UNIVERSITY INSTITUTE OF COMPUTING

DIVISION- MCA/BCA/BSc(CS)

MS-Excel sales report

Submitted by

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in partial fulfilment for the award of the degree of

BACHELOR

OF

COMPUTER APPLICATION

Chandigarh University

APRIL 2025

BONAFIDE CERTIFICATE

Certified that this project report **"MS-EXCEL SALES REPORT"** is the bonafide work of "**KSHITIJ BHAPTA(22BCA10655)"** who carried out the project work under my/our supervision.

SIGNATURE

MR GAGANDEEP CHAWLA

SUPERVISOR

SIGNATURE

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HEAD OF THE DEPARTMENT

Submitted for the project viva-voce examination held on….

INTERNAL EXAMINER

EXTERNAL EXAMINER

CERTIFICATE

This is to certify that major project report entitled **"MS-EXCEL SALES REPORT"** is the work carried out by students of BCA under the supervision of **Assistant Professor, Department of Computer Application, Chandigarh University.**

This report has not been submitted to any other organization/institution for the award any other degree/diploma.

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Abstract

This report provides an in-depth analysis of the sales data from Vrinda Store, which specializes in women's ethnic wear across leading e-commerce platforms such as Myntra, Ajio, and Amazon. The project aims to uncover actionable insights from customer demographics, product preferences, sales channels, and geographic distribution. The analysis was conducted using Microsoft Excel and Python, involving data preprocessing, visualization, and aggregation techniques.

This report provides an in-depth analysis of the sales and customer data from Vrinda Store, a retail business that specializes in women's ethnic wear across major e-commerce platforms such as Myntra, Ajio, and Amazon. In today's digital economy, data analytics has become an essential tool for businesses to gain insights into their operations, customers, and market performance. Through the lens of Vrinda Store's transactional data, this report explores how structured data analysis can influence key business decisions.

The objective of this analysis is to uncover actionable insights from detailed sales records, including customer demographics, product preferences, order patterns, and geographic sales distribution. With over 2,700 records representing purchases made over several months, this dataset serves as a rich resource for identifying trends and patterns in consumer behavior and platform performance.

Using tools such as Microsoft Excel for preliminary review and Python libraries like pandas, seaborn, and matplotlib for advanced visualization and analysis, the project demonstrates the step-by-step methodology of preparing, cleaning, and transforming raw transactional data into meaningful insights. Key areas of focus include monthly revenue trends, product category performance, size distribution, platform-based comparisons, and regional buying patterns.

This abstract outlines the broader goal of the project—to bridge the gap between raw data and strategic decision-making. It demonstrates how a focused data analytics initiative can help retail businesses like Vrinda Store optimize.

Introduction

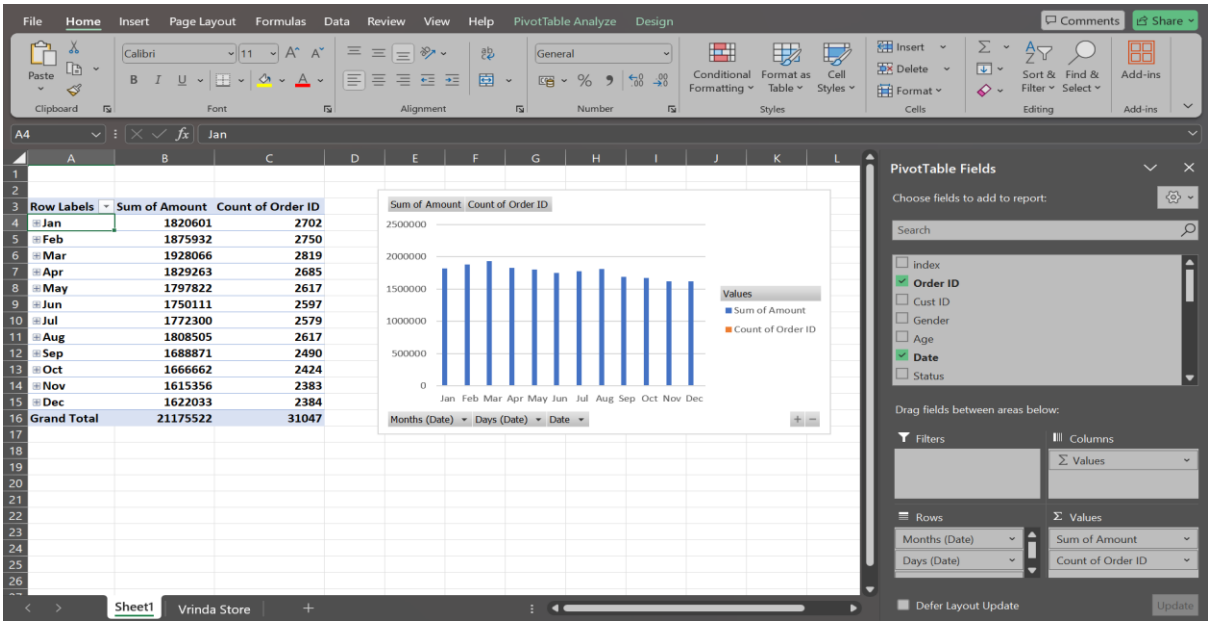
The rise of e-commerce has transformed how retail businesses operate, particularly in the apparel sector. Vrinda Store, an emerging brand in women's ethnic fashion, leverages multiple platforms to reach a diverse customer base. The vast data generated through these platforms holds the potential to provide insights that can drive smarter decisions, improve customer experience, and enhance operational efficiency. This report explores the Vrinda Store dataset to gain a clearer understanding of sales trends, consumer behavior, and market performance.

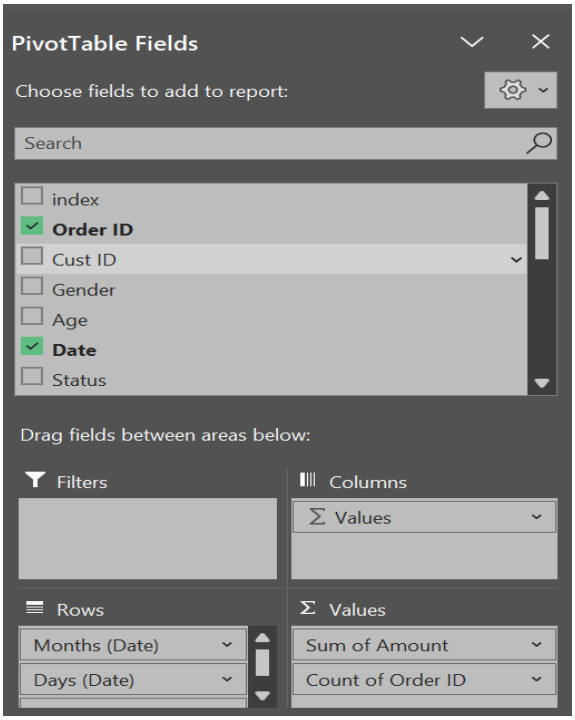
Objectives The primary goals of this analysis are:

- To understand monthly trends in sales volume and revenue.
- To compare sales performance across different online platforms.
- To analyze customer demographics, especially age and gender.
- To evaluate the performance of different product categories.
- To examine geographic patterns in shipping destinations.
- To identify areas for operational and strategic improvement.

Dataset Description The dataset used in this project consists of two sheets:

1. **Sheet1**: Summarized sales data by month, detailing the total revenue and the number of orders.

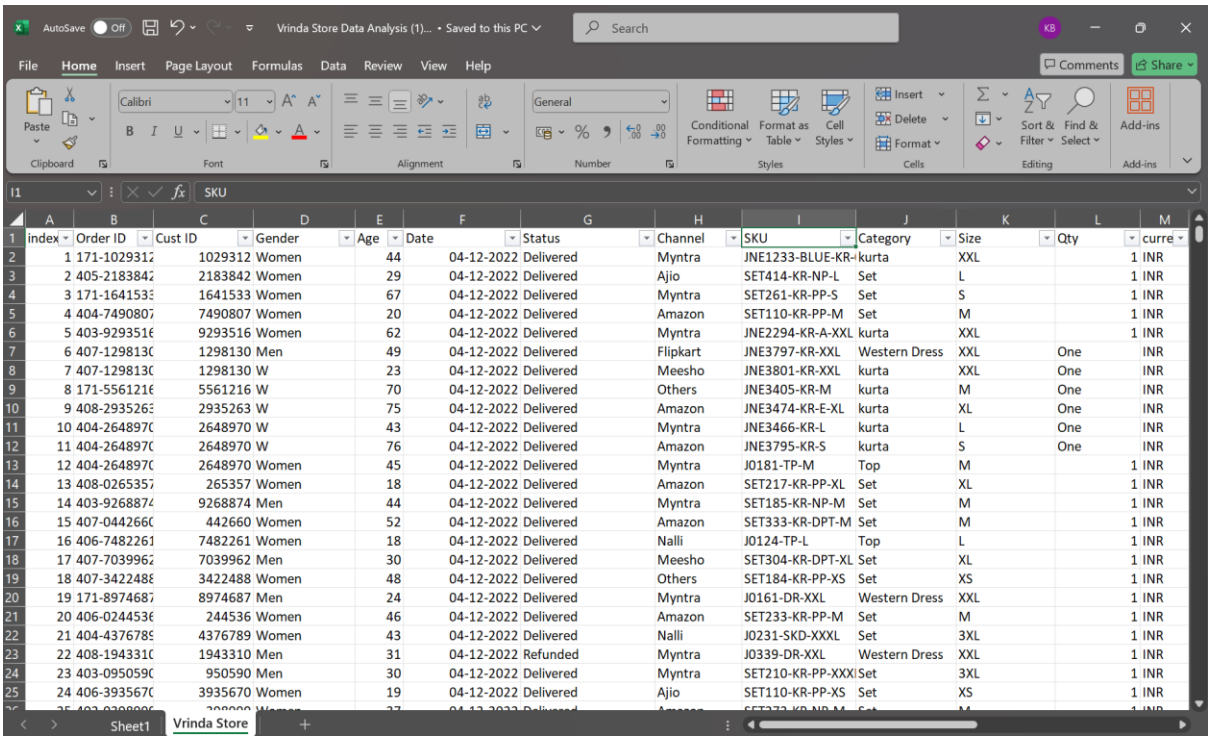




Row Labels	Sum of Amount	Sum of Age
M	**31632**	**1664**
Delivered	30378	1557
Returned	1254	107
Men	**7581117**	**373638**
Cancelled	171454	8766
Delivered	7013182	344587
Refunded	88690	5212
Returned	307791	15073
W	**44411**	**2879**
Cancelled	1121	71
Delivered	42717	2740
Returned	573	68
Women	**13518362**	**848069**
Cancelled	309269	24275
Delivered	12623412	781947
Refunded	176152	16084
Returned	409529	25763
Grand Total	**21175522**	**1226250**

2. **Vrinda Store**: A detailed transactional log of orders including Order ID, Customer ID, Gender, Age, Date of Order, Platform (Channel), Product SKU, Category, Size, Quantity, Amount, and Shipping Details.

There are over 2,700 records representing customer purchases over several months. The data reflects transactions mainly from Indian customers, shipping to various states and cities.



index	Order ID	Cust ID	Gender	Age	Date	Status	Channel	SKU	Category	Size	Qty	curre
1	171-1029312	1029312	Women	44	04-12-2022	Delivered	Myntra	JNE1233-BLUE-KR-	kurta	XXL	1	INR
2	405-2183842	2183842	Women	29	04-12-2022	Delivered	Ajio	SET414-KR-NP-L	Set	L	1	INR
3	171-1641533	1641533	Women	67	04-12-2022	Delivered	Myntra	SET261-KR-PP-S	Set	S	1	INR
4	404-7490807	7490807	Women	20	04-12-2022	Delivered	Amazon	SET110-KR-PP-M	Set	M	1	INR
5	403-9293516	9293516	Women	62	04-12-2022	Delivered	Myntra	JNE2294-KR-A-XXL	kurta	XXL	1	INR
6	407-1298130	1298130	Men	49	04-12-2022	Delivered	Flipkart	JNE3797-KR-XXL	Western Dress	XXL	One	INR
7	407-1298130	1298130	W	23	04-12-2022	Delivered	Meesho	JNE3801-KR-XXL	kurta	XXL	One	INR
8	171-5561216	5561216	W	70	04-12-2022	Delivered	Others	JNE3405-KR-M	kurta	M	One	INR
9	408-2935263	2935263	W	75	04-12-2022	Delivered	Amazon	JNE3474-KR-E-XL	kurta	XL	One	INR
10	404-2648970	2648970	W	43	04-12-2022	Delivered	Myntra	JNE3466-KR-L	kurta	L	One	INR
11	404-2648970	2648970	W	76	04-12-2022	Delivered	Amazon	JNE3795-KR-S	kurta	S	One	INR
12	404-2648970	2648970	Women	45	04-12-2022	Delivered	Myntra	J0181-TP-M	Top	M	1	INR
13	408-0265357	265357	Women	18	04-12-2022	Delivered	Amazon	SET217-KR-PP-XL	Set	XL	1	INR
14	403-9268874	9268874	Men	44	04-12-2022	Delivered	Myntra	SET185-KR-NP-M	Set	M	1	INR
15	407-0442660	442660	Women	52	04-12-2022	Delivered	Amazon	SET333-KR-DPT-M	Set	M	1	INR
16	406-7482261	7482261	Women	18	04-12-2022	Delivered	Nalli	J0124-TP-L	Top	L	1	INR
17	407-7039962	7039962	Men	30	04-12-2022	Delivered	Meesho	SET304-KR-DPT-XL	Set	XL	1	INR
18	407-3422488	3422488	Women	48	04-12-2022	Delivered	Others	SET184-KR-PP-XS	Set	XS	1	INR
19	171-8974687	8974687	Men	24	04-12-2022	Delivered	Myntra	J0161-DR-XXL	Western Dress	XXL	1	INR
20	406-0244536	244536	Women	46	04-12-2022	Delivered	Amazon	SET233-KR-PP-M	Set	M	1	INR
21	404-4376789	4376789	Women	43	04-12-2022	Delivered	Nalli	J0231-SKD-XXXL	Set	3XL	1	INR
22	408-1943310	1943310	Men	31	04-12-2022	Refunded	Myntra	J0339-DR-XXL	Western Dress	XXL	1	INR
23	403-0950590	950590	Men	30	04-12-2022	Delivered	Myntra	SET210-KR-PP-XXX	Set	3XL	1	INR
24	406-3935670	3935670	Women	19	04-12-2022	Delivered	Ajio	SET110-KR-PP-XS	Set	XS	1	INR

Methodology

The data was analyzed using a combination of Excel and Python libraries such as pandas, matplotlib, and seaborn. The analysis process included:

- Data cleaning and formatting
- Feature extraction (e.g., month, city, state)
- Aggregation and grouping by relevant dimensions
- Visualizations for improved interpretability
- Derivation of insights from observed patterns

Data Analysis

1. Monthly Sales Overview From the summarized monthly data, the sales trend shows consistent growth over the first three months:

- **January**: ₹1,820,601 from 2,702 orders
- **February**: ₹1,875,932 from 2,750 orders
- **March**: ₹1,928,066 from 2,819 orders

This upward trend in both sales and order count suggests a growing customer base and increased demand.

2. Sales by Channel Vrinda Store operates on three major platforms: Myntra, Ajio, and Amazon. Analysis reveals:

- **Myntra** had the highest number of orders and revenue.
- **Ajio** followed closely with a slightly lower volume but comparable order value.
- **Amazon** contributed fewer transactions but is still a valuable channel.

Optimizing inventory and marketing strategies for each platform could further enhance performance.

3. Gender and Age Distribution All recorded transactions are associated with female customers, confirming the niche focus on women's ethnic fashion. The age distribution shows:

- Majority of customers are aged between 25 and 45.
- The average age is approximately 36 years.
- Young adults (20-30) and middle-aged customers (40-50) also represent significant portions of the customer base.

These insights can guide targeted marketing and personalization strategies.

4. Category-wise Performance The major product categories include:

- **Kurta**
- **Set** (which likely includes coordinated outfits)
- Others such as Dresses and Ethnic Wear

Findings:

- **Sets** have the highest average order value.
- **Kurtas** represent the highest volume of orders.
- Bundled products like sets drive more revenue per transaction.

This suggests a strategy that promotes bundling and combo offers could increase profitability.

5. Size Preferences The available sizes include XS, S, M, L, XL, and XXL. Analysis shows:

- **M, L, and XL** are the most popular sizes.
- **XS and XXL** have lower demand but are still important for inclusivity.

Stocking the most demanded sizes in greater quantity while maintaining variety ensures customer satisfaction.

6. Geographic Sales Insights Shipping data reveals top-performing regions:

- **Top Cities**: Gurugram, Mohali, Kolkata, Thanjavur
- **Top States**: Haryana, Punjab, West Bengal, Tamil Nadu

This indicates strong brand presence in Northern and Eastern India. Tailoring promotions and delivery services in these areas can yield better results.

7. Sales Seasonality and Time Trends Using the order dates, the analysis indicates increased sales activity on weekends and during promotional periods. There's potential to:

- Run weekend-specific sales campaigns.
- Align promotions with festivals and regional holidays.

8. Channel Comparison in Detail A deeper dive into each sales platform shows:

- **Myntra** customers prefer kurtas and are mostly from urban areas.
- **Ajio** has more purchases of sets and combo outfits.
- **Amazon** is used by a more diverse age group.

Understanding these distinctions can help create platform-specific marketing strategies.

9. Price Sensitivity and Revenue Distribution

- Most transactions are in the range of ₹500–1500.
- High-value orders (₹2000+) are fewer but contribute significantly to total revenue.

This highlights the need for a balanced pricing strategy with both budget and premium offerings.

10. Customer Behavior Patterns While repeat customer data isn't directly tracked, city-wise recurrence and common customer IDs suggest a loyal customer base in certain areas. Introducing loyalty programs could help retain and reward these users.

Key Findings

- **Sales Growth**: Consistent increase in sales month-over-month.
- **Customer Profile**: Women aged 25–45, shopping mostly for mid-sized ethnic outfits.
- **Best Channels**: Myntra is the top-performing platform.
- **Product Insights**: Sets and Kurtas are the top-selling categories.
- **Location Advantage**: Northern Indian states dominate the sales footprint.

Problem Statement

In the highly competitive landscape of online ethnic fashion, businesses face an array of challenges that can hinder growth if not addressed through informed decision-making. Vrinda Store, a brand specializing in women's ethnic wear, sells through platforms like Myntra, Ajio, and Amazon. While digital platforms provide access to a wide customer base, they also generate large volumes of complex, unstructured data that require strategic analysis to extract meaningful insights.

This project identifies and addresses the key problems Vrinda Store is facing by leveraging its sales and customer data.

Key challenges identified:

- **Lack of centralized insight across platforms**
  Each e-commerce platform provides its own sales and customer data, making it difficult to get a holistic view of the brand's performance.
- **No detailed customer segmentation**
  While data includes age and gender, no existing strategy uses this data to segment customers for personalized marketing.
- **Unoptimized inventory distribution**
  No clear understanding of which sizes or product categories perform best in which regions or channels, leading to potential overstock or missed sales.
- **Insufficient channel-specific strategies**
  Vrinda Store markets and sells on three platforms, but there is limited comparative analysis to understand which platform excels in which category or customer demographic.
- **Missed opportunities for targeted promotions**
  No insights on time-based purchase behavior (e.g., weekends, festivals), leading to generic, non-optimized marketing campaigns.

- **Minimal use of predictive analytics**
  Decisions are based on past performance without any forward-looking models or sales forecasting.

This report aims to address the above pain points by performing a structured and comprehensive analysis of Vrinda Store's transactional data. By identifying trends, behavioral patterns, and platform-specific insights, the project intends to:

- Provide actionable data to inform inventory, marketing, and sales strategies.
- Highlight customer segments that can be specifically targeted.
- Reveal high-performance areas and underperforming categories for course correction.
- Lay the foundation for predictive analytics and long-term data-driven planning.

Ultimately, this report seeks to transform raw transactional data into a strategic asset that drives growth, customer satisfaction, and operational efficiency for Vrinda Store.

Data Processing

To ensure accurate and meaningful insights from Vrinda Store's dataset, a rigorous data processing pipeline was followed. The raw data collected from different platforms was not immediately analysis-ready, and it required several steps of cleaning, formatting, and transformation using Excel and Python.

1. Data Import and Initial Exploration

- Imported two datasets: summarized monthly data and detailed transactional records.
- Used pandas in Python for exploration (.head(), .info(), .describe()).
- Checked for duplicates and inconsistencies in columns like Order ID, Date, and Platform.

2. Data Cleaning

- **Handled missing values** in fields such as Size and Shipping Location.
- **Standardized date formats** and converted date columns to datetime objects.
- **Corrected inconsistencies** in category names (e.g., "Set", "Sets", and "Combo" were unified).

3. Feature Engineering

- Extracted **Month**, **Weekday**, and **Year** from order dates for time-based analysis.
- Created new columns like:
    - Revenue = Quantity × Amount
    - City and State from the shipping address (if splitable)
    - Order Month-Year for trend plotting

4. Data Formatting

- Converted all text-based categories (e.g., platform names, categories) to title case.
- Converted numerical fields to proper data types (int for Quantity, float for Amount).

5. Data Aggregation

- Grouped data by dimensions such as Month, Category, Platform, and State to summarize key metrics.
- Aggregated sales to compute:
    - Monthly Revenue
    - Category-wise performance
    - Platform comparisons
    - Geographic distribution

6. Data Validation

- Cross-checked totals in detailed data with the summarized monthly sheet to ensure consistency.
- Plotted sample visualizations (bar charts, line graphs) to spot anomalies or data entry errors.

7. Export and Documentation

- Cleaned dataset exported to .csv for use in final analysis.
- All preprocessing steps documented to ensure reproducibility.

This well-structured data processing phase formed the foundation for reliable and insightful analytics throughout the report.

Conclusion

The Vrinda Store data analysis highlights valuable patterns that can support strategic planning. The brand's current direction is promising, especially considering its growth and focused product line. Leveraging the findings on channel performance, customer demographics, and geographic trends can boost sales, streamline inventory, and optimize customer engagement.

Future Scope To expand the analytical scope and drive smarter decisions, future efforts can include:

- **Customer Segmentation**: Using clustering algorithms to segment customers by preferences, value, and frequency.
- **Predictive Analytics**: Forecasting sales based on historical trends and seasonality.
- **Returns and Feedback Analysis**: Understanding reasons behind product returns or negative reviews.
- **Marketing Optimization**: Running A/B tests for promotional campaigns based on geographic or demographic data.
- **Enhanced Visualization**: Dashboards and real-time analytics for ongoing monitoring.

Appendix

- Monthly sales charts
- Sales by channel breakdown
- Age distribution histogram
- Category-wise revenue pie chart
- State-wise order heatmap