



E-COMMERCE COMPANY'S

***PATH TO SUSTAINABLE
GROWTH***



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COMPANY BACKGROUND

- *The e-commerce company is facing multiple operational challenges that hinder growth and customer satisfaction.*
- *To address these issues, the company is leveraging data-driven insights to optimize operations.*





KEY CHALLENGES

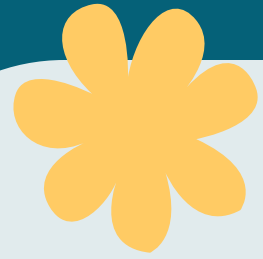
**FINANCIAL
PERFORMANCE**

**CUSTOMER
INSIGHTS**

**LOGISTICS AND
FULFILLMENT**

**PRODUCT
MANAGEMENT**

**CUSTOMER
SATISFACTION AND
RETURN**



TECHNOLOGY USED

PYTHON:

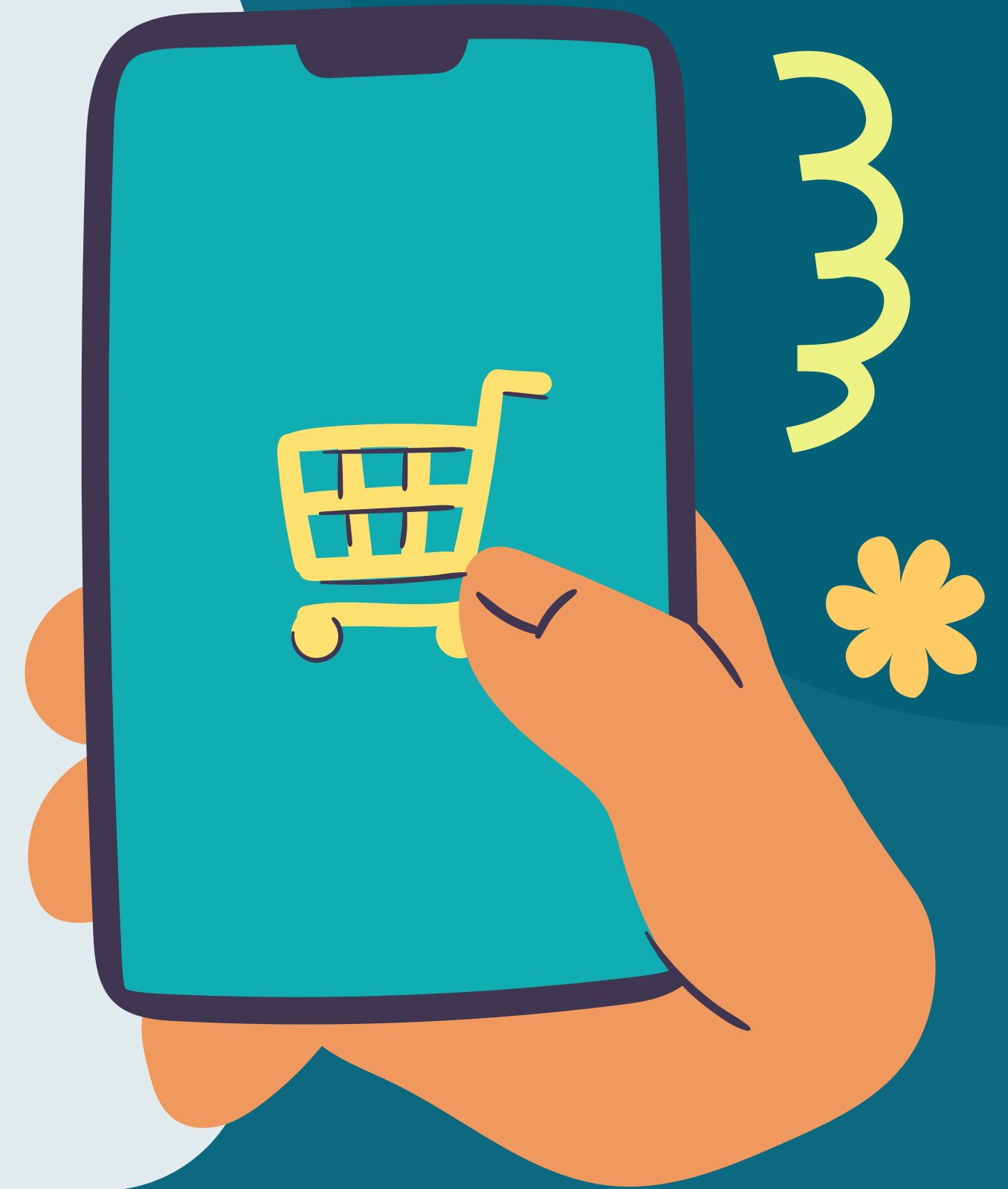
- *Powerful language used for data cleaning, interpreting data and analysing data.*
- *Importing libraries like pandas, matplotlib, seaborn and numpy.*
- *Performing Exploratory Data Analysis (EDA) in e-commerce.*

POWER BI

- *Powerful tool for creating interactive dashboards and visualizations using interactive tooltips and drill-through feature.*

ATTRIBUTES

- *Order ID*
- *Date*
- *Size*
- *Quantity*
- *Status*
- *currency*
- *Amount*
- *Fulfillment*
- *Sales Channel*
- *ship-service-level* 
- *Size*
- *SKU* 
- *ship-city, ship-state, ship-country*
- *ship-postal-code*
- *promotion_ids*
- *B2B*
- *fulfilled_by*





DATASET PREPARATION

LOADING DATASET

Loading dataset named as e-commerce company data into google colab to perform further analysis.

IMPORTING LIBRARIES

Importing libraries like numpy, pandas and matplotlib.



DATASET PREPARATION

DATASET CLEANING

Handling null values, replacing null values with the median in the “Amount column”, outliers, converting data types, removing duplicates .

EXPLORATORY DATA ANALYSIS [EDA]

Analyzing and understanding the dataset using the visualisation methods and finding statistical conceptual .

METRIC DEVELOPMENT

TOTAL REVENUE

71755672.62

TOTAL ORDERS

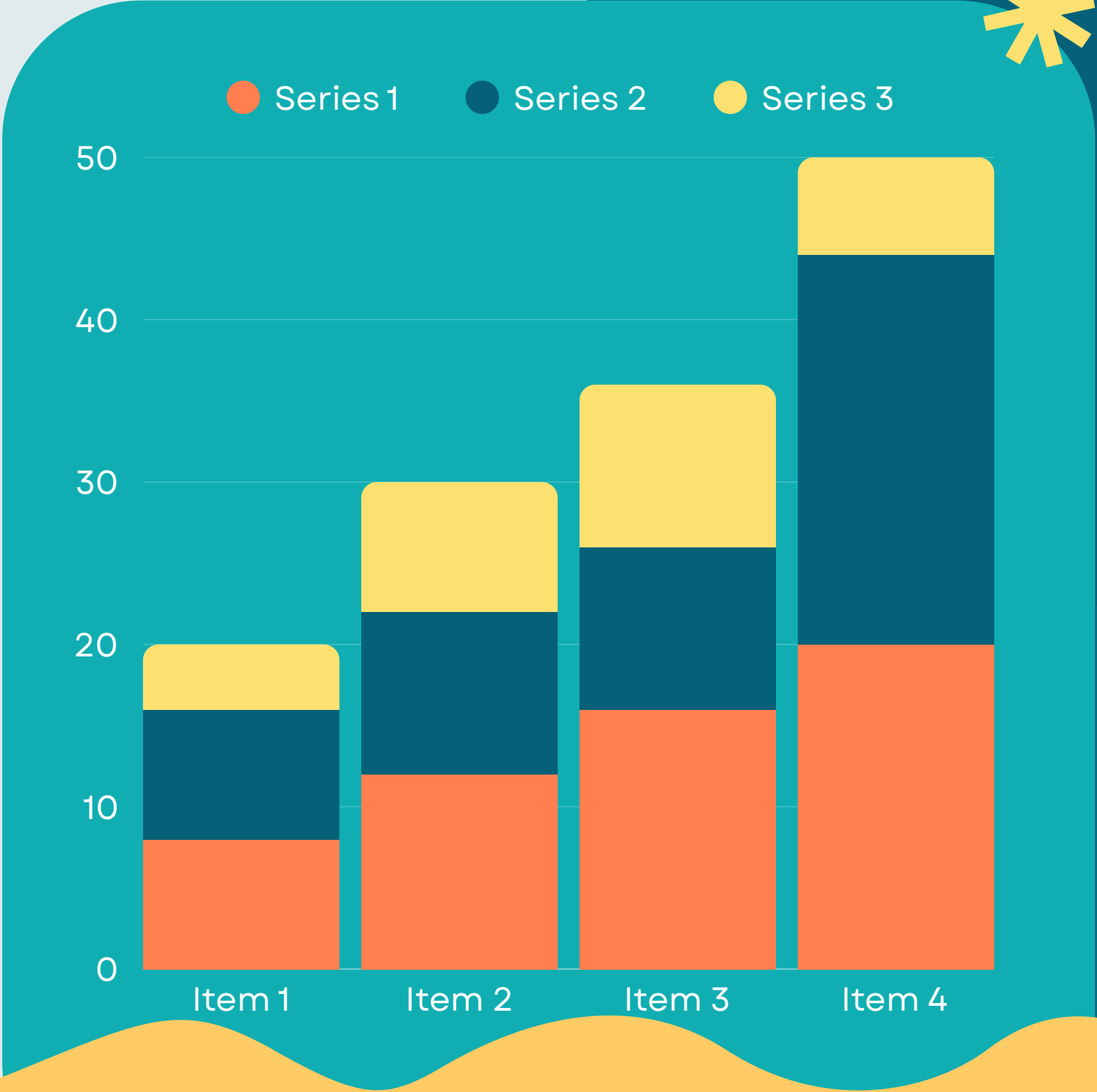
128910

CANCELLED
ORDERS

20437

TOTAL QUANTITY



116620





KEY INSIGHTS

Financial Performance:

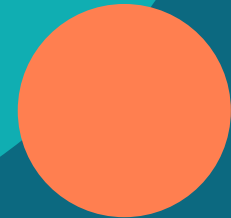

- *The total revenue shows a 91% growth over time, but there is a decline in March, May, and June, indicating a seasonal dip.*
 - *Sunday records the highest sales, contributing 15.34% of total revenue, highlighting the power of weekend shopping.*
 - *The "Set" category is the best-seller, making up nearly 50% of total sales, showing strong customer preference for bundled products.*
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KEY INSIGHTS





Customer Insights:

- *Top cities like Bengaluru, Hyderabad, and Mumbai contribute 22% of total revenue, with Maharashtra being the top-performing state, generating 17%.*
 - *The cancellation rate ranges between 11-20%, with a peak on May 3rd, where 351 orders were canceled.*
 - *Between B2B and B2C, B2C emerges as the main revenue driver.*
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KEY INSIGHTS

Logistics and fulfillment optimization:


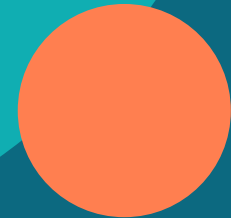


- *Amazon handles 70% of the total orders, while the remaining are fulfilled by merchants.*
 - *However, only 5-10% of all orders are successfully delivered, indicating low delivery efficiency.*
 - *Additionally, 18-22% of the orders are stuck in shipping mode, causing significant delivery delays.*
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KEY INSIGHTS



Product Management:

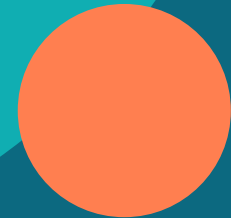

- *The "Set" category is the most demanding, with 50,260 quantities ordered.*
 - *'BL017-63BLACK' is the most popular product, averaging 8 units per order.*
 - *The "Dupatta" category has the highest average demand, making it a key product line*
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KEY INSIGHTS

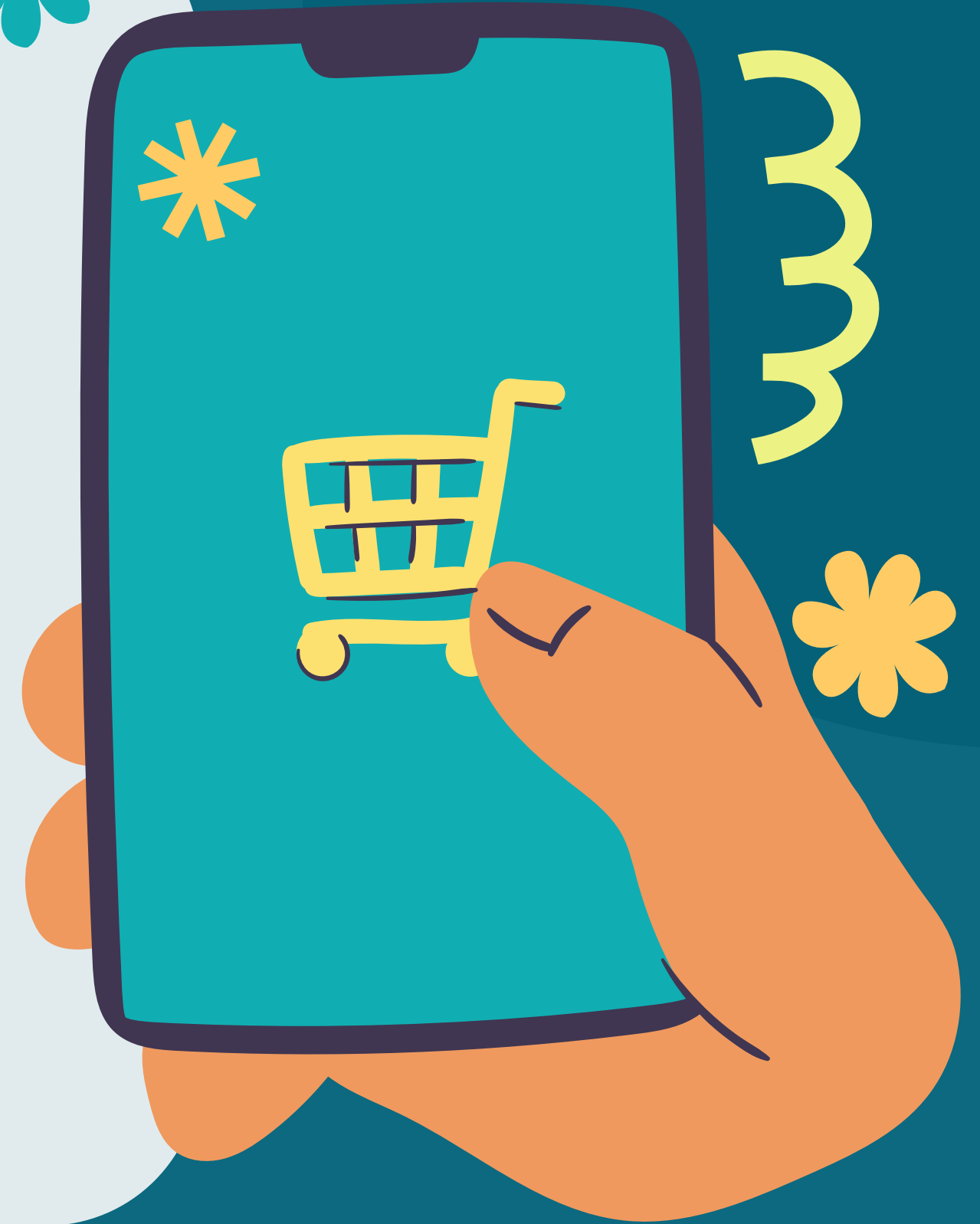


Customer Satisfaction and Returns:

- *The "Set, Kurta, and Western Dress" categories have the highest return rates, averaging around 1,600%, indicating significant product dissatisfaction or quality issues.*
 - *Some orders show an extremely high return rate of 10,000%, highlighting frequent returns*
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RECOMMENDATION

- **Reduce Return Rate:** Identify and address quality issues in high-return products like Set, Kurta, and Western Dress.
- **Improve Delivery Efficiency:** Optimize shipping processes to reduce the 18-22% delay rate and Partner with reliable logistics providers to ensure faster deliveries.
- **Leverage Top-Selling Products:** Expand the "Set" and "Dupatta" categories, as they have high demand and drive major sales. Introduce bundle offers to increase average order value.
- **Enhance Weekend Promotions:** Since Sunday drives the highest sales, run exclusive weekend deals to maximize revenue.
- **Focus on Key Markets:** Strengthen marketing in Bengaluru, Hyderabad, Mumbai, and Maharashtra, as they generate major revenue.



THANK YOU

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