

# Sales Analysis

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# Introduction

This report analyzes e-commerce purchase data for a one-year period. The dataset includes transaction IDs, purchase dates, and customer details. The goal is to identify trends in sales performance, customer behavior, and purchasing patterns over the past year

we aim to uncover insights that can inform future sales strategies and help improve customer engagement and overall business performance



# Simple View of Data

| Order Date | CustomerName | State             | City               |
|------------|--------------|-------------------|--------------------|
| 01/04/2018 | Bharat       | Gujarat           | Ahmedabad          |
| 01/04/2018 | Pearl        | Maharashtra       | Pune               |
| 03/04/2018 | Jahan        | Madhya Pradesh    | Bhopal             |
| 03/04/2018 | Divsha       | Rajasthan         | Jaipur             |
| 05/04/2018 | Kasheen      | West Bengal       | Kolkata            |
| 06/04/2018 | Hazel        | Karnataka         | Bangalore          |
| 06/04/2018 | Sonakshi     | Jammu and Kashmir | Kashmir            |
| 08/04/2018 | Aarushi      | Tamil Nadu        | Chennai            |
| 09/04/2018 | Jitesh       | Uttar Pradesh     | Lucknow            |
| 09/04/2018 | Yogesh       | Bihar             | Patna              |
| 11/04/2018 | Anita        | Kerala            | Thiruvananthapuram |
| 12/04/2018 | Shrichand    | Punjab            | Chandigarh         |
| 12/04/2018 | Mukesh       | Haryana           | Chandigarh         |
| 13/04/2018 | Vandana      | Himachal Pradesh  | Simla              |
| 15/04/2018 | Bhavna       | Sikkim            | Gangtok            |
| 15/04/2018 | Kanak        | Goa               | Goa                |
| 17/04/2018 | Sagar        | Nagaland          | Kohima             |

| Order ID | Amount | Profit | Quantity | Category    | Sub-Category     |
|----------|--------|--------|----------|-------------|------------------|
| B-25601  | 1275   | -1148  | 7        | Furniture   | Bookcases        |
| B-25601  | 66     | -12    | 5        | Clothing    | Stole            |
| B-25601  | 8      | -2     | 3        | Clothing    | Hankerchief      |
| B-25601  | 80     | -56    | 4        | Electronics | Electronic Games |
| B-25602  | 168    | -111   | 2        | Electronics | Phones           |
| B-25602  | 424    | -272   | 5        | Electronics | Phones           |
| B-25602  | 2617   | 1151   | 4        | Electronics | Phones           |
| B-25602  | 561    | 212    | 3        | Clothing    | Saree            |
| B-25602  | 119    | -5     | 8        | Clothing    | Saree            |
| B-25603  | 1355   | -60    | 5        | Clothing    | Trousers         |
| B-25603  | 24     | -30    | 1        | Furniture   | Chairs           |
| B-25603  | 193    | -166   | 3        | Clothing    | Saree            |
| B-25603  | 180    | 5      | 3        | Clothing    | Trousers         |
| B-25603  | 116    | 16     | 4        | Clothing    | Stole            |
| B-25603  | 107    | 36     | 6        | Clothing    | Stole            |
| B-25603  | 12     | 1      | 2        | Clothing    | Hankerchief      |
| B-25603  | 38     | 18     | 1        | Clothing    | Kurti            |

| Month of Order Date | Category    | Target |
|---------------------|-------------|--------|
| 1/4/2018            | Furniture   | 10400  |
| 1/5/2018            | Furniture   | 10500  |
| 1/6/2018            | Furniture   | 10600  |
| 1/7/2018            | Furniture   | 10800  |
| 1/8/2018            | Furniture   | 10900  |
| 1/9/2018            | Furniture   | 11000  |
| 1/10/2018           | Furniture   | 11100  |
| 1/11/2018           | Furniture   | 11300  |
| 1/12/2018           | Furniture   | 11400  |
| 1/1/2019            | Furniture   | 11500  |
| 1/2/2019            | Furniture   | 11600  |
| 1/3/2019            | Furniture   | 11800  |
| 1/4/2018            | Electronics | 9000   |
| 1/5/2018            | Electronics | 9000   |
| 1/6/2018            | Electronics | 9000   |
| 1/7/2018            | Electronics | 9000   |

Using sql to get data about target

```

select CONCAT(1,'-', MONTH( 1.Order_Date),'-',YEAR( 1.Order_Date)) as 'Month of Order Date' , sum(o.Amount) as Target ,o.Category
from [List of Orders] l
inner join [Order Details] o
on l.Order_ID=o.Order_ID
group by o.Category , MONTH( 1.Order_Date) , YEAR( 1.Order_Date),o.Category
order by Category desc ,YEAR( 1.Order_Date), MONTH( 1.Order_Date)

```

|    | Month of Order Date | Target | Category  |
|----|---------------------|--------|-----------|
| 1  | 1-4-2018            | 8121   | Furniture |
| 2  | 1-5-2018            | 6220   | Furniture |
| 3  | 1-6-2018            | 5532   | Furniture |
| 4  | 1-7-2018            | 3483   | Furniture |
| 5  | 1-8-2018            | 9538   | Furniture |
| 6  | 1-9-2018            | 8704   | Furniture |
| 7  | 1-10-2018           | 6766   | Furniture |
| 8  | 1-11-2018           | 15165  | Furniture |
| 9  | 1-12-2018           | 9474   | Furniture |
| 10 | 1-1-2019            | 21257  | Furniture |

| Month of Order Date | Category    | Amount |
|---------------------|-------------|--------|
| 01/04/2018          | Furniture   | 8121   |
| 01/05/2018          | Furniture   | 6220   |
| 01/06/2018          | Furniture   | 5532   |
| 01/07/2018          | Furniture   | 3483   |
| 01/08/2018          | Furniture   | 9538   |
| 01/09/2018          | Furniture   | 8704   |
| 01/10/2018          | Furniture   | 6766   |
| 01/11/2018          | Furniture   | 15165  |
| 01/12/2018          | Furniture   | 9474   |
| 01/01/2019          | Furniture   | 21257  |
| 01/02/2019          | Furniture   | 16262  |
| 01/03/2019          | Furniture   | 16659  |
| 01/04/2018          | Electronics | 11127  |
| 01/05/2018          | Electronics | 12807  |
| 01/06/2018          | Electronics | 9344   |
| 01/07/2018          | Electronics | 6502   |

# Data Cleaning and Preprocessing

- **Data cleaning** :involves addressing issues like missing values, duplicates, and inconsistent formats
- **Handling Missing Data**: Missing values are either filled in or removed.
- **Removing Duplicates**: Duplicate entries are identified and removed.



Data Cleaning

# Initial Data Exploration

The objective is to gain a comprehensive understanding of the dataset through the examination of key statistical metrics and the visualization of data patterns. This process aims to identify emerging trends, detect outliers, and uncover preliminary insights that can guide further, more detailed analysis



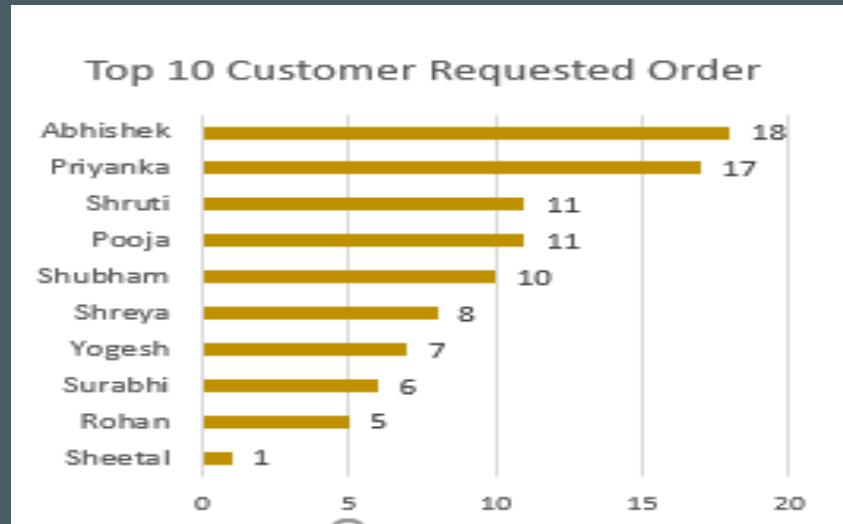
# Depth Analysis and Insights

This phase analyzes the data to uncover key insights on sales, customer behavior, and product trends, driving informed business decisions

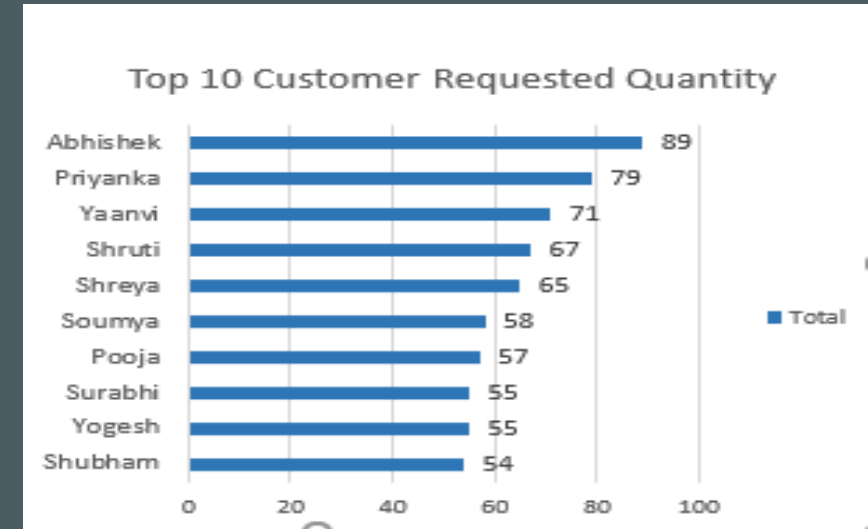
## Depth Analysis and Insights

- **Top Products:** Identify best-selling and most popular products.
- **Customer Behavior:** Analyze purchasing patterns to identify key customer segments.
- **Geographic Insights:** Highlight regions or cities with the highest order volumes.
- **Sales Trends:** Detect key trends in product demand and customer behavior.





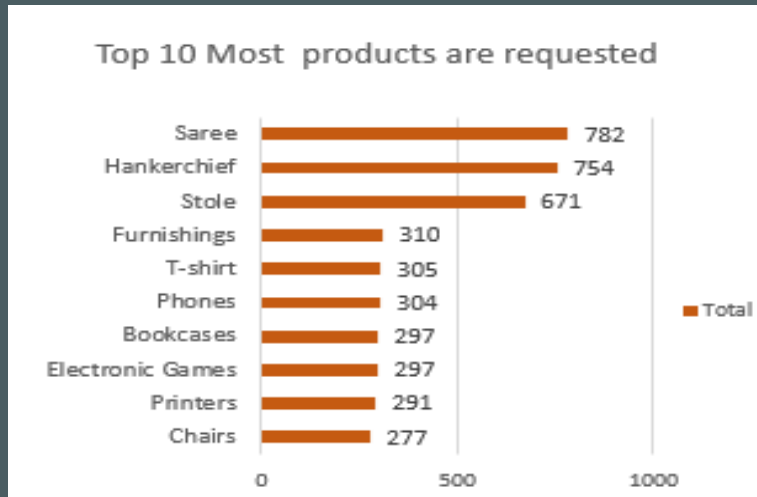
The Highest Customer Ordered Products



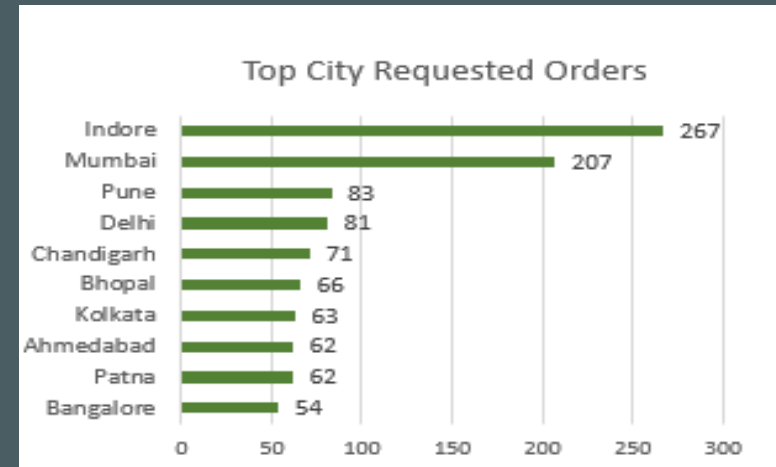
The Highest Customer Ordered Quantity of Products

We observe a difference between the customers who make the most orders and those who order the largest quantities of Products.





The Most Products are soled



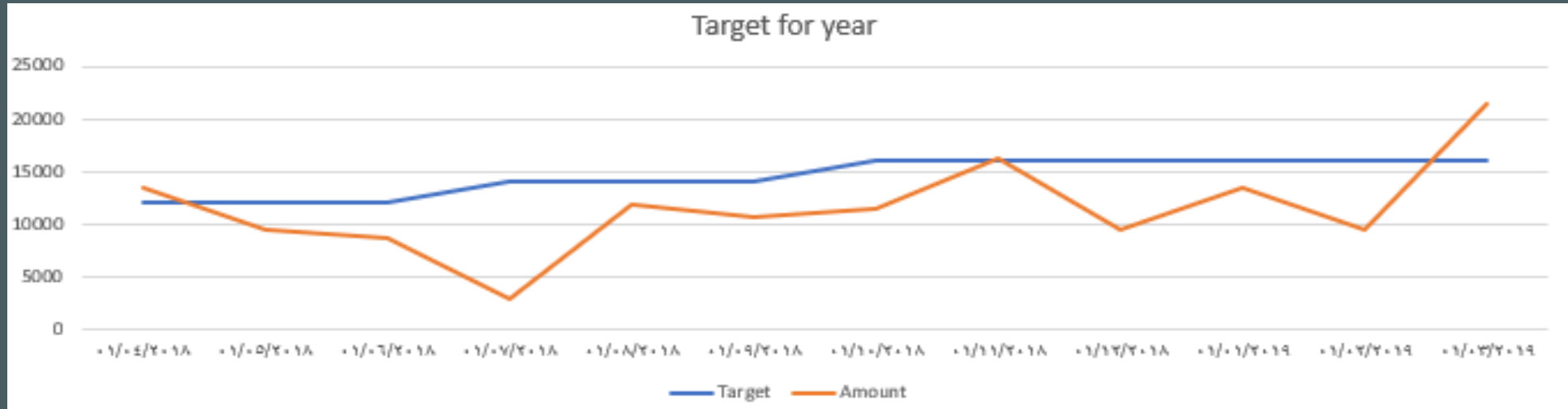
The Most City Requested orders

# Sales Performance vs. Target

This analysis compares sales performance against targets for each category, highlighting whether goals were met, exceeded, or missed. It also includes percentage variances for each category

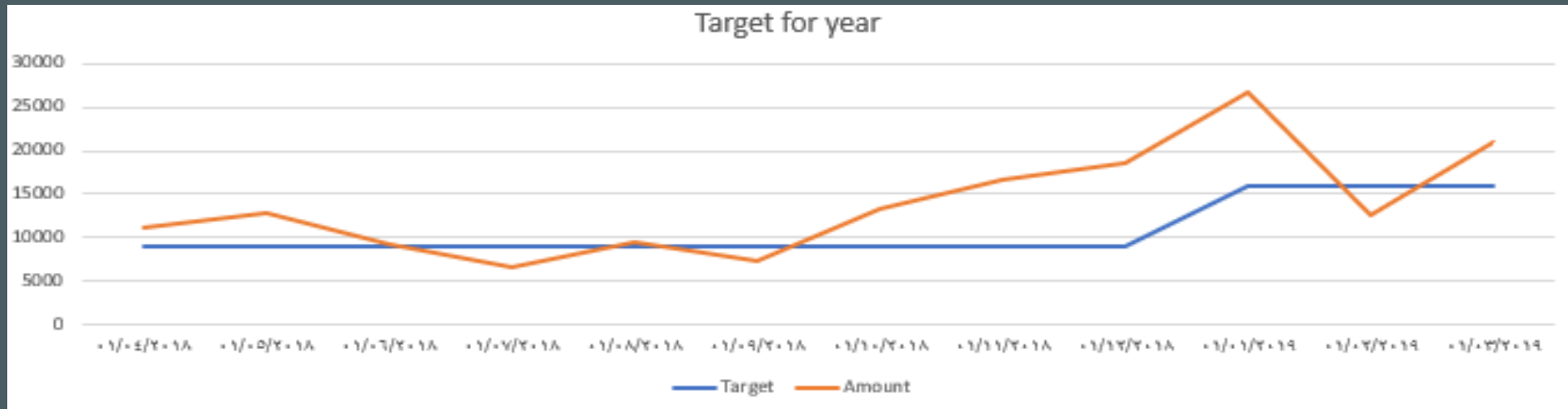


## Clothing Target Achievement for the Year



The Clothing achieved the Target only 3 months out of 12 months

## Electronics Target Achievement for the Year

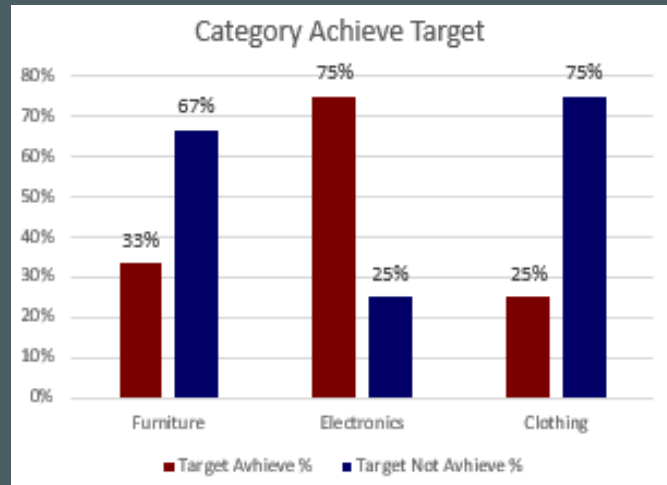


The Electronics achieved the Target only 9 months out of 12 months

## Furniture Target Achievement for the Year



The Furniture achieved the Target only 4 months out of 12 months



Based on the data we have gathered, electronics have the highest target achievement at 75%, while Clothing has the lowest at 25%

Based on the sales performance of all products throughout the year, we find that 44% of the target were achieved

# Recommendations to Improve Sales Performance

To improve sales performance and meet our targets, I recommend the following:

- **Revise Sales Strategy:** Review and adjust our sales approach, focusing on better targeting and optimized outreach methods to increase conversions.
- **Enhance Sales Training:** Provide additional training to improve product knowledge and closing techniques, boosting team performance.
- **Focus on High-Value Segments:** Concentrate efforts on the most profitable customer segments to improve conversion rates and maximize revenue.
- **Align Marketing and Sales:** Strengthen collaboration between sales and marketing to ensure better lead quality and consistent messaging.
- **Refine KPIs:** Set realistic, measurable KPIs and track progress regularly to ensure we stay on target.

# Conclusion

In conclusion, our sales performance has fallen short of the established targets for the period, reflecting challenges in several key areas. Despite efforts, we have not achieved the expected growth, highlighting gaps in our sales strategies, execution, and work on improve our performance



Thanks