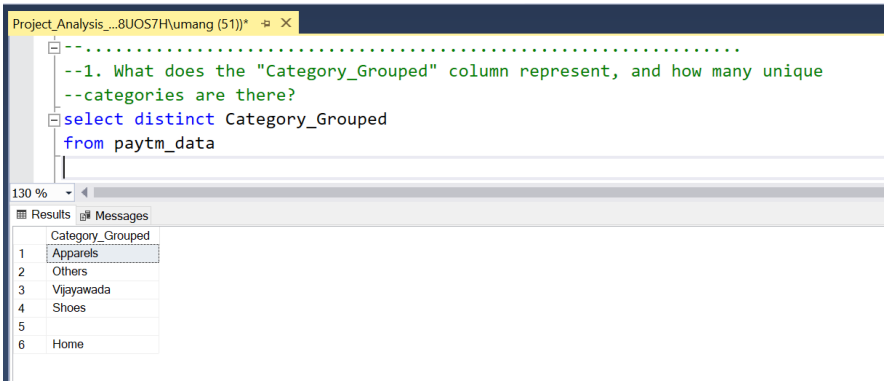
```
-- cleaning the data
UPDATE paytm_data
SET Paid_pr = NULL
WHERE ISNUMERIC(Paid_pr) = 0;

ALTER TABLE paytm_data
ALTER COLUMN Paid_pr int;

select * from paytm_data
where Paid_pr = '4499,4499'

UPDATE paytm_data
SET Paid_pr = '4499'
WHERE Paid_pr = '4499,4499'

--.....................................................................................
--1. What does the "Category_Grouped" column represent, and how many unique
--categories are there?
select distinct Category_Grouped
from paytm_data
```



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```
--.....................................................
--1. What does the "Category_Grouped" column represent, and how many unique
--categories are there?
select distinct Category_Grouped
from paytm_data
```

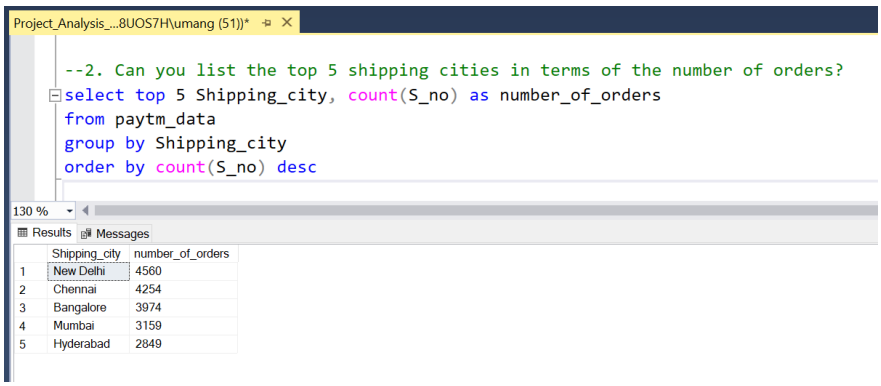
130 %

Results | Messages

	Category_Grouped
1	Apparels
2	Others
3	Vijayawada
4	Shoes
5	
6	Home

```
--2. Can you list the top 5 shipping cities in terms of the number of orders?
select top 5 Shipping_city, count(S_no) as number_of_orders
from paytm_data
```

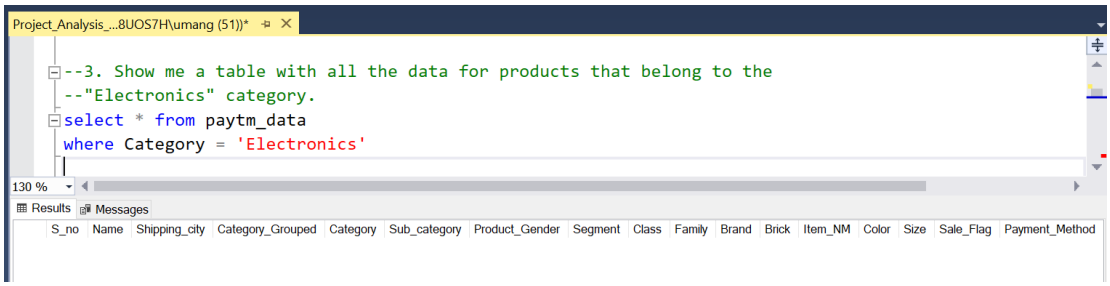
```
group by Shipping_city
order by count(S_no) desc
```



```
--2. Can you list the top 5 shipping cities in terms of the number of orders?
select top 5 Shipping_city, count(S_no) as number_of_orders
from paytm_data
group by Shipping_city
order by count(S_no) desc
```

	Shipping_city	number_of_orders
1	New Delhi	4560
2	Chennai	4254
3	Bangalore	3974
4	Mumbai	3159
5	Hyderabad	2849

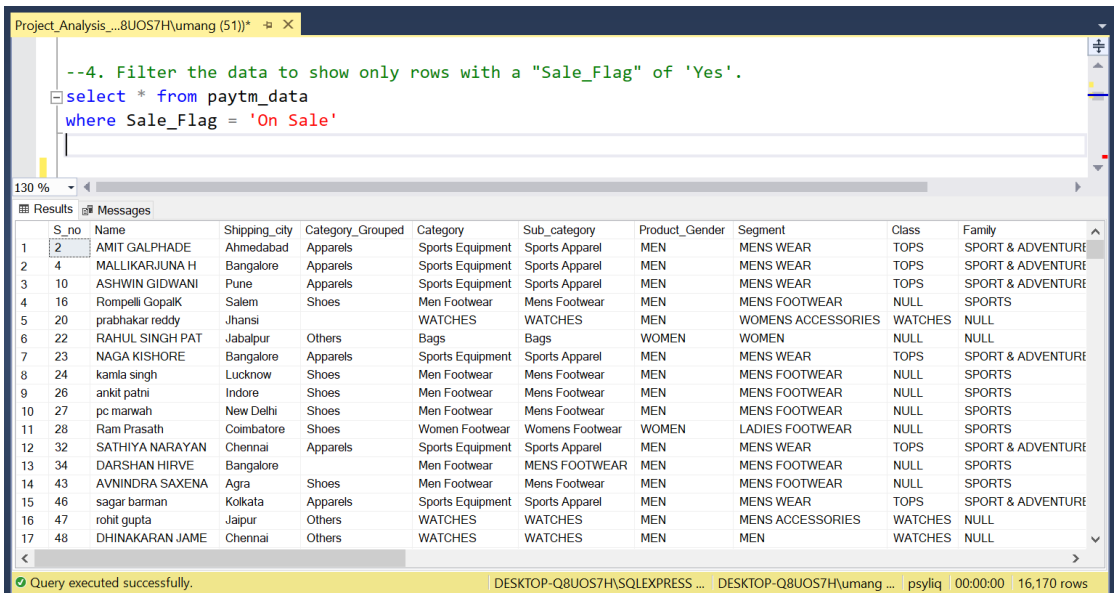
```
--3. Show me a table with all the data for products that belong to the
--"Electronics" category.
select * from paytm_data
where Category = 'Electronics'
```



```
--3. Show me a table with all the data for products that belong to the
--"Electronics" category.
select * from paytm_data
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_Method

```
--4. Filter the data to show only rows with a "Sale_Flag" of 'Yes'.
select * from paytm_data
where Sale_Flag = 'On Sale'
```



```
--4. Filter the data to show only rows with a "Sale_Flag" of 'Yes'.
select * from paytm_data
where Sale_Flag = 'On Sale'
```

	S_no	Name	Shipping_city	Category_Grouped	Category	Sub_category	Product_Gender	Segment	Class	Family
1	2	AMIT GALPHADE	Ahmedabad	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE
2	4	MALLIKARJUNA H	Bangalore	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE
3	10	ASHWIN GIDWANI	Pune	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE
4	16	Rompelli GopalK	Salem	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS
5	20	prabhakar reddy	Jhansi		WATCHES	WATCHES	MEN	WOMENS ACCESSORIES	WATCHES	NULL
6	22	RAHUL SINGH PAT	Jabalpur	Others	Bags	Bags	WOMEN	WOMEN	NULL	NULL
7	23	NAGA KISHORE	Bangalore	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE
8	24	kamla singh	Lucknow	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS
9	26	ankit patni	Indore	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS
10	27	pc marwah	New Delhi	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS
11	28	Ram Prasath	Coimbatore	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTWEAR	NULL	SPORTS
12	32	SATHIYA NARAYAN	Chennai	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE
13	34	DARSHAN HIRVE	Bangalore		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	SPORTS
14	43	AVNINDRA SAXENA	Agra	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS
15	46	sagar barman	Kolkata	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE
16	47	rohit gupta	Jaipur	Others	WATCHES	WATCHES	MEN	MENS ACCESSORIES	WATCHES	NULL
17	48	DHINAKARAN JAME	Chennai	Others	WATCHES	WATCHES	MEN	MEN	WATCHES	NULL

Query executed successfully. DESKTOP-Q8UOS7H\SQLEXPRESS ... DESKTOP-Q8UOS7H\umang ... psyliq 00:00:00 16,170 rows

```
--5. Sort the data by "Item_Price" in descending order. What is the most expensive item?
with a as (select Item_NM, Item_Price
, rank() over(order by Item_Price desc) as rn
from paytm_data)
select Item_NM, MAX(Item_Price) as item_price
from a
where rn = 1
group by Item_NM
```

```sql
--5. Sort the data by "Item_Price" in descending order. What is the most expensive item?
with a as (select Item_NM, Item_Price
, rank() over(order by Item_Price desc) as rn
from paytm_data)
select Item_NM, MAX(Item_Price) as item_price
from a
where rn = 1
group by Item_NM
```

130 %

Results | Messages

	Item_NM	item_price
1	Street Tuneo Mid Black Sneakers	13500.00
2	Element Soul M Black Running Shoes	13500.00
3	Eureka Brussels Nest of Tables	13500.00

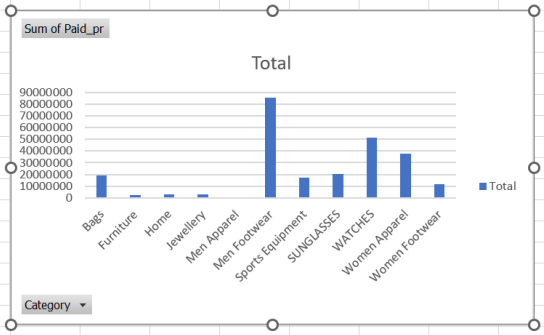
```sql
--6. Apply conditional formatting to highlight all products with a
--"Special_Price_effective" value below $5000 in red.
SELECT Special_Price_effective,
CASE WHEN Special_Price_effective < 5000 THEN 'Red'
ELSE 'Normal'
END AS Formatting
FROM paytm_data;
```

	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
1	Size	Sale_Flag	Payment_Method	coupon_money_effective	Coupon_Percentage	Quantity	Cost_Price	Item_Price	Special_Price_effecti	paid_pr_effective	Value_CM1	Value_CM2	Special_pri
2	FREE SIZE	Not on Sale	COD	454.62	0	1	2294.54	4999	4999	4544.38	1722.77	1134.77	49
3	XL	On Sale	COD	0		1	2919.33	4999	4999	4999	1499.87	876.87	49
4	55CM	Not on Sale	Prepaid	0		1	2186.66	4095	4095	4095	1433.07	955.07	40
5	XL	On Sale	COD	0		1	2919.33	4999	4999	4999	1499.87	876.87	49
6	11	Not on Sale	Prepaid	1873.75	25	1	5167.83	7495	7495	5621.25	-198.99	-357.99	74
7	10	Not on Sale	COD	1299	20	1	3897	6495	6495	5196	1039.82	776.82	64
8	9	Not on Sale	Prepaid	0		1	2589.62	4560	4560	4560	1441.5	1248.5	45
9	9	Not on Sale	COD	1000	0	1	3321.12	5995	5995	4995	1094.54	589.54	59
10	9	Not on Sale	COD	1138	20	1	3711.7	5690	5690	4552	312.35	312.35	56
11	XXXL	On Sale	COD	0		1	2412	4020	4020	4020	1608	1430	40
12	8	Not on Sale	COD	749.85		1	2919.31	4999	4999	4249.15	836.84	503.84	49
13	8	Not on Sale	COD	0		1	3210.33	5795	4636	4636	887.97	423.97	46
14	8	Not on Sale	COD	0		1	5875.87	7495	5621	5621	-907.25	-1090.25	56
15	8	Not on Sale	COD	0		1	3210.33	5795	4636	4636	887.97	423.97	46
16	7	Not on Sale	COD	1000	0	1	3309.01	5090	5090	4090	576.98	359.98	50
17	7	On Sale	Prepaid	1000	0	1	3211.31	5499	5499	4499	765.88	349.88	54
18	5	Not on Sale	COD	0		1	3534.3	6300	5670	5670	1478.08	1131.08	56
19	STANDARD	Not on Sale	COD	0		1	2672.68	4295	4295	4295	1124.17	862.17	42
20	4	Not on Sale	COD	0		1	2412	4020	4020	4020	1608	1430	40
21	FREE SIZE	On Sale	COD	0		1	2938.8	4799	4799	4799	1860.2	1581.2	47
22	FREE SIZE	Not on Sale	COD	454.62	0	1	2294.54	4999	4999	4544.38	1722.77	1134.77	49

paytm_data

```sql
--7. Create a pivot table to find the total sales value for each category.
select Category, Sum(Paid_pr) as total_sales
from paytm_data
group by Category
-- Used Excel as well as SQL REPORT BUILDER
```

	A	B
1	Row Labels	Sum of Paid_pr
2	Bags	18949494
3	Furniture	2401258
4	Home	2956426
5	Jewellery	2839168
6	Men Apparel	630925
7	Men Footwear	85645319
8	Sports Equipment	17485201
9	SUNGLASSES	20372305
10	WATCHES	51219020
11	Women Apparel	37533749
12	Women Footwear	11801140
13	Grand Total	251834005



PivotChart Fields

Choose fields to add to report:

Search

Value_CM1
Value_CM2
Special_price
Paid_pr

Drag fields between areas below:

Filters | Legend (Series)

Axis (Categories): Category

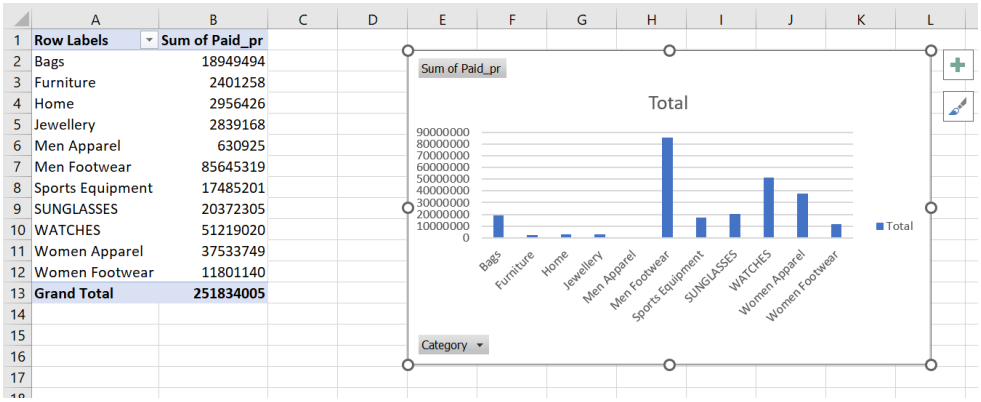
Values: Sum of Paid_pr

Defer Layout Update | Update

Sheet1 | paytm_data

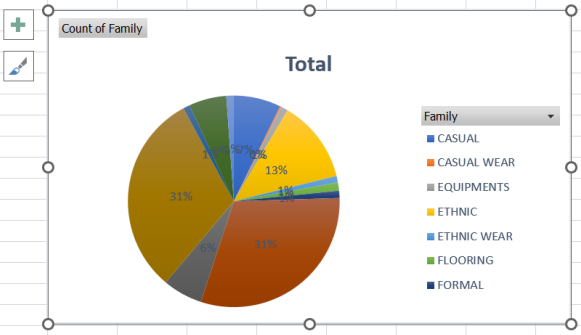
Category	Paid pr
	4499
Bags	18949494
Furniture	2401258
Home	2956426
Jewellery	2839168
Men Apparel	630925
Men Footwear	85640820
Sports Equipment	17485201
SUNGLASSES	20372305
WATCHES	51219020
Women Apparel	37533749
Women Footwear	11801140
Total	**251834005**

```sql
--8. Create a bar chart to visualize the total sales for each category.
select Category, Sum(Paid_pr) as total_sales
from paytm_data
group by Category
-- Used Excel
```

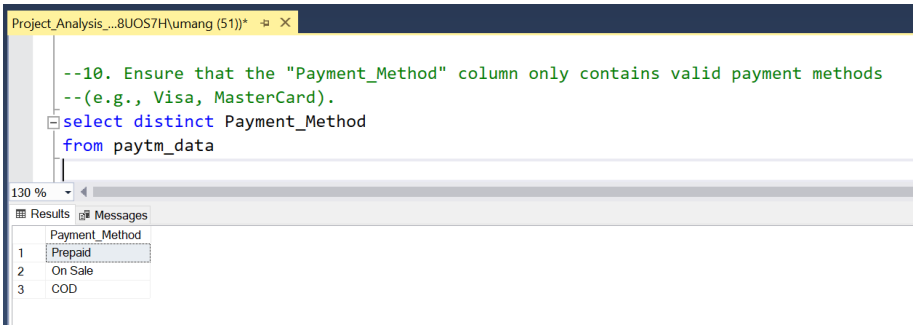



```sql
--9. Create a pie chart to show the distribution of products in the "Family" category.
select Family, COUNT(Family) as number_of_sales
from paytm_data
Group by Family
-- Used Excel
```

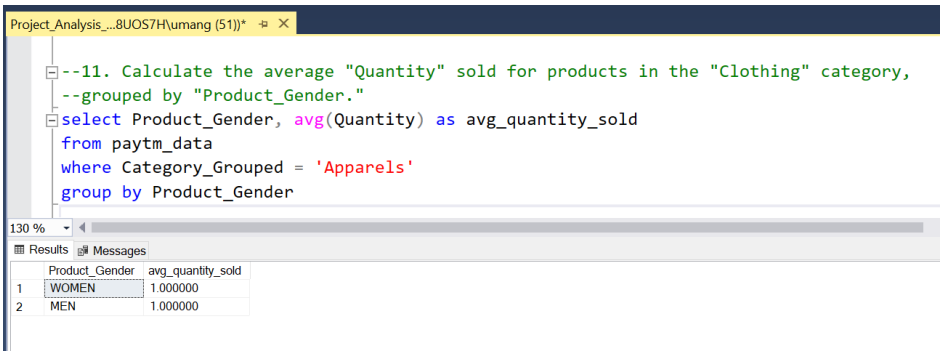
Row Labels	Count of Family
CASUAL	3670
CASUAL WEAR	121
EQUIPMENTS	527
ETHNIC	6426
ETHNIC WEAR	505
FLOORING	641
FORMAL	562
NULL	15533
SPORT & ADVENTURE	3087
SPORTS	15762
TABLES	524
UNISEX	2912
WOMEN	576
Grand Total	**50846**




```sql
--10. Ensure that the "Payment_Method" column only contains valid payment methods
--(e.g., Visa, MasterCard).
select distinct Payment_Method
from paytm_data
```




```sql
--11. Calculate the average "Quantity" sold for products in the "Clothing" category,
--grouped by "Product_Gender."
select Product_Gender, avg(Quantity) as avg_quantity_sold
from paytm_data
where Category_Grouped = 'Apparels'
group by Product_Gender
```

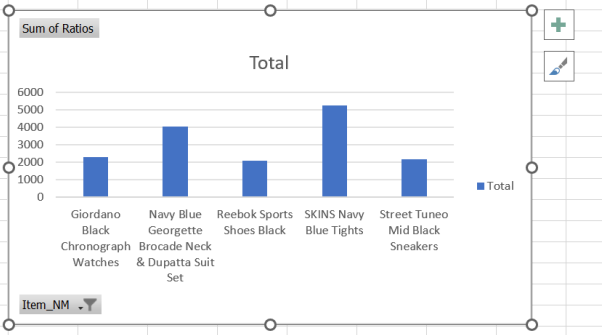



```sql
--12. Find the top 5 products with the highest "Value_CM1" and "Value_CM2" ratios.
--Create a chart to visualize this data.
select top 5 Item_NM, Value_CM1/Value_CM2 as ratios
from paytm_data
group by Item_NM, Value_CM1/Value_CM2
order by Value_CM1/Value_CM2 desc
```

```sql
--12. Find the top 5 products with the highest "Value_CM1" and "Value_CM2" ratios.
--Create a chart to visualize this data.
select top 5 Item_NM, Value_CM1/Value_CM2 as ratios
from paytm_data
group by Item_NM, Value_CM1/Value_CM2
order by Value_CM1/Value_CM2 desc
```

	Item_NM	ratios
1	CRICKET	9.49737180975702433978
2	ED417-EF-130D-1A2VDF silver Analog Watch	5.16530367462654018100
3	Giordano Black Chronograph Watches	5.16530367462654018100
4	Iridium Ii Full Spike White Cricket Shoes	5.16530367462654018100
5	2641-44 Gold/Silver Analog Watch	4.13971742543171114599

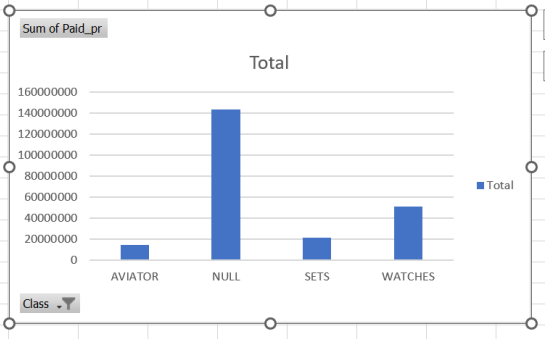
Row Labels	Sum of Ratios
Giordano Black Chronograph Watches	2281.851585
Navy Blue Georgette Brocade Neck & Dupatta Suit Set	4049.2868
Reebok Sports Shoes Black	2086.175635
SKINS Navy Blue Tights	5260.292776
Street Tuneo Mid Black Sneakers	2161.627217
Grand Total	**15839.23401**




```sql
--13. Identify the top 3 "Class" categories with the highest total sales. Create a
--stacked bar chart to represent this data.
select top 4 Class, sum(Paid_pr) as total_sales
from paytm_data
group by Class
order by sum(Paid_pr) desc
```

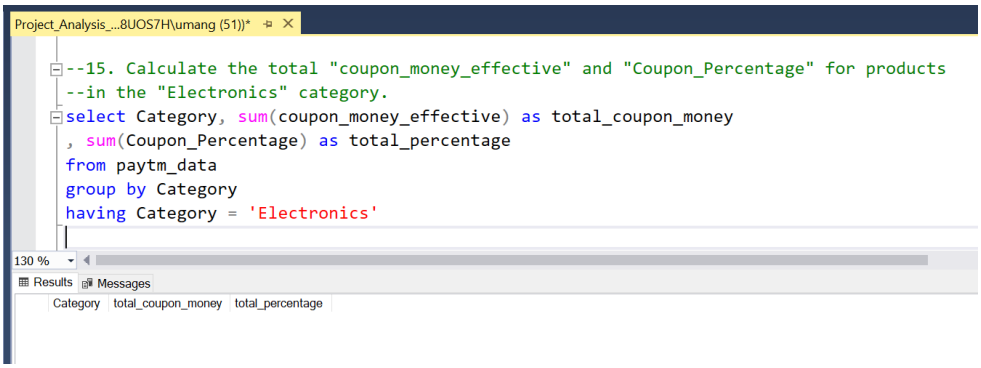
	Class	total_sales
1	NULL	143216014
2	WATCHES	51219020
3	SETS	21669280
4	AVIATOR	14644681

Row Labels	Sum of Paid_pr
AVIATOR	14644681
NULL	143220513
SETS	21669280
WATCHES	51219020
Grand Total	**230753494**

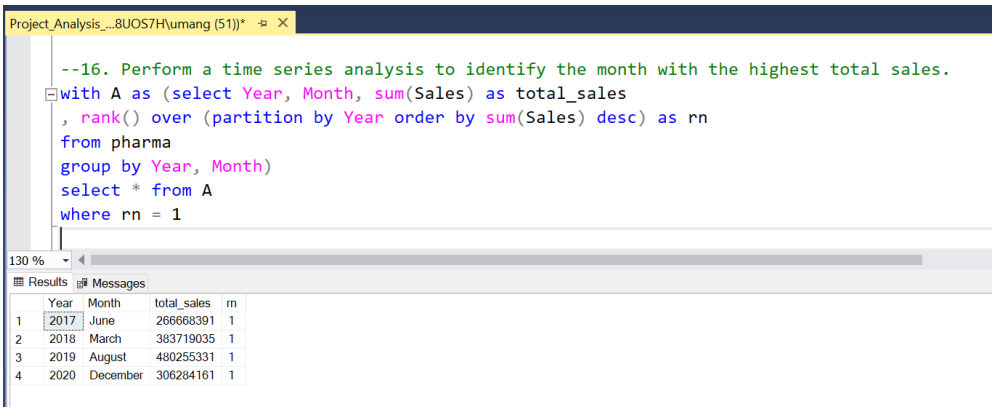



```sql
--14. Use VLOOKUP or INDEX-MATCH to retrieve the "Color" of a product with a specific
--"Item_NM."
```

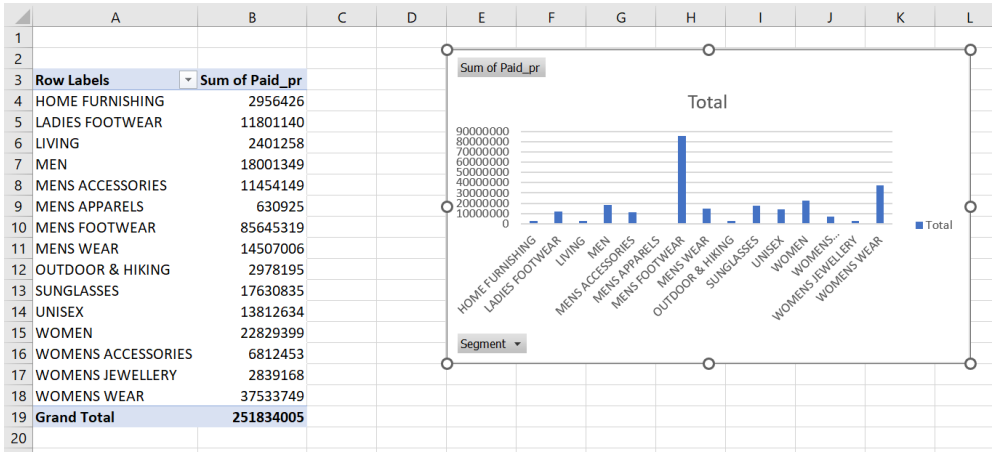
```sql
--15. Calculate the total "coupon_money_effective" and "Coupon_Percentage" for products
--in the "Electronics" category.
select Category, sum(coupon_money_effective) as total_coupon_money
, sum(Coupon_Percentage) as total_percentage
from paytm_data
group by Category
having Category = 'Electronics'
```




```sql
--16. Perform a time series analysis to identify the month with the highest total sales.
with A as (select Year, Month, sum(Sales) as total_sales
, rank() over (partition by Year order by sum(Sales) desc) as rn
from pharma
group by Year, Month)
select * from A
where rn = 1
```




```sql
--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(Paid_pr) as total_sales
from paytm_data
group by Segment
```



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```sql
--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(Paid_pr) as total_sales
from paytm_data
group by Segment
```

130 %

Results | Messages

	Segment	total_sales
1	MENS ACCESSORIES	11454149
2	OUTDOOR & HIKING	2978195
3	MENS WEAR	14507006
4	WOMENS ACCESSORIES	6812453
5	UNISEX	13812634
6	LADIES FOOTWEAR	11801140
7	WOMEN	22829399
8	WOMENS JEWELLERY	2839168
9	MENS APPARELS	630925
10	HOME FURNISHING	2956426
11	LIVING	2401258
12	MENS FOOTWEAR	85640820
13	WOMENS WEAR	37533749
14	SUNGLASSES	17630835
15	MEN	18005848

```sql
--18. Use the AVERAGEIFS function to find the average "Item_Price" for products that have
--a "Sale_Flag" of 'Yes.'
With A as (select * from paytm_data
where Sale_Flag = 'On Sale')
select Item_NM, Avg(Item_Price) as avg_item_price
from A
group by Item_NM
```

Project_Analysis_...8UOS7H\umang (51))*

```sql
--18. Use the AVERAGEIFS function to find the average "Item_Price" for products that have
--a "Sale_Flag" of 'Yes.'
With A as (select * from paytm_data
where Sale_Flag = 'On Sale')
select Item_NM, Avg(Item_Price) as avg_item_price
from A
group by Item_NM
```

130 %

Results | Messages

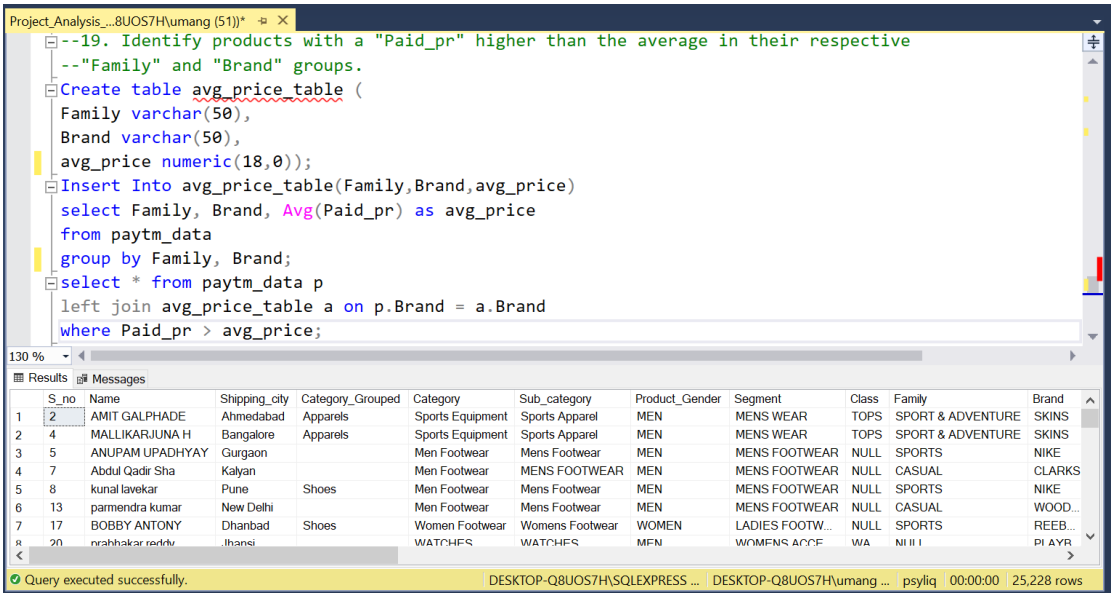
	Item_NM	avg_item_price
1	Gold/White Analog Watches	5218.077504
2	Th1790787/D Sport Black /White Chronograph-Mksp	7151.020599
3	Bpb-1004-C Silver/Black Analog Watch	5037.285156
4	Embroidered Blue Saree - Mksp	7030.377649
5	Es104201004 Black / Rose Gold Analog Watch	5890.795246
6	Ventilator Hls Grey Running Shoes	5490.607902
7	White/ Balck Chronograph	5577.303822
8	SKINS Navy Blue Tights	4871.987366
9	Green/Green Sunglasses	5543.634686
10	Sheen Silver/Black Analog Watch	6967.506283
11	Adizero F50 2 M Black Running Shoes	6042.604743
12	Silver/ Silver Analog Watch	7033.478193
13	Lunarswift+ 4 Black Running Shoes	5439.816733
14	Giordano Black Chronograph Watches	6064.221870

Query executed successfully. | DESKTOP-Q8UOS7H\SQLEXPRESS ... | DESKTOP-Q8UOS7H\umang ... | psyliq | 00:00:00 | 24 rows

```sql
--19. Identify products with a "Paid_pr" higher than the average in their respective
--"Family" and "Brand" groups.
Create table avg_price_table (
Family varchar(50),
Brand varchar(50),
avg_price numeric(18,0));
```

```sql
Insert Into avg_price_table(Family,Brand,avg_price)
select Family, Brand, Avg(Paid_pr) as avg_price
from paytm_data
group by Family, Brand;

select * from paytm_data p
left join avg_price_table a on p.Brand = a.Brand
where Paid_pr > avg_price;
```



Project_Analysis_...8UOS7H\umang (51))*

```sql
--19. Identify products with a "Paid_pr" higher than the average in their respective
--"Family" and "Brand" groups.
Create table avg_price_table (
Family varchar(50),
Brand varchar(50),
avg_price numeric(18,0));
Insert Into avg_price_table(Family,Brand,avg_price)
select Family, Brand, Avg(Paid_pr) as avg_price
from paytm_data
group by Family, Brand;
select * from paytm_data p
left join avg_price_table a on p.Brand = a.Brand
where Paid_pr > avg_price;
```

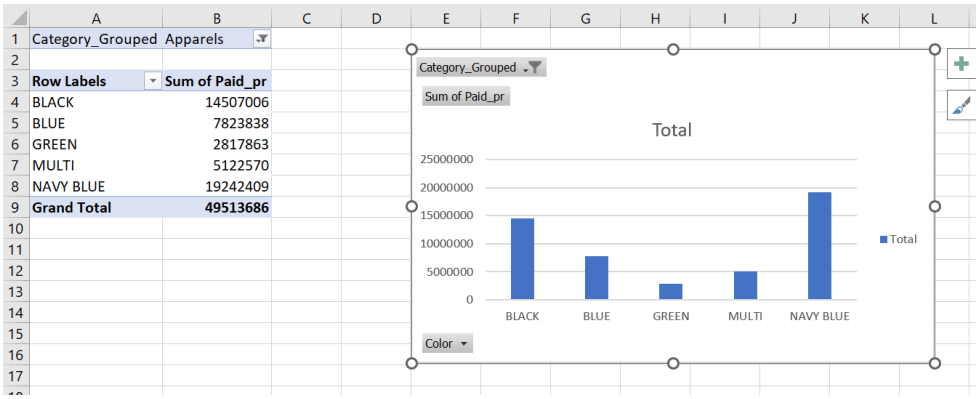
130 %

Results | Messages

	S_no	Name	Shipping_city	Category_Grouped	Category	Sub_category	Product_Gender	Segment	Class	Family	Brand
1	2	AMIT GALPHADE	Ahmedabad	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS
2	4	MALLIKARJUNA H	Bangalore	Apparels	Sports Equipment	Sports Apparel	MEN	MENS WEAR	TOPS	SPORT & ADVENTURE	SKINS
3	5	ANUPAM UPADHYAY	Gurgaon		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE
4	7	Abdul Qadir Sha	Kalyan		Men Footwear	MENS FOOTWEAR	MEN	MENS FOOTWEAR	NULL	CASUAL	CLARKS
5	8	kunal lavekar	Pune	Shoes	Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	SPORTS	NIKE
6	13	parmendra kumar	New Delhi		Men Footwear	Mens Footwear	MEN	MENS FOOTWEAR	NULL	CASUAL	WOOD...
7	17	BOBBY ANTONY	Dhanbad	Shoes	Women Footwear	Womens Footwear	WOMEN	LADIES FOOTW...	NULL	SPORTS	REEB...
8	20	prabhakar reddy	Jhansi		WATCHES	WATCHES	MEN	WOMENS ACCE...	WA	NULL	PLAYB...

Query executed successfully. | DESKTOP-Q8UOS7H\SQLEXPRESS ... | DESKTOP-Q8UOS7H\umang ... | psyliq | 00:00:00 | 25,228 rows

```sql
--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 Color, sum(Paid_pr) as total_sales
from paytm_data
where Category_Grouped = 'Apparels'
group by Color
order by sum(Paid_pr) desc
```



	A	B
1	Category_Grouped	Apparels
2		
3	**Row Labels**	**Sum of Paid_pr**
4	BLACK	14507006
5	BLUE	7823838
6	GREEN	2817863
7	MULTI	5122570
8	NAVY BLUE	19242409
9	**Grand Total**	**49513686**

--.....