



Welcome to my Paytm Mall e-Purchase Data Analysis project done as part of my Internship with PSYLIQ. This program helps unlock SQL's potential in understanding data.

Paytm Mall Epurchase Data Assessment Details

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

"Category_Grouped" represent what are categories grouped in the following table like Apparels,Others,Shoes,Home. There are 5 unique categories in paytm_epurchase_data.

```
SELECT DISTINCT Category_Grouped  
FROM paytm_epurchase_data;
```

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

```
SELECT Top(5) Shipping_City, COUNT(*) AS OrderCount  
FROM paytm_epurchase_data  
GROUP BY Shipping_City  
ORDER BY OrderCount DESC;
```

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

```
SELECT *  
FROM paytm_epurchase_data  
WHERE Category = 'Electronics';
```

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

```
SELECT *  
FROM paytm_epurchase_data  
WHERE Sale_Flag LIKE 'Yes';
```

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

```
SELECT Top(1) *  
FROM paytm_epurchase_data  
ORDER BY Item_Price DESC;
```

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

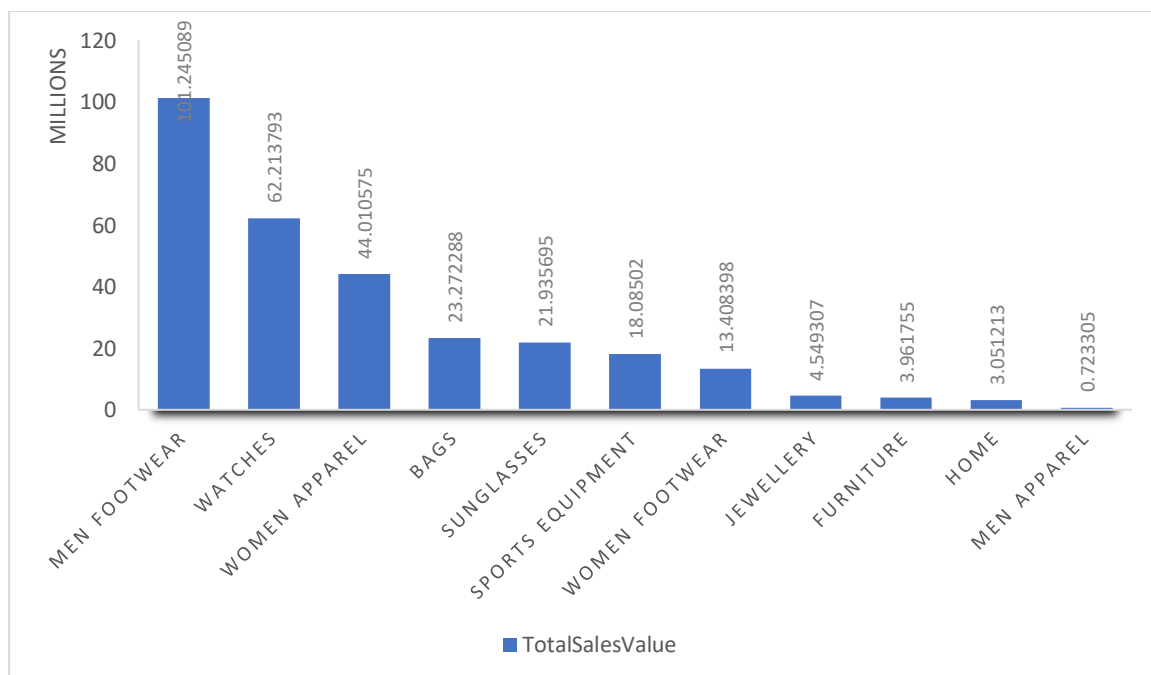
```
SELECT *,  
CASE  
    WHEN Special_Price_effective < 50 THEN 'Below $50'  
    ELSE 'Above $50'  
END AS Price_Category  
FROM paytm_epurchase_data;
```

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

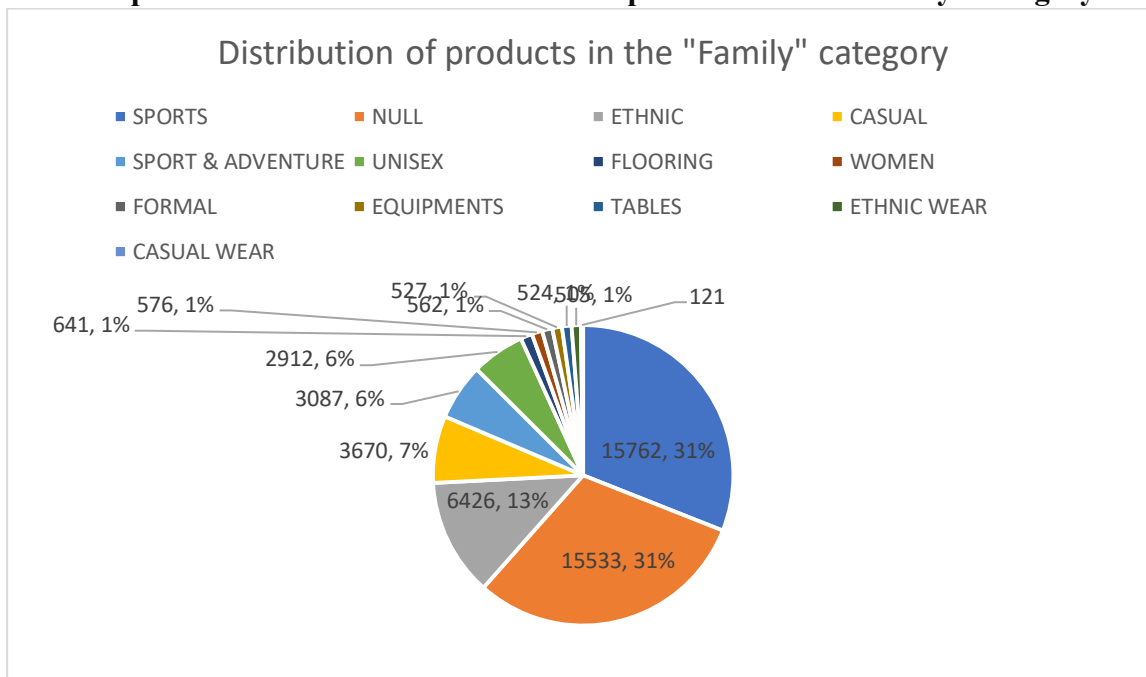
```
SELECT Category_Grouped, SUM(Item_Price) AS TotalSalesValue  
FROM paytm_epurchase_data  
GROUP BY Category_Grouped;
```

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

```
SELECT Category, SUM(Item_Price) AS TotalSalesValue  
FROM paytm_epurchase_data  
GROUP BY Category;
```



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



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

```
UPDATE Paytm_Epurchase_data
SET Payment_Method =
CASE
    WHEN Payment_Method NOT IN ('COD', 'Prepaid') THEN 'Online'
    ELSE Payment_Method
END;
```

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

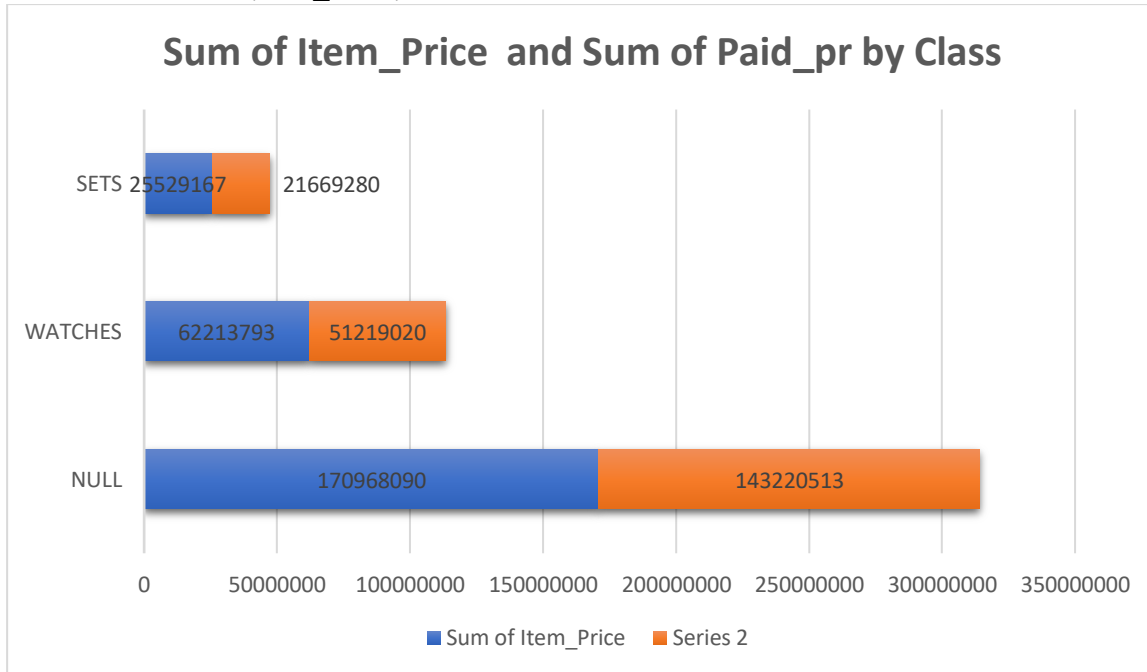
```
SELECT Product_Gender, AVG(Quantity) AS AverageQuantitySold
FROM Paytm_Epurchase_data
WHERE Category_Grouped = 'Clothing'
GROUP BY Product_Gender;
```

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)*, Value_CM1 / NULLIF(Value_CM2, 0) AS Ratio_Value_CM1_to_CM2
FROM Paytm_Epurchase_data
WHERE Value_CM2 > 0
ORDER BY Ratio_Value_CM1_to_CM2 DESC;
```

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

```
SELECT TOP 3 Class, SUM(Item_Price) AS Sum_of_Item_Price, SUM(Paid_pr) AS Sum_of_Paid_pr
FROM Paytm_Epurchase_data
GROUP BY Class
ORDER BY SUM(Item_Price) DESC;
```



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

```
SELECT Color
FROM Paytm_Epurchase_data
WHERE Item_NM = 'Erik Original Twill Jos Beige Casual Trousers';
```

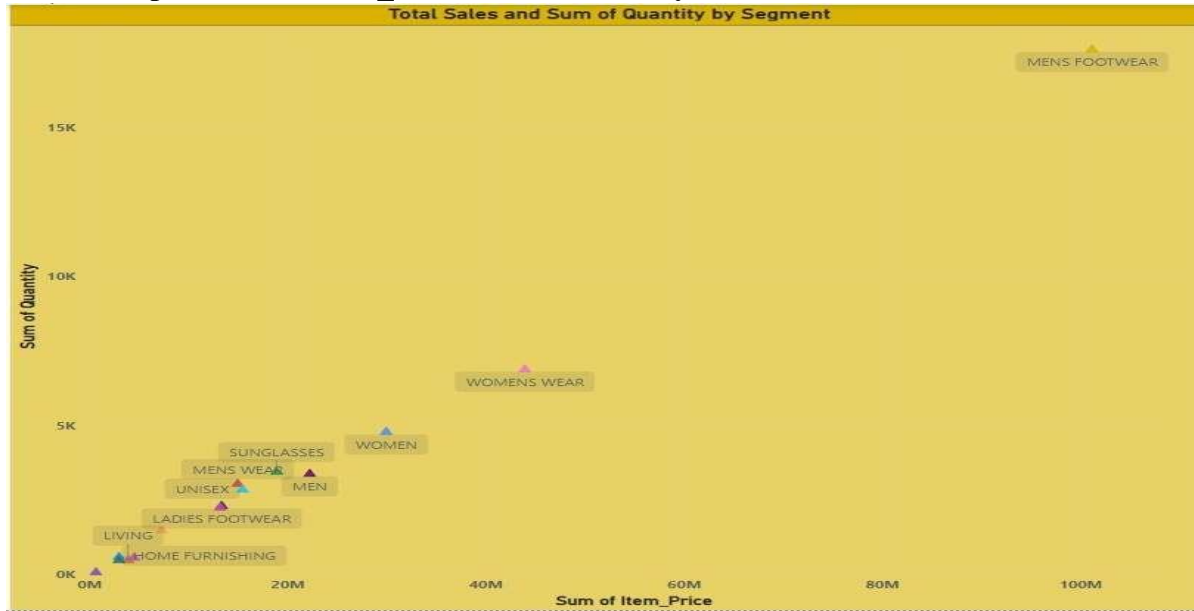
15. Calculate the total "coupon_money_effective" and "Coupon_Percentage" for products in the "Electronics" category.

```
SELECT
    SUM(coupon_money_effective) AS TotalCouponMoney,
    SUM(Coupon_Percentage) AS TotalCouponPercentage
FROM Paytm_Epurchase_data
WHERE Category_Grouped = 'Electronics';
```

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

```
--SELECT top 1
-- DATEPART(month, YourDateColumn) AS SalesMonth,
-- SUM(Item_Price) AS TotalSales
--FROM Paytm_Epurchase_data
--GROUP BY DATEPART(month, YourDateColumn)
--ORDER BY TotalSales DESC;
```

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.



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

```
SELECT AVG(Item_Price) AS AverageItemPrice
FROM Paytm_Epurchase_data
WHERE Sale_Flag = 'Yes';
```

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

```
SELECT *
FROM Paytm_Epurchase_data P1
WHERE Paid_pr > (
    SELECT AVG(Paid_pr)
    FROM Paytm_Epurchase_data P2
    WHERE P1.Family = P2.Family AND P1.Brand = P2.Brand );
```

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(Item_Price) AS TotalSales
FROM Paytm_Epurchase_data
WHERE Category_Grouped = 'Clothing'
GROUP BY Color;
```

RESULTS from SQL Server

111 %

Results

Messages

Category_Grouped

1Apparels

2Others

3Shoes

4NULL

5Home

Shipping_City

OrderCount

1New Delhi4561

2Chennai4254

3Bangalore3974

4Mumbai3159

5Hyderabad2849

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

coupon_money_effective

Coupon_Percentage

Quantity

Cost_Price

Item_Price

Special_Price_eff

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

coupon_money_effective

Coupon_Percentage

Quantity

Cost_Price

Item_Price

Special_Price_eff

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

coupon_money_effective

Coupon_Percentage

Quantity

Cost_Price

Item_Price

Special_Price_eff

1

36

Ramasamy Dharma

Rajapalayam

Shoes

Men Footwear

Mens Footwear

MEN

MENS FOOTWEAR

NULL

SPORTS

PUMA

SNEAKERS

Street Tuneo Mid Black Sneakers

BLACK

9

Not On Sale

COD

0

NULL

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

coupon_money_effective

Coupon_Percentage

Quantity

Cost_Price

Item_Price

Special_Price_eff

1

1

ABHINAV CHATTER

Jabalpur

Others

SUNGLASSES

SUNGLASSES

UNISEX

SUNGLASSES

AVIATOR

UNISEX

RAY BAN

AVIATOR

Rb3025 003/32 Grey Sunglasses

GREY

FREE SIZE

Not On Sale

COD

454.619995

117188

0

2

2

AMIT GALPHADE

Ahmedabad

Apparels

Sports Equip...

Sports Apparel

MEN

MENS WEAR

TOPS

SPOR...

SKINS

TIGHTS

SKINS Navy Blue Tights

BLA...

XL

On Sale

COD

0

NULL

3

3

PRAEHI NAMBA...

Chennai

Others

Bags

Bags

UNISEX

UNISEX

NULL

VIP

STROL...

Black Soft Strolley

BLA...

55CM

Not On Sale

Prepaid

0

NULL

4

4

MALLIKARJUNA H

Bangalore

Apparels

Sports Equip...

Sports Apparel

MEN

MENS WEAR

TOPS

SPOR...

SKINS

TIGHTS

SKINS Navy Blue Tights

BLA...

XL

On Sale

COD

0

NULL

5

5

ANUPAM UPADH...

Gurgaon

NULL

Men Footwear

Mens Footw...

MEN

MENS FOOT...

NULL

SPOR...

NIKE

BASKE...

Air Visi Pro Ii Nbk Black Basket...

BLA...

11

Not On Sale

Prepaid

1873.75

25

6

6

SITAL DE

Aalo

Shoes

Men Footwear

Mens Footw...

MEN

MENS FOOT...

NULL

SPOR...

REEBOK

RUNN...

Reebok Sports Shoes Black

BLA...

10

Not On Sale

COD

1299

20

7

7

Abdul Qadir Sha

Kalyan

NULL

Men Footwear

MENS FOOT...

MEN

MENS FOOT...

NULL

CASUAL

CLARKS

LOAFE...

Brown Loafers

BR...

9

Not On Sale

Prepaid

0

NULL

8

8

kunal lavekar

Pune

Shoes

Men Footwear

Mens Footw...

MEN

MENS FOOT...

NULL

SPOR...

NIKE

RUNN...

Free 3.0 Grey Running Shoes

GREY

9

Not On Sale

COD

1000

0

| Results | | Messages | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|-----------|-----------------|------------------|----------|-----------------|----------------|---------|---------------|---------|---------|---------|----------|-------------------------------------|--------|-----------|----------------|------------------------|-------------------|----------|------------|------------|-------------------|
| Category_Grouped | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Apparels | | | | | | | | | | | | | | | | | | | | | |
| 2 | Others | | | | | | | | | | | | | | | | | | | | | |
| 3 | Shoes | | | | | | | | | | | | | | | | | | | | | |
| 4 | NULL | | | | | | | | | | | | | | | | | | | | | |
| 5 | Home | | | | | | | | | | | | | | | | | | | | | |
| Shipping_City OrderCount | | | | | | | | | | | | | | | | | | | | | | |
| 1 | New Delhi | | 4561 | | | | | | | | | | | | | | | | | | | |
| 2 | Chennai | | 4254 | | | | | | | | | | | | | | | | | | | |
| 3 | Bangalore | | 3974 | | | | | | | | | | | | | | | | | | | |
| 4 | Mumbai | | 3159 | | | | | | | | | | | | | | | | | | | |
| 5 | Hyderabad | | 2849 | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| 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 | coupon_money_effective | Coupon_Percentage | Quantity | Cost_Price | Item_Price | Special_Price_eff |
| | | | | | | | | | | | | | | | | | | | | | | |
| 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 | coupon_money_effective | Coupon_Percentage | Quantity | Cost_Price | Item_Price | Special_Price_eff |
| | | | | | | | | | | | | | | | | | | | | | | |
| 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 | coupon_money_effective | Coupon_Percentage | Quantity | Cost_Price | Item_Price | Special_Price_eff |
| 1 | 36 | Ramasamy Dharma | Rajapalayam | Shoes | Men Footwear | Mens Footwear | MEN | MENS FOOTWEAR | NULL | SPORTS | PUMA | SNEAKERS | Street Tuneo Mid Black Sneakers | BLACK | 9 | Not On Sale | COD | 0 | | | | NULL |
| | | | | | | | | | | | | | | | | | | | | | | |
| 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 | coupon_money_effective | Coupon_Percentage | Quantity | Cost_Price | Item_Price | Special_Price_eff |
| 1 | 1 | ABHINAV CHATTER | Jabalpur | Others | SUNGLASSES | SUNGLASSES | UNISEX | SUNGLASSES | AVIATOR | UNISEX | RAY BAN | AVIATOR | Rb3025 003/32 Grey Sunglasses | GREY | FREE SIZE | Not On Sale | COD | 454.619995 | 117188 | 0 | | |
| 2 | 2 | AMIT GALPHADE | Ahmedabad | Apparels | Sports Equip... | Sports Apparel | MEN | MENS WEAR | TOPS | SPOR... | SKINS | TIGHTS | SKINS Navy Blue Tights | BLA... | XL | On Sale | COD | 0 | | | | NULL |
| 3 | 3 | PRAEHI NAMBAIA | Chennai | Others | Bags | Bags | UNISEX | UNISEX | NULL | NULL | VIP | STROL... | Black Soft Strolley | BLA... | 55CM | Not On Sale | Prepaid | 0 | | | | NULL |
| 4 | 4 | MALLIKARJUNA H | Bangalore | Apparels | Sports Equip... | Sports Apparel | MEN | MENS WEAR | TOPS | SPOR... | SKINS | TIGHTS | SKINS Navy Blue Tights | BLA... | XL | On Sale | COD | 0 | | | | NULL |
| 5 | 5 | ANUPAM UPADH... | Gurgaon | NULL | Men Footwear | Mens Footw... | MEN | MENS FOOT... | NULL | SPOR... | NIKE | BASKE... | Air Visi Pro Ii Nbk Black Basket... | BLA... | 11 | Not On Sale | Prepaid | 1873.75 | | | | 25 |
| 6 | 6 | SITAL DE | Aalo | Shoes | Men Footwear | Mens Footw... | MEN | MENS FOOT... | NULL | SPOR... | REEBOK | RUNN... | Reebok Sports Shoes Black | BLA... | 10 | Not On Sale | COD | 1299 | | | | 20 |
| 7 | 7 | Abdul Qadir Sha | Kalyan | NULL | Men Footwear | MENS FOOT... | MEN | MENS FOOT... | NULL | CASUAL | CLARKS | LOAFE... | Brown Loafers | BR... | 9 | Not On Sale | Prepaid | 0 | | | | NULL |
| 8 | 8 | kunal lavekar | Pune | Shoes | Men Footwear | Mens Footw... | MEN | MENS FOOT... | NULL | SPOR... | NIKE | RUNN... | Free 3.0 Grey Running Shoes | GREY | 9 | Not On Sale | COD | 1000 | | | | 0 |

| | | | | | | | | | | | | | | | | | | |
|------------------|------------------|---------------------|------------------|----------|--------------|----------------|---------|------------------|---------|--------|----------|---------------------|--|-------|-----------|----------------|------------------------|---|
| Category_Grouped | | TotalSales/Value | | | | | | | | | | | | | | | | |
| 1 | Apparels | 56208837 | | | | | | | | | | | | | | | | |
| 2 | Others | 83734877 | | | | | | | | | | | | | | | | |
| 3 | Shoes | 68409549 | | | | | | | | | | | | | | | | |
| 4 | NULL | 85054982 | | | | | | | | | | | | | | | | |
| 5 | Home | 3051213 | | | | | | | | | | | | | | | | |
| Category | | TotalSales/Value | | | | | | | | | | | | | | | | |
| 1 | Women Apparel | 44010575 | | | | | | | | | | | | | | | | |
| 2 | Men Footwear | 101245089 | | | | | | | | | | | | | | | | |
| 3 | Men Apparel | 723305 | | | | | | | | | | | | | | | | |
| 4 | Bags | 23272288 | | | | | | | | | | | | | | | | |
| 5 | Jewellery | 4549307 | | | | | | | | | | | | | | | | |
| 6 | Sports Equipm... | 18089020 | | | | | | | | | | | | | | | | |
| 7 | SUNGLASSES | 21935695 | | | | | | | | | | | | | | | | |
| 8 | WATCHES | 62213793 | | | | | | | | | | | | | | | | |
| Family | | Ordercount | | | | | | | | | | | | | | | | |
| 1 | SPORTS | 15782 | | | | | | | | | | | | | | | | |
| 2 | NULL | 15533 | | | | | | | | | | | | | | | | |
| 3 | ETHNIC | 6426 | | | | | | | | | | | | | | | | |
| 4 | CASUAL | 3670 | | | | | | | | | | | | | | | | |
| 5 | SPORT... | 3087 | | | | | | | | | | | | | | | | |
| 6 | UNISEX | 2912 | | | | | | | | | | | | | | | | |
| 7 | FLOOR... | 641 | | | | | | | | | | | | | | | | |
| 8 | WOMEN | 578 | | | | | | | | | | | | | | | | |
| Product_Gender | | AverageQuantitySold | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 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 | coupon_money_effective | |
| 1 | 1304 | SANTOSH UPADHYA | BALLIA | Others | WATCHES | WATCHES | MEN | MENS ACCESSORIES | WATCHES | NULL | GIORDANO | CHRONOGRAPH WATCHES | Giordano Black Chronograph Watches | BLACK | FREE SIZE | On Sale | COD | 0 |
| 2 | 47 | richi gada | Jajpur | Others | WATCHES | WATCHES | MEN | MENS ACCESSORIES | WATCHES | NULL | GIORDANO | CHRONOGRAPH WATCHES | Giordano Black Chronograph Watches | BLACK | FREE SIZE | On Sale | COD | 0 |
| 3 | 4803 | MUTHU KUMARAN | Chennai | NULL | Men Foo... | MENS FOO... | MEN | MENS FOOTWEAR | NULL | SPO... | PUMA | CRICKET | Irdium Ii Full Spike White Cricket Sh... | WHITE | 10 | On Sale | COD | 0 |
| 4 | 3494 | Babita Pant | Noida | Others | WATCHES | WATCHES | MEN | MENS ACCESSORIES | WATCHES | NULL | GIORDANO | CHRONOGRAPH WATCHES | Giordano Black Chronograph Watches | BLACK | FREE SIZE | On Sale | COD | 0 |
| 5 | 1578 | Srinivas Rao | Mumbai | NULL | Men Foo... | MENS FOO... | MEN | MENS FOOTWEAR | NULL | SPO... | PUMA | CRICKET | Irdium Ii Full Spike White Cricket Sh... | WHITE | 10 | On Sale | COD | 0 |

Results Messages

| | Class | Sum_of_Item_Price | Sum_of_Paid_pr |
|---|---------|-------------------|----------------|
| 1 | NULL | 170968090 | 143220513 |
| 2 | WATCHES | 62213793 | 51219020 |
| 3 | SETS | 25529167 | 21669280 |

| Color |
|---------|
| 1 BEIGE |
| 2 BEIGE |
| 3 BEIGE |
| 4 BEIGE |
| 5 BEIGE |
| 6 BEIGE |

| TotalCouponMoney | TotalCouponPercentage |
|------------------|-----------------------|
| 1 NULL | NULL |

| Segment | Sum_of_Item_Price | Sum_of_Quantity |
|-----------------|-------------------|-----------------|
| 1 MENS FOOTWEAR | 101245089 | 17653 |
| 2 WOMENS WEAR | 44010575 | 6931 |
| 3 WOMEN | 30013131 | 4828 |
| 4 MEN | 22291728 | 3422 |
| 5 SUNGLASSES | 18931045 | 3488 |
| 6 UNISEX | 15519256 | 2890 |

| AverageItemPrice |
|------------------|
| 1 NULL |

| S_no | Name | Shipping_city | Category_Grouped | Category | Sub_Category | Product_Gender | Segment | Class | Family | Brand | Brck | Item_NM | Color | Size | Sale_Flag | Payment_Method | coupon_money_effective | Coupon_Percent | |
|------|------|------------------|------------------|----------|------------------|----------------|---------|--------------|--------|-------------------|--------|---------|---------------------------|---------|-----------|----------------|------------------------|----------------|------|
| 1 | 2 | AMIT GALPHADE | Ahmedabad | Apparels | Sports Equipment | Sports Apparel | MEN | MENS WEAR | TOPS | SPORT & ADVENTURE | SKINS | TIGHTS | SKINS Navy Blue Tights | BLACK | XL | On Sale | COD | 0 | NULL |
| 2 | 4 | MALIKARJUN... | Bangalore | Apparels | Sports Equipment | Sports Apparel | MEN | MENS WEAR | TOPS | SPORT & ADVENTURE | SKINS | TIGHTS | SKINS Navy Blue Tights | BLACK | XL | On Sale | COD | 0 | NULL |
| 3 | 5 | ANUPAM UPAD... | Gurgaon | NULL | Men Footwear | Mens Footw... | MEN | MENS FOO... | NULL | SPORTS | NIKE | BASK... | Air Vap Pro II Nbk Blk | BLACK | 11 | Not On ... | Prepaid | 1873.75 | 25 |
| 4 | 7 | Abdul Qadir Sha | Kalyan | NULL | Men Footwear | MENS FOOT... | MEN | MENS FOO... | NULL | CASUAL | CLA... | LOAF... | Brown Loafers | BRO... | 9 | Not On ... | Prepaid | 0 | NULL |
| 5 | 8 | kunal lawekar | Pune | Shoes | Men Footwear | Mens Footw... | MEN | MENS FOO... | NULL | SPORTS | NIKE | RUN... | Free 3.0 Grey Runnin... | GREY | 9 | Not On ... | COD | 1000 | 0 |
| 6 | 13 | paramendra ku... | New Delhi | NULL | Men Footwear | Mens Footw... | MEN | MENS FOO... | NULL | CASUAL | WO... | BOOTS | Tan Boots | TAN | 8 | Not On ... | COD | 0 | NULL |
| 7 | 17 | BOBBY ANTONY | Dhanbad | Shoes | Women Footwear | Womens Fo... | WOMEN | LADIES FO... | NULL | SPORTS | REE... | RUN... | Reaiflex Optimal Yello... | YELL... | 5 | Not On ... | COD | 0 | NULL |
| 8 | 20 | prabhakar reddy | Jhansi | NULL | WATCHES | WATCHES | MEN | WOMENS A... | WA... | NULL | PLA... | ANAL... | Bpb-1004-C Silver/Blk | SILV... | FR... | On Sale | COD | 0 | NULL |

Color TotalSales