Project:

Radha Store

E-commerce Annual Sales Analysis Report

2022

Content

➢ Problem Statement

Radha store is an E-commerce store with many products to sell in various categories. They are available on different online e-commerce platforms across India, like Amazon, Flipkart, Meesho, etc

Now, they want to create an annual sales report for 2022. So that they can analyse their performance in terms of sales, the report should communicate to them about their customers' purchasing behaviour and patterns.

Therefore they hire you as a data analyst, and you must create their E-commerce Annual sales report for 2022. They will provide you with their sales data for 2022, along with their business problems which you should consider as analytical goals while developing this report using **MS Excel**.

➢ Business Problems / Analytical Goals

1. Which month got the highest and lowest sales in 2022?
2. Monthly sales trend ($) and the number of orders placed in 2022.
3. How many percent are men and women in our total customer base by 2022?
4. Detail % distribution of orders according to order status, like-
   What is the % orders that are successful deliveries?
   What is the % orders that get cancelled?
   What is the % orders raised refund requests?
   What is the % orders that get returned, etc?
5. What are the top 5 product categories in terms of sales?
   And how much % is their contribution to total revenue?
6. What are the top 5 states in terms of sales ($)? What is the % contribution in the total sale of each respective state?
7. What is the % distribution of total orders across different age groups, also how many % are men and women in each age group?
8. How many sales ($) did we get close through each channel?

All the data should be filterable for different months, cities, platforms/channels, and product categories.

➢ Solution Approach

Step 1: Understanding Source data and analytical goals

The first and most important thing is to understand the given raw data based on the business problems we going to solve. The company's business problems should be considered as analytical goals that will be implemented while creating the dashboard report.

Step 2: Data Cleaning

The next step we going to approach is cleaning the provided raw data, as the data may probably contain null values, empty values, or values that may be inconsistent in some columns.

For example. the Quantity column contains values: 1, 2, 3, 4, … and "one", "two" etc.

Once we clean our raw data and transform it into a consistent set of data, we can consider it as our source data further.

Step 3: Data Processing

In the step of data processing, we tend to perform some sort of data calculations and derive some new columns that will be required for making analysis.

To conclude which set of columns we should calculate and add to the source data, we need to make observations about the source data and the analytical goals. Whether there is any information gap that should be filled.

Example:

1. In the source data we have the ‘date’ column, however, according to the problem set ‘month name’ column is required.
2. Source data has the column ‘Age’, but during the analysis, we need an ‘Age group’ Column.
3. If we have given the price of the product and quantity ordered, we will calculate the revenue/ order price for every order.
4. Extracting elements from an ‘address’ column like, pin code, city, state, etc.

Once we add up all the crucial derived columns to the source data we have done with data processing and we are good to go for the next step.

Step 4: Data Analysis

This is the most exciting part of our project where we will bring our data to life by creating visualization elements bar graphs, pie charts slicer elements, and timeline elements, by implementing pivot charts.

The selection of appropriate visualization charts is a crucial task, it is dependent on the analytical problem statements/ goals trying to cater

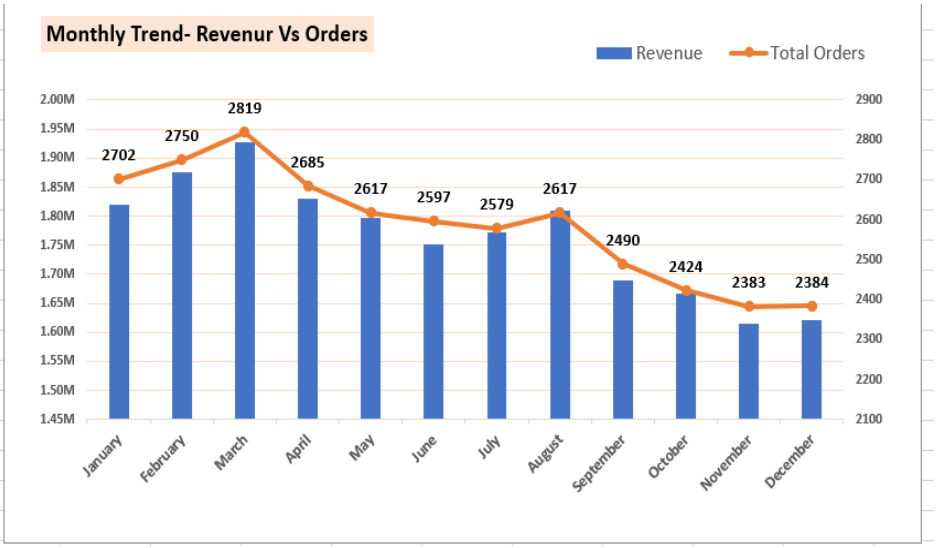
Step 5: Data Visualizations / Dashboarding

After validating our analytical values, we created the dashboard by putting all the created individual pivot charts together.

➢ Visualization Charts

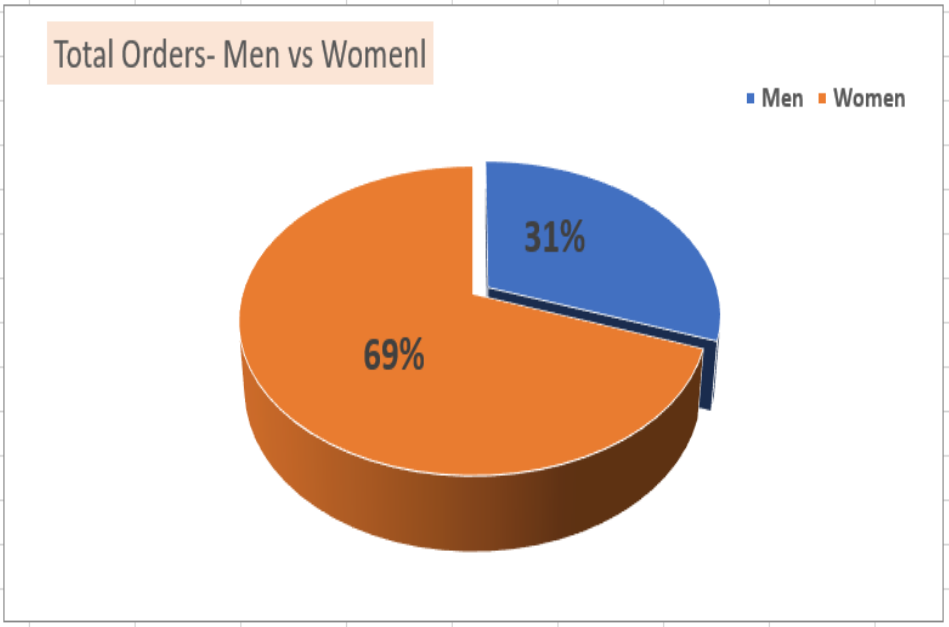
1. Monthly Trend- Revenue vs Orders

Month	Revenue	Total Orders
January	1820601	2702
February	1875932	2750
March	1928066	2819
April	1829263	2685
May	1797822	2617
June	1750966	2597
July	1772300	2579
August	1808505	2617
September	1688871	2490
October	1666662	2424
November	1615356	2383
December	1622033	2384



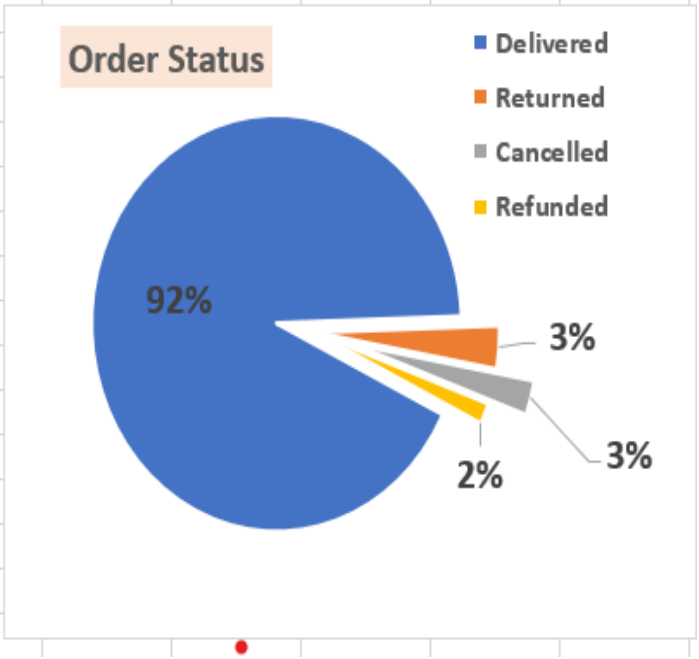
2. Total orders- Men vs Women

Gender	Total Order placed
Men	9494
Women	21553



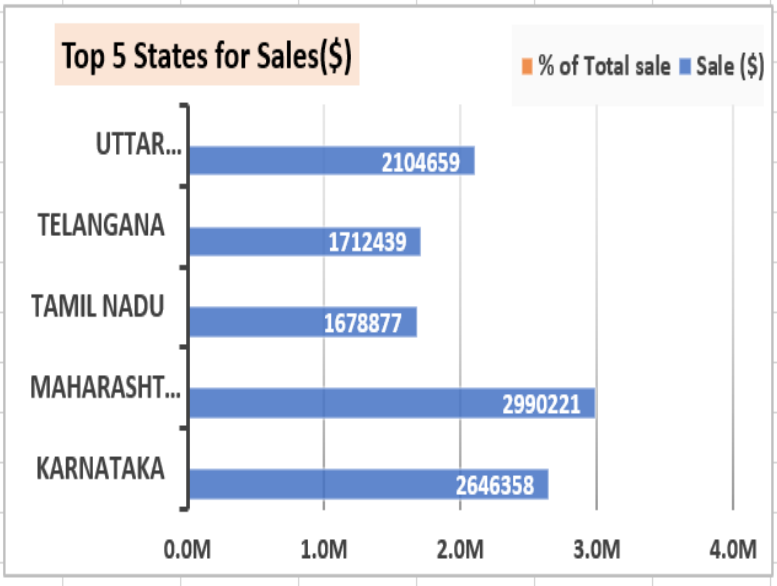
3. Order Status

Row Labels	Count of Order ID
Delivered	28641
Returned	1045
Cancelled	844
Refunded	517
Grand Total	**31047**



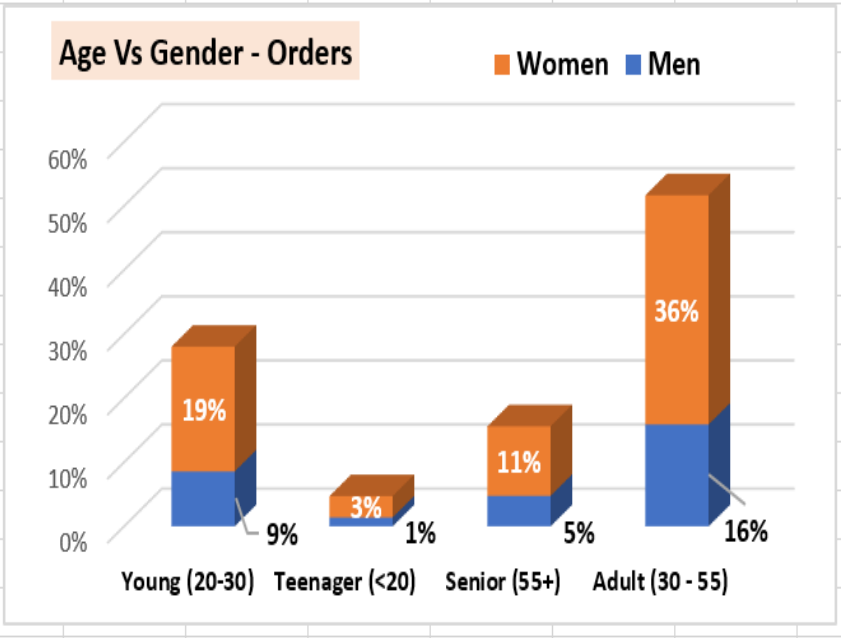
4. Top 5 states for Sales ($)

States	Sale ($)	% of Total sale
KARNATAKA	2646358	24%
MAHARASHTRA	2990221	27%
TAMIL NADU	1678877	15%
TELANGANA	1712439	15%
UTTAR PRADESH	2104659	19%



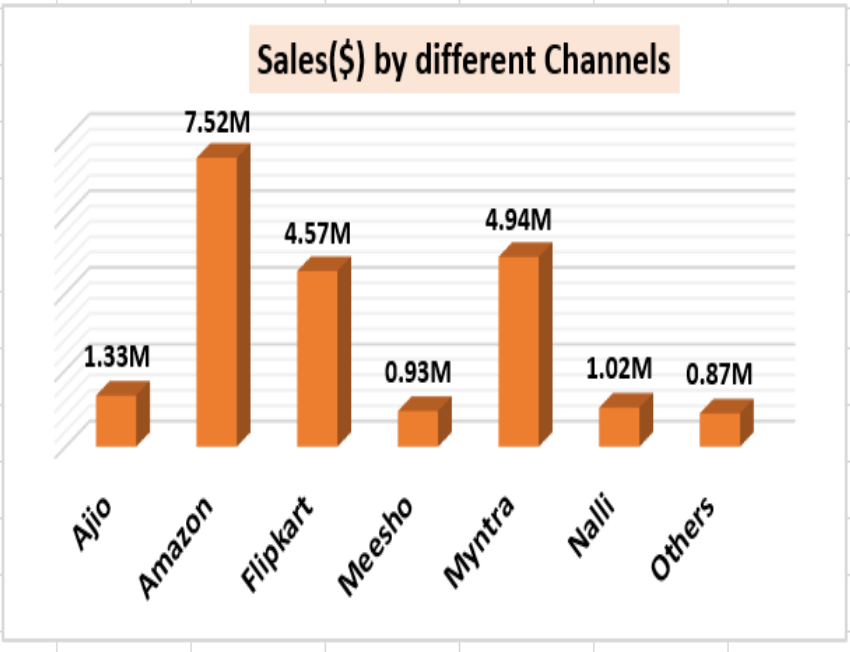
5. Age vs Gender- Order Distribution

Orders	Gender	
Age Group	Men	Women
Young (20-30)	9%	19%
Teenager (<20)	1%	3%
Senior (55+)	5%	11%
Adult (30 - 55)	16%	36%



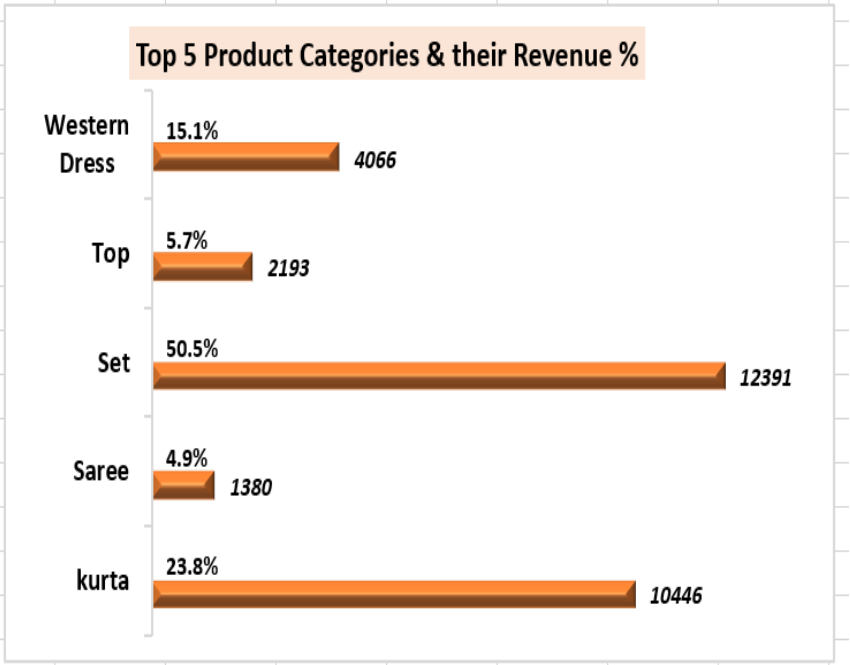
6. Sales ($) by different Channels

Row Labels	Sum of Amount
Ajio	1331427
Amazon	7519933
Flipkart	4573301
Meesho	927606
Myntra	4941540
Nalli	1015329
Others	867241
Grand Total	21176377

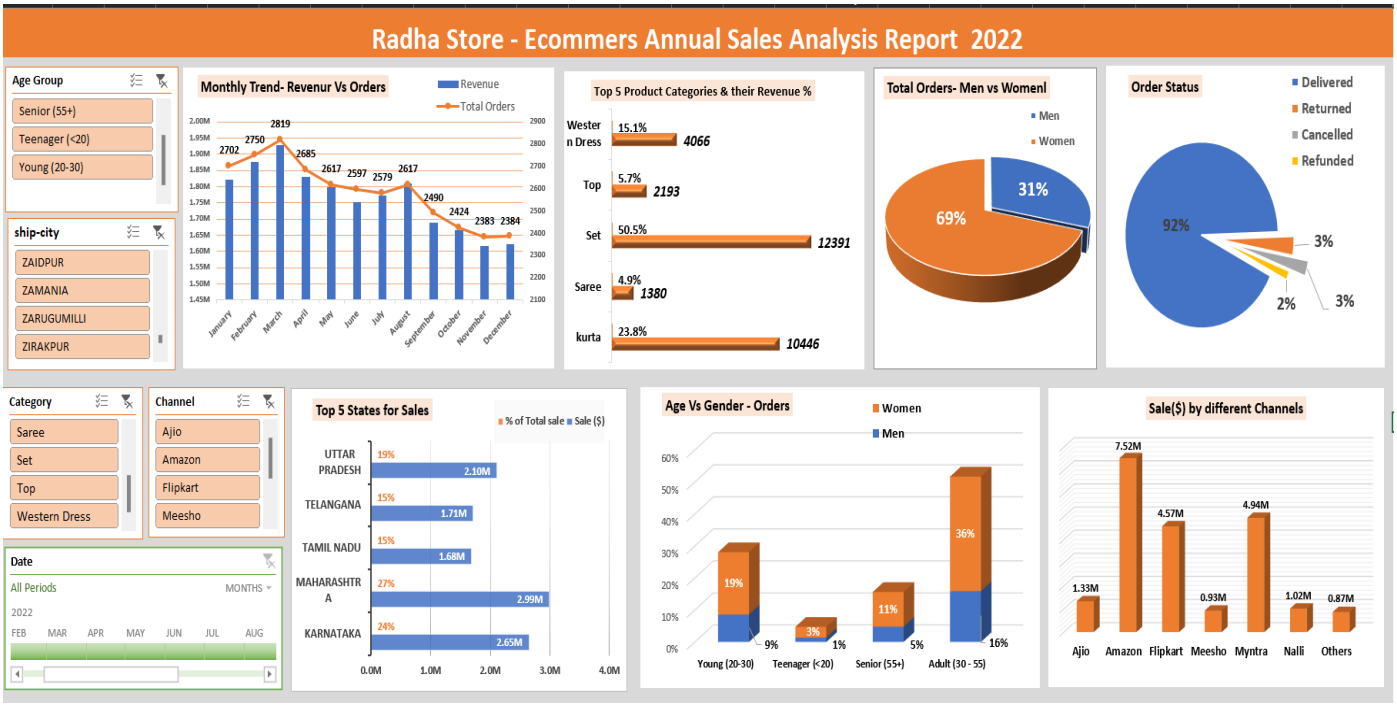


7. Top 5 Product Categories by Orders, and Their Revenue %

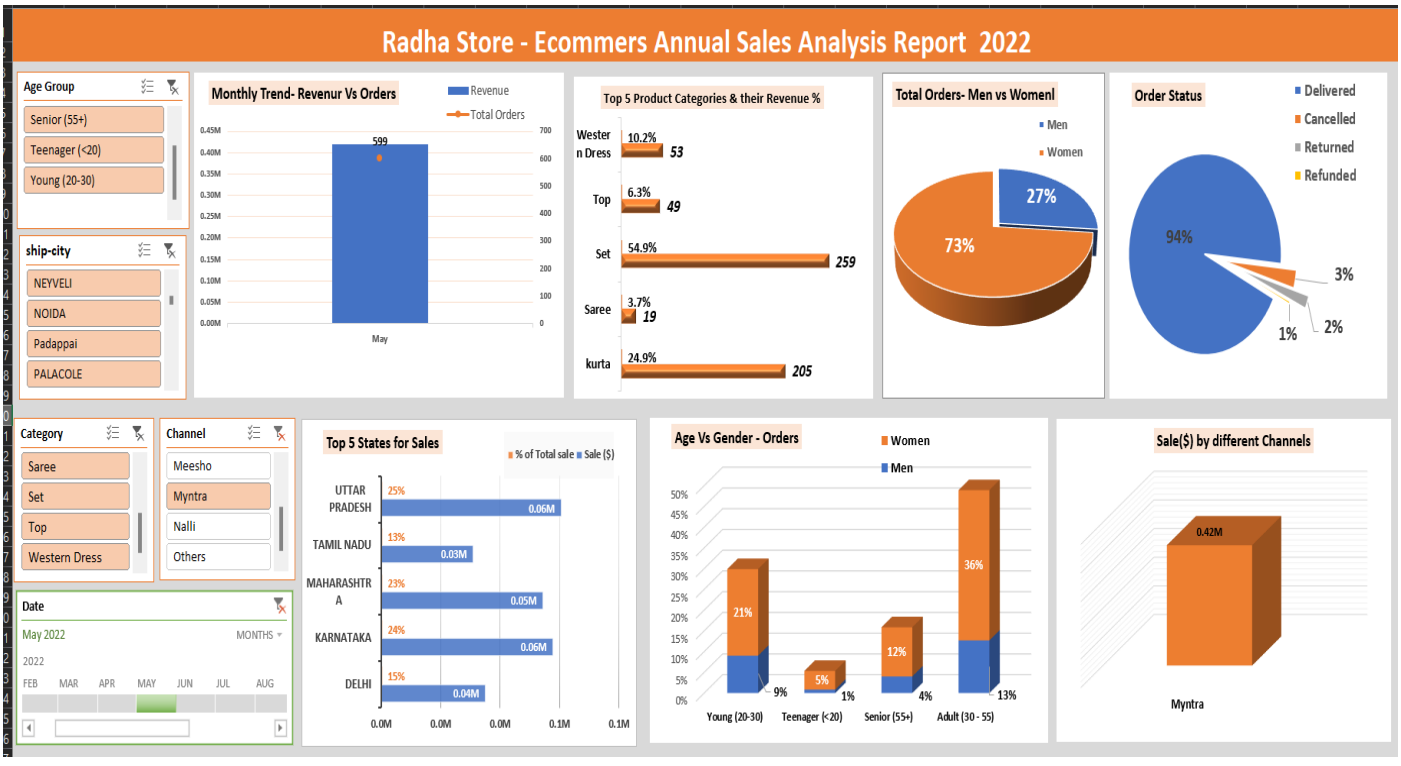
Product Categories	Orders	Revenue %
kurta	10446	23.8%
Saree	1380	4.9%
Set	12391	50.5%
Top	2193	5.7%
Western Dress	4066	15.1%
Grand Total	**30476**	**100.0%**



➢ Final Report Dashboard



After applying filters-



➢ Derived Insights

1. The first 3 months of the year are best performing and the last 3 months of the year are least performing in terms of sales and Revenue.

month with-
Highest sale = March (Revenue: Rs.1.92Mn)
Least Sale = November (Revenue: Rs.1.61Mn)

 # Recommendation:
To promote an increase in sales at year-end we can provide Extra discounts coupons, and special offers combos.

2. In your customer base 70% almost are women and 30% are men.

#Recommendation:
To increase the male customer base, we should introduce some strategies, like- special combos, Gift vouchers, movie tickets, etc

3. In the orders

successful deliveries = 92%
Returned = 3%
Cancelled = 3%
Refunded = 2%

4. Top 5 product Categories by sale-

Westen Dress (Revenue % = 15%)
Set (Revenue % = 50%)
Kurta (Revenue % =24%)
Top (Revenue % = 6%)
Saree (Revenue % =5%)

#Recommendation:

Try to focus on these top categories to increase potential sales, by up stocking these category products with the latest fashion Trends having competitive pricing or premium quality.

5. Top 5 States in terms of Revenue-

1. Maharashtra (Revenue = Rs. 2.99M) - 27% of total Revenue
2. Karnataka (Revenue = Rs. 2.65M) - 24% of total Revenue
3. Uttar Pradesh (Revenue = Rs. 2.1M) - 19% of total Revenue
4. Telangana (Revenue = Rs. 1.71M) - 15% of total Revenue
5. Tamil Nadu (Revenue = Rs. 1.68M) - 15% of total Revenue

6. Total order Segregation across Age group vs Gender-

Teenager (<20) = 1%M + 3%W = 4% of total orders
Young (20-30) = 9%M + 19%W = 28% of total orders
Adult (31-55) =16%M + 36%W = 52% of total orders
Senior (>55) =5%M + 11%W = 16% of total orders

#Recommendation:

Almost 70% of your customer base belongs to the Adult and Senior age groups combined, therefore target this segment of products, and there is potential growth in sales.

7. Top 3 Channels/platforms of E-commerce in terms of Revenue-

    1. Amazon (Revenue= Rs. 7.5M)
    2. Myntra (Revenue= Rs. 4.9M)
    3. Flipkart (Revenue=Rs. 4.5M)

#Recommendation:

Server your best quality products and quick customer support on these top 3 E-commerce platforms. Only these 3 platforms generated 80% of total sales alone (almost Rs. 17M out of Rs. 21 M)
