The provided dataset is from a Superstore Retail Business, containing information about products, customers, and sales associated with the store. As a Power BI Developer, I performed data extraction, cleaning, loading, and transformation to prepare the data for analysis.

1. Data Extraction, Cleaning, Loading, and Transformation:

* To start the analysis, I read the data directly from the Excel file provided by the Desk representatives at the stores.
* I cleaned the dataset by removing empty columns and rows, changed the appropriate data types, and split fields to improve data quality and efficiency.
* The values in the "Ship Mode" column were standardized by replacing "FC" with "First Class".
* I split the "Address" column into "City," "State," "Country," and "Pincode" to enhance location-based analysis.

2. Data Modelling:

* To perform efficient analysis, I converted the flat file into a STAR schema with a central Fact table named 'Orders' and three-dimension tables: 'Order details', 'Customer', and 'Product'
* I also created measure table to hold all the measures created at one place and make one to many relationships with fact table with the help of Order ID.
* I ensured that there are no duplicate rows in the newly created dimension tables and eliminated any empty rows.
* One-to-many relationships were established between the dimension tables and the Fact table to enable effective data analysis.

3. Data Analysis:

* I created a new column 'Sales' by calculating the sales amount as (Qty \* Price per qty \* (1 - Discount)) as Sales was missing from the column and Sales column will be necessary for rest of the analysis. (Syntax = Sales = Orders[Quantity] \* Orders[Price Per Each] \* (1-Orders[Discount]))
* Using a card visual, I displayed the total sales value to provide an overview of the store's revenue. The Total revenue generated in the last 4 years is 2332016.10 $
* I also calculated and visualized the total sales from discounted products to evaluate their contribution to overall sales. Total sales with the discount is 923506 $ (Syntax = Sales From Discount = CALCULATE(SUM(Orders[Sales]), Orders[Discount]))
* I created a column called "Cart Value" using nested IF functions. Orders were classified as follows:
  + Cart Value < 1000: Low
  + Cart Value < 3500: Medium
  + Cart Value < 10000: High
  + Cart Value >= 10000: Very High

Syntax = Cart Value = IF(Orders[Sales] < 1000, "Low", IF(AND(Orders[Sales] >= 1000, Orders[Sales] < 3500), "Medium", IF(AND(Orders[Sales] >= 3500, Orders[Sales] < 10000), "High", IF(Orders[Sales] > 10000, "Very High"))))

* A pie chart was used to visualize the distribution of cart values, providing insights into customers' spending patterns.

I separately visualized the total sales from the "low" cart value category (orders below 1000) to identify potential areas for improvement in sales strategies. (Syntax = LowCart\_ValueSales = CALCULATE(SUM(Orders[Sales]), Orders[Sales] < 1000))

* To track the total sales from the "low" cart category and discount more than or equal to 50%, I created a new measure using the CALCULATE() and SUM() functions with the appropriate filters. (Syntax = LowCartDiscountedSales = CALCULATE(SUM(Orders[Sales]), Orders[Sales] < 1000, Orders[Discount] >= 0.5))
* I analysed the number of days it takes to deliver for each shipment type (ship mode) by calculating the difference between the order date and shipping date. The average number of days to deliver for each shipment type was visualized using a column chart. (Syntax = Average Days for Delivery = CALCULATE(AVERAGE(Orders[Delivery Days])))
* To determine if there is a spike in sales on special occasions like festivals, I created a matrix visualization with order date as a hierarchy, sales, and sales year to date. This helps the store manager gain insights into sales trends over time.
* I also visualized the cumulative sales for each month across all years and calculated the year-on-year (YoY) sales growth. This metric aids in understanding sales performance and identifying growth opportunities. (Syntax = YoY Growth = VAR CurrentYearSales = SUM(Orders[Sales]) VAR PreviousYearSales = CALCULATE(SUM(Orders[Sales]), SAMEPERIODLASTYEAR(Orders[Order Date]))   
  RETURN IF(ISBLANK(PreviousYearSales), BLANK(), (CurrentYearSales - PreviousYearSales) / PreviousYearSales))

Overall, the data analysis provided valuable insights into the store's sales performance, customer spending patterns, and delivery efficiency. The visualization of various metrics helps the store manager make data-driven decisions to achieve ambitious sales targets and improve overall business operations.

To summarize:

1. The data was extracted, cleaned, and transformed for analysis.

2. I used basic statistics and visualization techniques to gain insights into sales, cart values, shipment performance, and year-on-year growth.

3. I explained the calculation purpose and method for each analysis step, avoiding technical jargon to ensure clarity.