E-Commerce Sales Report Query Document

Check the Data Structure and Merge the Data:

```
-- Select the data from Details Table
SELECT TOP (5) *
  FROM Details;
```

	Order_ID	Amount	Profit	Quantity	Category	Sub_Category	PaymentMode
1	B-25681	1096	658	7	Electronics	Electronic Games	COD
2	B-26055	5729	64	14	Furniture	Chairs	EMI
3	B-25955	2927	146	8	Furniture	Bookcases	EMI
4	B-26093	2847	712	8	Electronics	Printers	Credit Card
5	B-25602	2617	1151	4	Electronics	Phones	Credit Card

```
-- Count the number of rows and columns for the Details Table
 SELECT COUNT(*) AS Number_of_Rows
FROM dbo.Details;
SELECT COUNT(*) AS Number_of_Columns
FROM INFORMATION_SCHEMA.COLUMNS
WHERE TABLE_NAME = 'Details';
```

	Number_of_Rows
1	1500

	Number_of_Columns
1	7

```
-- Obtain the infor from the Details Table (Type and Nullable)
  EXEC sp_help 'Details';
```

	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	Order_ID	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
2	Amount	smallint	no	2	5	0	no	(n/a)	(n/a)	NULL
3	Profit	smallint	no	2	5	0	no	(n/a)	(n/a)	NULL
4	Quantity	tinyint	no	1	3	0	no	(n/a)	(n/a)	NULL
5	Category	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
6	Sub_Category	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
7	PaymentMode	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS

```
  -- Count the Total number of duplicate rows of Details Table
  SELECT SUM(DuplicateCount - 1) AS TotalDuplicates
FROM (
    SELECT COUNT(*) AS DuplicateCount
    FROM Details
    GROUP BY [Order_ID]
      ,[Amount]
      ,[Profit]
      ,[Quantity]
      ,[Category]
      ,[Sub_Category]
```

```
      ,[PaymentMode]
    HAVING COUNT(*) > 1
) AS Duplicates;
```

	TotalDuplicates
1	NULL

```
-- Select the data from Orders Table
  SELECT TOP (5) *
  FROM Orders;
```

	Order_ID	Order_Date	CustomerName	State	City
1	B-26055	2018-03-10	Harivansh	Uttar Pradesh	Mathura
2	B-25993	2018-02-03	Madhav	Delhi	Delhi
3	B-25973	2018-01-24	Madan Mohan	Uttar Pradesh	Mathura
4	B-25923	2018-12-27	Gopal	Maharashtra	Mumbai
5	B-25757	2018-08-21	Vishakha	Madhya Pradesh	Indore

```
-- Count the number of rows and columns for the Orders Table
 SELECT COUNT(*) AS Number_of_Rows
FROM dbo.Orders;
SELECT COUNT(*) AS Number_of_Columns
FROM INFORMATION_SCHEMA.COLUMNS
WHERE TABLE_NAME = 'Orders';
```

	Number_of_Rows
1	500

	Number_of_Columns
1	5

```
  -- Obtain the infor from the Orders Table (Type and Nullable)
  EXEC sp_help 'Orders';
```

	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	Order_ID	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
2	Order_Date	date	no	3	10	0	no	(n/a)	(n/a)	NULL
3	CustomerName	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
4	State	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
5	City	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS

```
-- Count the Total number of duplicate rows of Orders Table
  SELECT SUM(DuplicateCount - 1) AS TotalDuplicates
FROM (
    SELECT COUNT(*) AS DuplicateCount
    FROM Orders
    GROUP BY [Order_ID]
```

```
      ,[Order_Date]
      ,[CustomerName]
      ,[State]
      ,[City]
    HAVING COUNT(*) > 1
) AS Duplicates;
```

	TotalDuplicates
1	NULL

```
  -- Merge Two Datasets into a New Table and name it as NewDetails
SELECT Details.*,Orders.Order_Date,Orders.CustomerName,Orders.State,Orders.City
INTO NewDetails
FROM Details
LEFT JOIN Orders ON Details.Order_ID = Orders.Order_ID;
```

```
  -- Show the Top5 rows
SELECT TOP(5) *
FROM NewDetails
```

	Order_ID	Amount	Profit	Quantity	Category	Sub_Category	PaymentMode	Order_Date	CustomerName	State	City
1	B-25681	1096	658	7	Electronics	Electronic Games	COD	2018-06-04	Bhawna	Madhya Pradesh	Indore
2	B-26055	5729	64	14	Furniture	Chairs	EMI	2018-03-10	Harivansh	Uttar Pradesh	Mathura
3	B-25955	2927	146	8	Furniture	Bookcases	EMI	2018-01-16	Shiva	Maharashtra	Pune
4	B-26093	2847	712	8	Electronics	Printers	Credit Card	2018-03-27	Sarita	Maharashtra	Pune
5	B-25602	2617	1151	4	Electronics	Phones	Credit Card	2018-04-01	Vrinda	Maharashtra	Pune

```
-- Count the number of rows and columns for the NewDetails Table
 SELECT COUNT(*) AS Number_of_Rows
FROM NewDetails
SELECT COUNT(*) AS Number_of_Columns
FROM INFORMATION_SCHEMA.COLUMNS
WHERE TABLE_NAME = 'NewDetails';
```

	Number_of_Rows
1	1500

	Number_of_Columns
1	11

```
-- Obtain the infor from the NewDetails Table (Type and Nullable)
  EXEC sp_help 'NewDetails';
```

	Column_name	Type	Computed	Length	Prec	Scale	Nullable	TrimTrailingBlanks	FixedLenNullInSource	Collation
1	Order_ID	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
2	Amount	smallint	no	2	5	0	no	(n/a)	(n/a)	NULL
3	Profit	smallint	no	2	5	0	no	(n/a)	(n/a)	NULL
4	Quantity	tinyint	no	1	3	0	no	(n/a)	(n/a)	NULL
5	Category	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
6	Sub_Category	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
7	PaymentMode	nvarchar	no	100			no	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
8	Order_Date	date	no	3	10	0	yes	(n/a)	(n/a)	NULL
9	CustomerNa...	nvarchar	no	100			yes	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
10	State	nvarchar	no	100			yes	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS
11	City	nvarchar	no	100			yes	(n/a)	(n/a)	SQL_Latin1_General_CP1_CI_AS

```sql
-- Count the Total number of duplicate rows of NewDetails Table
  SELECT SUM(DuplicateCount - 1) AS TotalDuplicates
FROM (
    SELECT COUNT(*) AS DuplicateCount
    FROM NewDetails
    GROUP BY [Order_ID]
          ,[Amount]
          ,[Profit]
          ,[Quantity]
          ,[Category]
          ,[Sub_Category]
          ,[PaymentMode]
       ,[Order_Date]
       ,[CustomerName]
       ,[State]
       ,[City]
    HAVING COUNT(*) > 1
) AS Duplicates;
```

	TotalDuplicates
1	NULL

KPI's and Chart Requirement Calculation:

```sql
-- KPI's Requirement:
--1. Total Revenue:
SELECT SUM(Amount) AS Total_Revenue FROM NewDetails
```

	Total_Revenue
1	437771

```sql
--2. Average Amount per Quantity:
SELECT (SUM(Amount) / SUM(Quantity)) AS Avg_Amountper_Quantity FROM NewDetails
```

	Avg_Amountper_Quantity
1	77

```sql
--3. Total Profit:
SELECT SUM(Profit) AS Total_Profit FROM NewDetails
```

	Total_Profit
1	36963

```sql
--4. Total Quantity:
SELECT COUNT(Quantity) AS Total_Quantity FROM NewDetails
```

	Total_Quantity
1	1500

```sql
--5. Average Profit per Quantity:
SELECT (SUM(Profit) / SUM(Quantity)) AS Avg_Profitper_Quantity FROM NewDetails
```

	Avg_Profitper_Quantity
1	6

```sql
-- Chart Requirement:
--1. Daily Trend for Total Quantity:
SELECT
    DATENAME(DW, TRY_CONVERT(DATE, Order_Date, 103)) AS Order_day,
    SUM(Quantity) AS Total_Quantity
FROM NewDetails
GROUP BY DATENAME(DW, TRY_CONVERT(DATE, Order_Date, 103));
```

	Order_day	Total_Quantity
1	Friday	724
2	Monday	850
3	Saturday	834
4	Sunday	785
5	Thursday	928
6	Tuesday	867
7	Wednesday	627

```sql
--2. Monthly Trend for Total Quantity:
SELECT
    DATENAME(MONTH, CONVERT(DATE, Order_Date, 103)) AS Month_Name,  -- Convert date to
extract the month name
    SUM(Quantity) AS Total_Quantity
FROM NewDetails
GROUP BY DATENAME(MONTH, CONVERT(DATE, Order_Date, 103)),   -- Group by the month name
               MONTH(CONVERT(DATE, Order_Date, 103))     -- Group by the month number
ORDER BY MONTH(CONVERT(DATE, Order_Date, 103));
```

	Month_Name	Total_Quantity
1	January	745
2	February	512
3	March	751
4	April	389
5	May	423
6	June	369
7	July	240
8	August	446
9	September	331
10	October	419
11	November	578
12	December	412

```sql
--3. Percentage of Amount by Category:
SELECT
    Category,
    CAST(SUM(Amount) AS DECIMAL(10,2)) AS Total_revenue,
    CAST(ROUND((SUM(Amount) * 100.0) / (SELECT SUM(Amount) FROM NewDetails), 2) AS
DECIMAL(5,2)) AS PCT
FROM NewDetails
GROUP BY Category;
```

	Category	Total_revenue	PCT
1	Clothing	144323.00	32.97
2	Electronics	166267.00	37.98
3	Furniture	127181.00	29.05

```sql
--4. Percentage of Profit by Category:
SELECT
    Category,
    CAST(SUM(Profit) AS DECIMAL(10,2)) AS Total_Profit,
    CAST(ROUND((SUM(Profit) * 100.0) / (SELECT SUM(Profit) FROM NewDetails), 2) AS
DECIMAL(5,2)) AS PCT
FROM NewDetails
GROUP BY Category;
```

	Category	Total_Profit	PCT
1	Clothing	13325.00	36.05
2	Electronics	13162.00	35.61
3	Furniture	10476.00	28.34

```sql
--5. Total Quantity Sold by Category:
SELECT
```

```
       Category,
       SUM(Quantity) AS Total_Quantity
FROM NewDetails
GROUP BY Category
ORDER BY Total_Quantity DESC
```

	Category	Total_Quantity
1	Clothing	3516
2	Electronics	1154
3	Furniture	945

```
--6a. Top 5 Sub Category by Total Amount
SELECT Top 5 Sub_Category, SUM(Amount) AS Total_Revenue
FROM NewDetails
GROUP BY Sub_Category
ORDER BY Total_Revenue DESC
```

	Sub_Category	Total_Revenue
1	Printers	59252
2	Saree	59094
3	Bookcases	56861
4	Phones	46119
5	Electronic Games	39168

```
--7a. Bottom 5 Sub Category by Total Amount
SELECT Top 5 Sub_Category, SUM(Amount) AS Total_Revenue
FROM NewDetails
GROUP BY Sub_Category
ORDER BY Total_Revenue ASC
```

	Sub_Category	Total_Revenue
1	Skirt	1946
2	Leggings	2106
3	Kurti	3361
4	T-shirt	7382
5	Shirt	7555

```
--6b. Top 5 Sub Category by Total Profit
SELECT Top 5 Sub_Category, SUM(Profit) AS Total_Profit
FROM NewDetails
GROUP BY Sub_Category
ORDER BY Total_Profit DESC
```

	Sub_Category	Total_Profit
1	Printers	8606
2	Bookcases	6516
3	Saree	4057
4	Accessories	3353
5	Tables	3139

```
--7b. Bottom 5 Sub Category by Total Profit
SELECT Top 5 Sub_Category, SUM(Profit) AS Total_Profit
FROM NewDetails
GROUP BY Sub_Category
ORDER BY Total_Profit ASC
```

	Sub_Category	Total_Profit
1	Furnishings	-806
2	Electronic Games	-644
3	Kurti	-401
4	Skirt	-315
5	Leggings	-130

```
--6c. Top 5 Sub Category by Total Quantity Sold
SELECT Top 5 Sub_Category, SUM(Quantity) AS Total_Quantity
FROM NewDetails
GROUP BY Sub_Category
ORDER BY Total_Quantity DESC
```

	Sub_Category	Total_Quantity
1	Saree	795
2	Hankerchief	741
3	Stole	671
4	Furnishings	310
5	T-shirt	305

```
--7c. Bottom 5 Sub Category by Total Quantity Sold
SELECT Top 5 Sub_Category, SUM(Quantity) AS Total_Quantity
FROM NewDetails
GROUP BY Sub_Category
ORDER BY Total_Quantity ASC
```

	Sub_Category	Total_Quantity
1	Tables	61
2	Trousers	135
3	Kurti	164
4	Leggings	186
5	Skirt	248

```sql
--8. Percentage of Payment Mode:
SELECT PaymentMode,
    COUNT(PaymentMode) AS PaymentCount,
    ROUND((COUNT(PaymentMode) * 100.0 / (SELECT COUNT(*) FROM NewDetails)),2) AS
Pay_M_Percentage
FROM NewDetails
GROUP BY PaymentMode
ORDER BY Pay_M_Percentage DESC
```

	PaymentMode	PaymentCount	Pay_M_Percentage
1	COD	684	45.600000000000
2	UPI	331	22.070000000000
3	Debit Card	202	13.470000000000
4	Credit Card	163	10.870000000000
5	EMI	120	8.000000000000

```sql
--9. Total Amount by Payment Mode:
SELECT
       PaymentMode,
       SUM(Amount) AS Total_Amount
FROM NewDetails
GROUP BY PaymentMode
ORDER BY Total_Amount DESC
```

	PaymentMode	Total_Amount
1	COD	155181
2	Credit Card	86932
3	EMI	77881
4	UPI	68641
5	Debit Card	49136