FlipMart Sales Analysis

FlipMart is a global retail and e-commerce company. They want to analyse their historical sales data to identify growth opportunities, understand customer behaviour, and improve operational efficiency across regions. As a newly hired BI Analyst, you're tasked to build a report that provides insights into key performance metrics, regional trends, product category performance, and customer segmentation.

Dataset Description

The dataset contains 51,290 sales records with the following columns:

1. **Order Details:** Row ID, Order ID, Order Date, Ship Date, Shipping Mode
2. **Customer Information:** Customer ID, Customer Name, Segment, Country
3. **Product Info:** Product ID, Category, Sub-Category, Product Name
4. **Sales Metrics:** Quantity, Shipping Cost, Cost, Sales

Marks: 5

Data Transformation:

- Check the quality of data (valid, error and empty values)
- Remove blank rows or blank columns if any.
- Create two Duplicates of the “Sales” table (the dataset you imported) in the query tab. (right click on the table and click on duplicate)
- Rename the duplicated tables to “Customer” and “products”.
- In the customer table, remove all columns other than
    - Customer ID
    - Customer Name
    - Customer Segment
    - Country
- In the Product table, remove all columns other than
    - Product ID
    - Product Category
    - Product Sub-Category
    - Product Name

Hint: Choose the desired columns and click on “Remove other columns”

- Keep the given columns in the Sales table.
    - Row ID
    - Order ID
    - Customer ID

    - Product ID
    - Order Date
    - Ship Date
    - Shipping Mode
    - Quantity
    - Shipping Cost
    - Cost
    - Sales
    -
- Remove duplicates from each table. (Select all and then remove duplicates.)
- Close and apply the Power Query.

Marks: 5

Data Modeling:

- Create a star schema for the three tables. (Customers, Sales, and Products)
- Create a Calendar Table and connect it with Sales. (create table using DAX)

Marks: 30

(10 marks for each page)

Data Analysis:

- **Sales Analysis:**
    - What are the total sales, cost, and profit trends over time?
    - Which months or weekdays show the highest and lowest sales?
    - What is the Average Order Value (AOV)?
    - What is the monthly or yearly growth rate?
    - Is there a correlation between profit and sales?

- **Customer Analysis:**
    - How many customers do we have?
    - How many customers are repeat buyers?

- Who are the top-performing customers? (highlight the top customer based on sales or profit, or order count)
- Which segments (Consumer, Corporate, etc.) generate more sales?
- Which country is the top performer? (Or which country generates the most sales and profit?)
- Is profit distribution uneven by location?

- **Product Analysis:**
  - How many products are there?
  - Total variety of products? (How many categories are there?)
  - Which categories/sub-categories are most profitable?
  - Which products or categories are best-selling?
  - What are the top five products based on order count?

Note:

- Create three pages in Power BI
  - Sales Analysis
  - Customer Analysis
  - Product Analysis

- Add at least 4 cards to each page. (Cards related to the page, it can be of your choice)
- Add at least 4 or 5 visuals to each page. (Visuals can be based on the above questions, or any of your choice)
- Add DAX measures or columns, if needed.

Deliverable:

Kindly submit the given files in the classroom:

- Power BI file
- Export Power BI file as a PDF.