

SQL Analysis – Product Performance & Return Project

A.KPI's-

1. Total Sales Revenue-

```
SELECT SUM(Total_Price) AS Total_Revenue  
FROM sales_data  
WHERE Quantity > 0
```

Results		Messages	
	Total_Revenue		
1	8887204.97554303		

2. Total Number of Orders-

```
SELECT COUNT(DISTINCT Invoice_No) AS Total_Orders  
FROM sales_data  
WHERE Quantity > 0
```

Results		Messages	
	Total_Orders		
1	18536		

3. Average Order Value (AOV)-

```
SELECT SUM(Total_Price) / COUNT(DISTINCT Invoice_No) AS AOV  
FROM sales_data  
WHERE Quantity > 0
```

Results		Messages	
	AOV		
1	479.456461779404		

4. Total Returns-

```
SELECT SUM(Total_Price) AS Total_Returns
FROM sales_data
WHERE IsReturn = 1
```

Results		Messages	
	Total_Returns		
1	-608689.465127863		

5. Net Revenue-

```
SELECT
SUM(CASE WHEN IsReturn = 0 AND Quantity > 0 THEN Total_Price ELSE 0 END) -
SUM(CASE WHEN IsReturn = 1 THEN Total_Price ELSE 0 END) AS Net_Revenue
FROM sales_data
```

Results		Messages	
	Net_Revenue		
1	9495894.4406709		

6. Total Unique Customers-

```
SELECT COUNT(DISTINCT Customer_ID) AS Total_Customers
FROM sales_data
WHERE Customer_ID IS NOT NULL;
```

Results		Messages	
	Total_Customers		
1	4372		

7. Return Rate (%)-

```
SELECT
ROUND(
SUM(CASE WHEN IsReturn = 1 THEN Total_Price ELSE 0 END) * 100.0 /
NULLIF(SUM(CASE WHEN Quantity > 0 THEN Total_Price ELSE 0 END), 0),
2) AS ReturnRatePercent
FROM sales_data
```

Results		Messages	
	ReturnRatePercent		
1	-6.85		

B. QUESTIONS SOLVED:

1. WHAT ARE THE MONTHLY SALES & RETURN TRENDS?

```
SELECT
    FORMAT(Invoice_Date, 'MM-yyyy') AS Month,
    SUM(CASE WHEN IsReturn = 0 THEN Total_Price ELSE 0 END) AS Total_Sales,
    SUM(CASE WHEN IsReturn = 1 THEN Total_Price ELSE 0 END) AS Total>Returns
FROM sales_data
GROUP BY FORMAT(Invoice_Date, 'MM-yyyy')
ORDER BY Month;
```

2. WHAT ARE THE TOP 10 SELLING PRODUCTS BY REVENUE?

```
SELECT TOP 10
    Description,
    SUM(Total_Price) AS Total_Sales
FROM sales_data
WHERE IsReturn = 0
GROUP BY Description
ORDER BY Total_Sales DESC;
```

3. WHAT ARE THE TOTAL SALES BY COUNTRY?

```
SELECT
    Country,
    SUM(Total_Price) AS Total_Sales
FROM sales_data
WHERE IsReturn = 0
GROUP BY Country
ORDER BY Total_Sales DESC;
```

4. WHAT IS THE SALES PERFORMANCE BY PRODUCT CATEGORY?

```
SELECT
    Product_Category,
    SUM(Total_Price) AS Category_Sales
FROM sales_data
WHERE IsReturn = 0
GROUP BY Product_Category
ORDER BY Category_Sales DESC;
```

5. WHAT ARE THE RETURNS BY COUNTRY?

```
SELECT
    Country,
    COUNT(*) AS Total_Returns
FROM sales_data
WHERE isreturn = 1
GROUP BY Country
ORDER BY Total_Returns DESC;
```

6. WHAT ARE THE TOP RETURNED PRODUCT CATEGORIES?

```
SELECT
    Product_Category,
    COUNT(CASE WHEN IsReturn = 1 THEN 1 END) * 100.0 / COUNT(*) AS ReturnRate
FROM sales_data
GROUP BY Product_Category
ORDER BY ReturnRate DESC;
```

7. WHICH CUSTOMERS BROUGHT IN THE HIGHEST REVENUE?

```
SELECT TOP 10
    Customer_ID,
    SUM(Total_Price) AS Customer_Sales
FROM sales_data
WHERE IsReturn = 0
GROUP BY Customer_ID
ORDER BY Customer_Sales DESC
```

8. WHAT IS THE CUSTOMER DISTRIBUTION BY GEOGRAPHY?

```
SELECT
    Country,
    COUNT(DISTINCT Customer_ID) AS CustomerCount
FROM sales_data
WHERE IsReturn = 0
GROUP BY Country
ORDER BY CustomerCount DESC;
```