

E-COMMERCE

Online Shopping



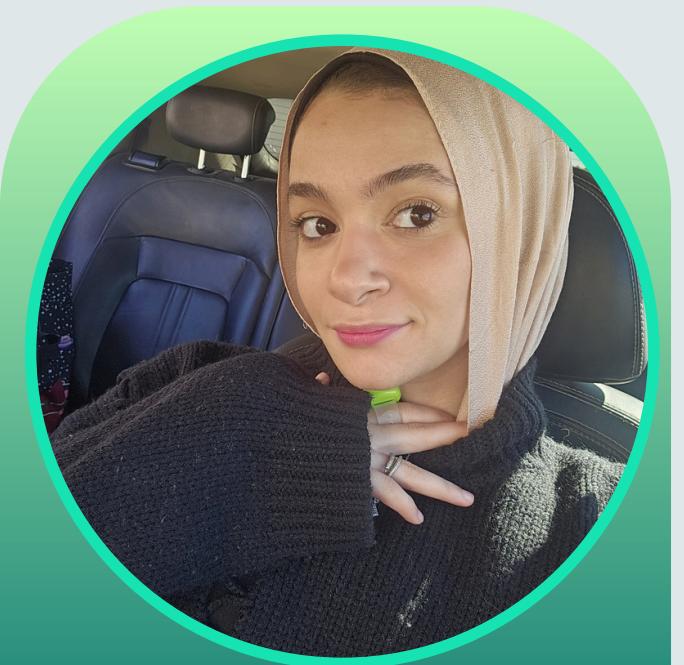
TEAMWORK



Aya Eid



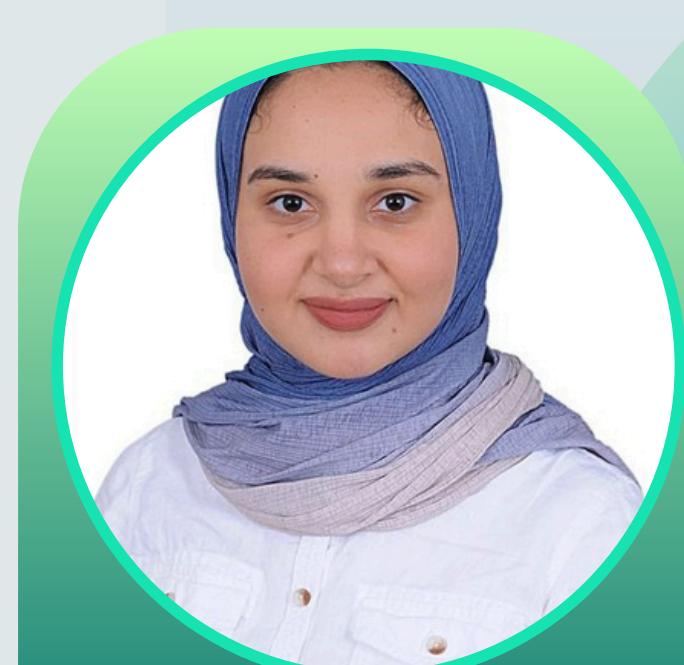
Mohamed
Nabil



Arwa Adel



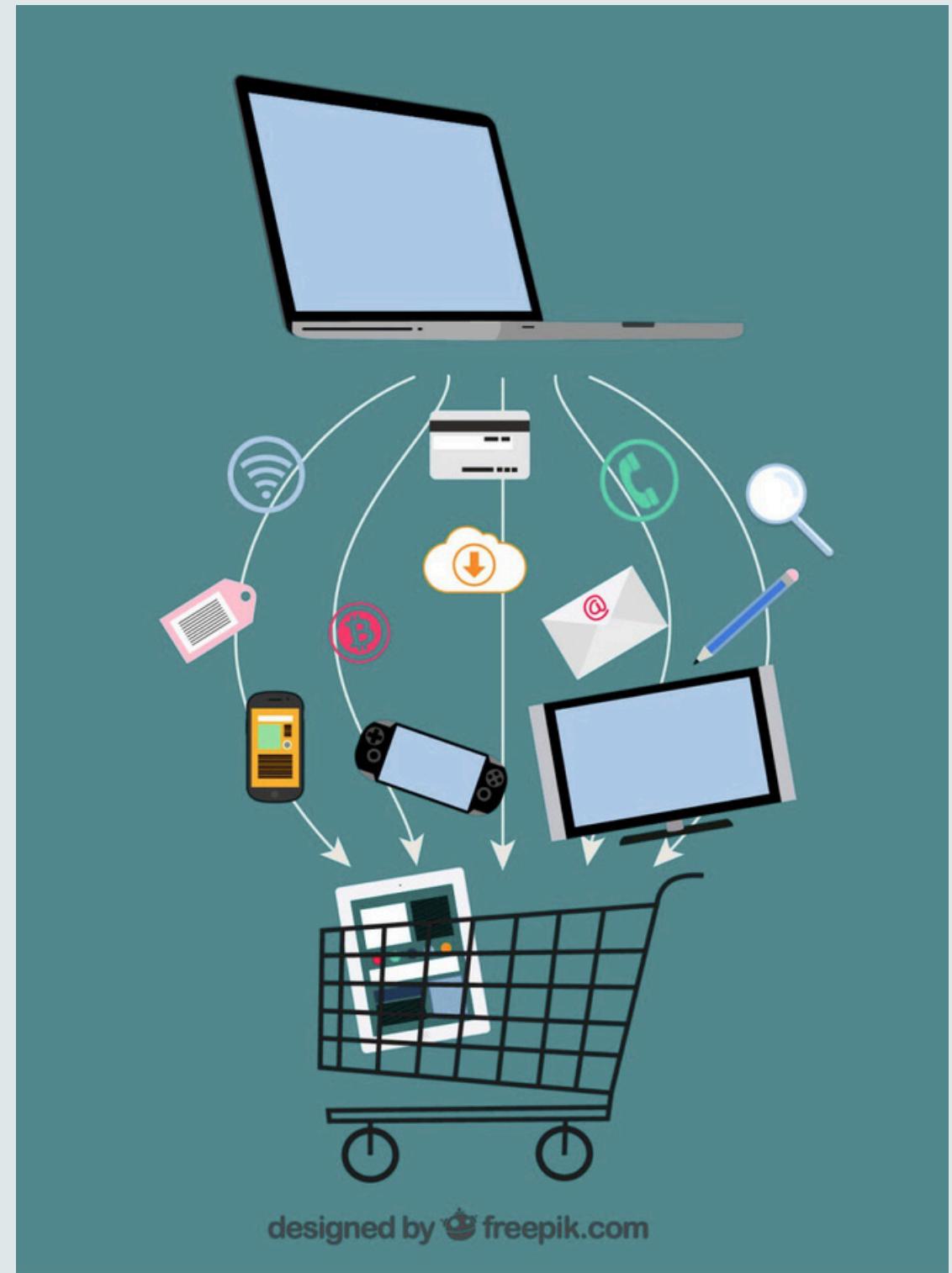
Ahmed
Khaled



Noha Belal

OUTLINE

- Introduction
- Motivation
- Data Preparation
- ETL Process(SSIS)
- Data Modeling(SSAS)
- Reporting (SSRS)
- Visualization(Power BI,Tableau)
- Tools & Technologies Used



INTRODUCTION

In the world of e-commerce, massive amounts of data are generated daily from sales, customers, and products.

This project presents a practical model for transforming that data into interactive dashboards that help decision-makers understand the current situation and forecast future trends.

Using Power BI and Tableau, visual solutions were designed to clearly display key performance indicators, enabling faster and more effective performance evaluation and strategy improvement.



MOTIVATION

With the rapid growth of e-commerce and the increasing competition among online stores, businesses are now more than ever in need of leveraging their data to gain deeper market insights.

Analyzing e-commerce data enables the identification of purchasing patterns and customer behavior, highlights top-performing products, and reveals the reasons behind sales declines in certain periods.

It also supports the improvement of marketing strategies, personalization of offers, and enhancement of customer satisfaction – all of which directly contribute to higher profits and sustainable success.

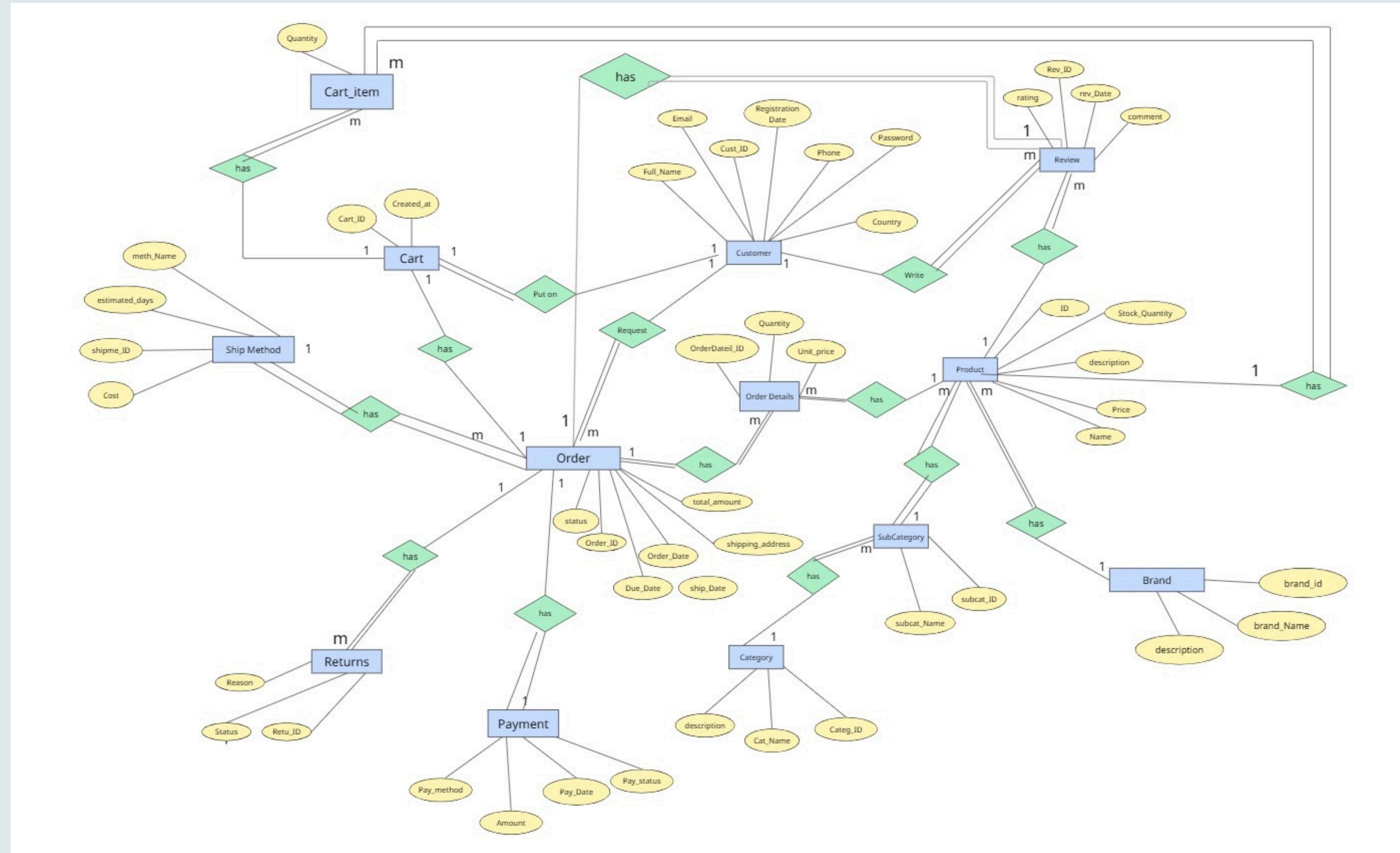
This project represents a practical step towards transforming raw data into actionable insights that support evidence-based strategic decision-making.



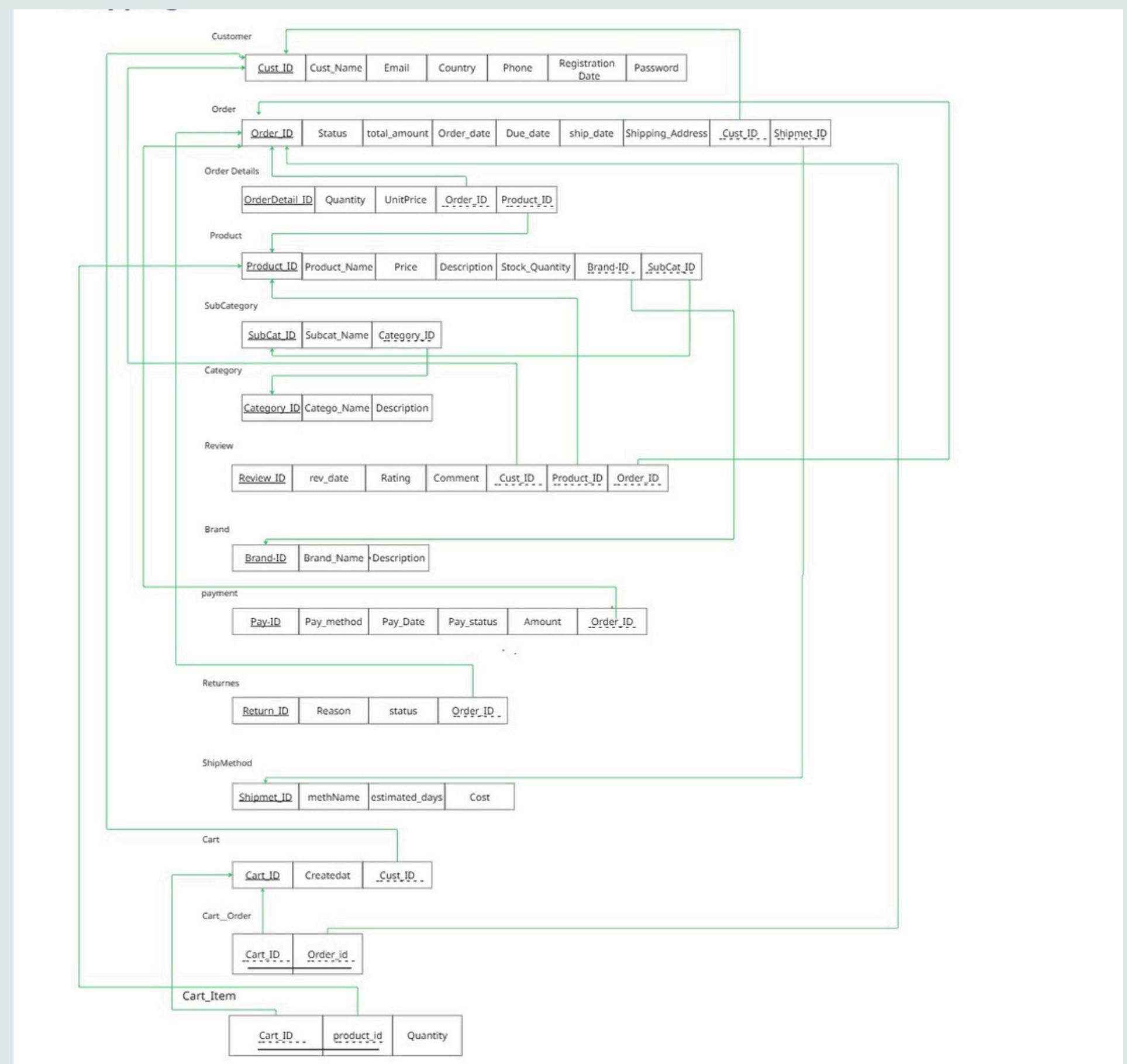
DATA PREPARATION



1-ERD



2-Mapping



3-Creation

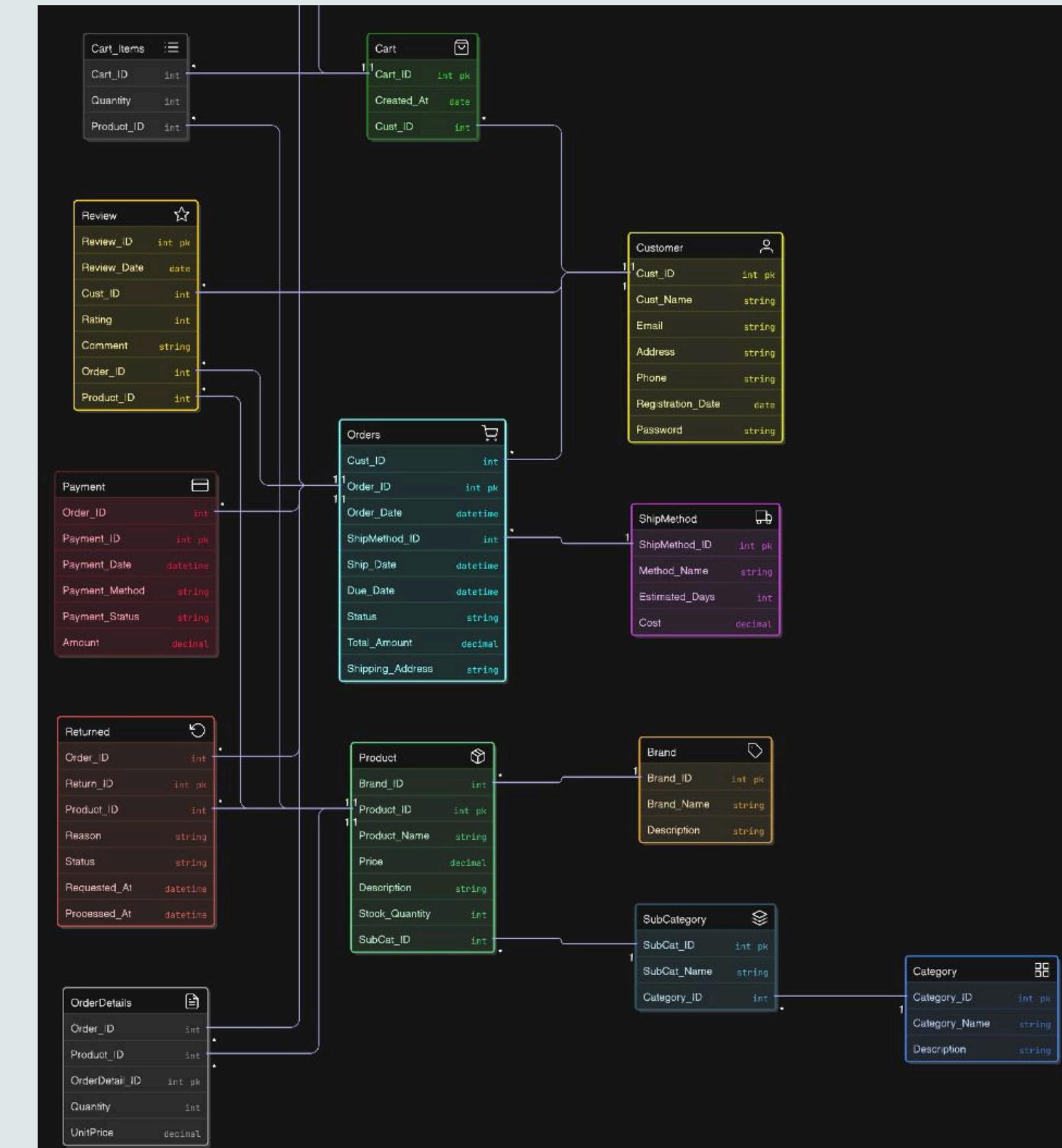
```
CREATE DATABASE E_Commerce;
GO
USE E_Commerce;
GO
CREATE SCHEMA users;
GO
CREATE SCHEMA products;
GO
CREATE SCHEMA cart;
GO
CREATE SCHEMA orders;
GO

CREATE TABLE users.Customer (
    Cust_ID INT PRIMARY KEY IDENTITY(1,1),
    Cust_Name NVARCHAR(100) NOT NULL,
    Email NVARCHAR(100) UNIQUE,
    Address NVARCHAR(200),
    Phone NVARCHAR(20) UNIQUE,
    Registration_Date DATE DEFAULT GETDATE(),
    Password NVARCHAR(100) NOT NULL
);
GO

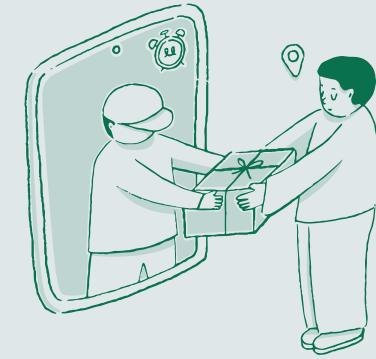
CREATE TABLE products.Category (
    Category_ID INT PRIMARY KEY IDENTITY(1,1),
    Category_Name NVARCHAR(100) NOT NULL,
    Description NVARCHAR(200)
);

CREATE TABLE products.Brand (
    Brand_ID INT PRIMARY KEY IDENTITY(1,1),
    Brand_Name NVARCHAR(100) NOT NULL,
```

4- OltpTables



5-Implementation



- We have created our own virtual database to simulate an e-commerce system. The data was generated using SQL scripts we designed ourselves, ensuring that it is as realistic as possible in terms of data types, table relationships, and record counts, so that it reflects a real-world scenario that can be analyzed. Logical relationships between tables (such as foreign keys and composite keys) were also taken into account.
- The data was generated using artificial intelligence tools and custom scripts to produce diverse and semi-realistic datasets. We designed the schema and data based on well-known e-commerce database models, with some modifications to suit our specific analysis objectives.

6-Business Validation

Data validation was performed using the following methods:

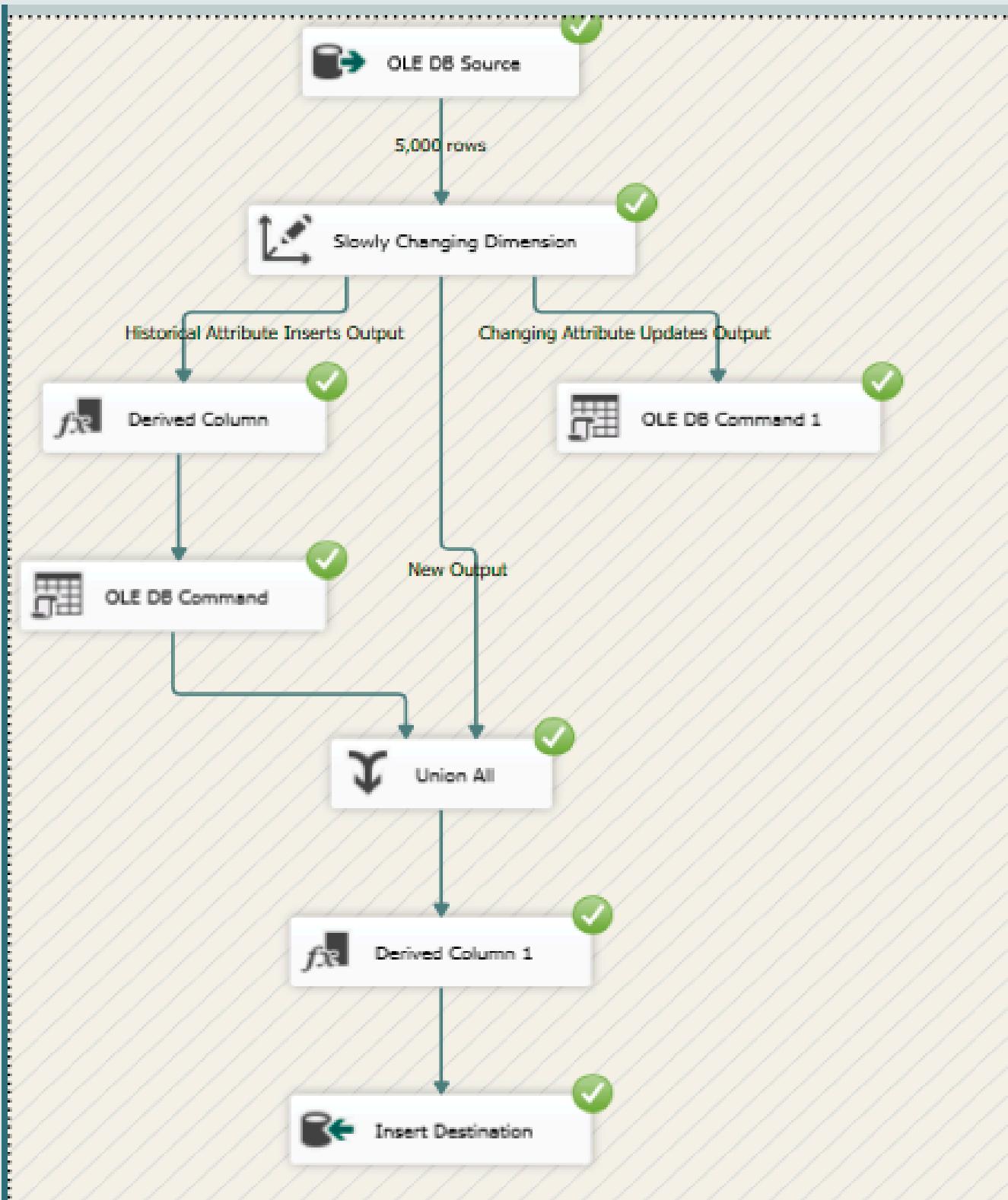
- Orphan Keys
- Enum Checks
- Value Checks
- Uniqueness
- Date Logic

```
1  -- =====
2  -- Data Consistency Check Script for E_Commerce DB
3  -- =====
4
5
6  -- ===== Orphaned Foreign Keys =====
7  -- Orders without valid Customers
8  SELECT 'Orphan Orders (Customer)' AS Test, COUNT(*) AS Failures
9  FROM orders.Orders o
10 LEFT JOIN users.Customer c ON o.Cust_ID = c.Cust_ID
11 WHERE c.Cust_ID IS NULL;
12
13 -- Orders without valid Ship Methods
14 SELECT 'Orphan Orders (ShipMethod)', COUNT(*)
15 FROM orders.Orders o
16 LEFT JOIN orders.ShipMethod s ON o.ShipMethod_ID = s.ShipMethod_ID
17 WHERE s.ShipMethod_ID IS NULL;
18
19 -- OrderDetails with missing Orders
20 SELECT 'Orphan OrderDetails (Order)', COUNT(*)
21 FROM orders.OrderDetails od
22 LEFT JOIN orders.Orders o ON od.Order_ID = o.Order_ID
23 WHERE o.Order_ID IS NULL;
24
25 -- OrderDetails with missing Products
26 SELECT 'Orphan OrderDetails (Product)', COUNT(*)
27 FROM orders.OrderDetails od
28 LEFT JOIN products.Product p ON od.Product_ID = p.Product_ID
29 WHERE p.Product_ID IS NULL;
30
31 -- Returned with missing Orders
32 SELECT 'Orphan Returned (Order)', COUNT(*)
33 FROM orders.Returned r
34 LEFT JOIN orders.Orders o ON r.Order_ID = o.Order_ID
35 WHERE o.Order_ID IS NULL;
```

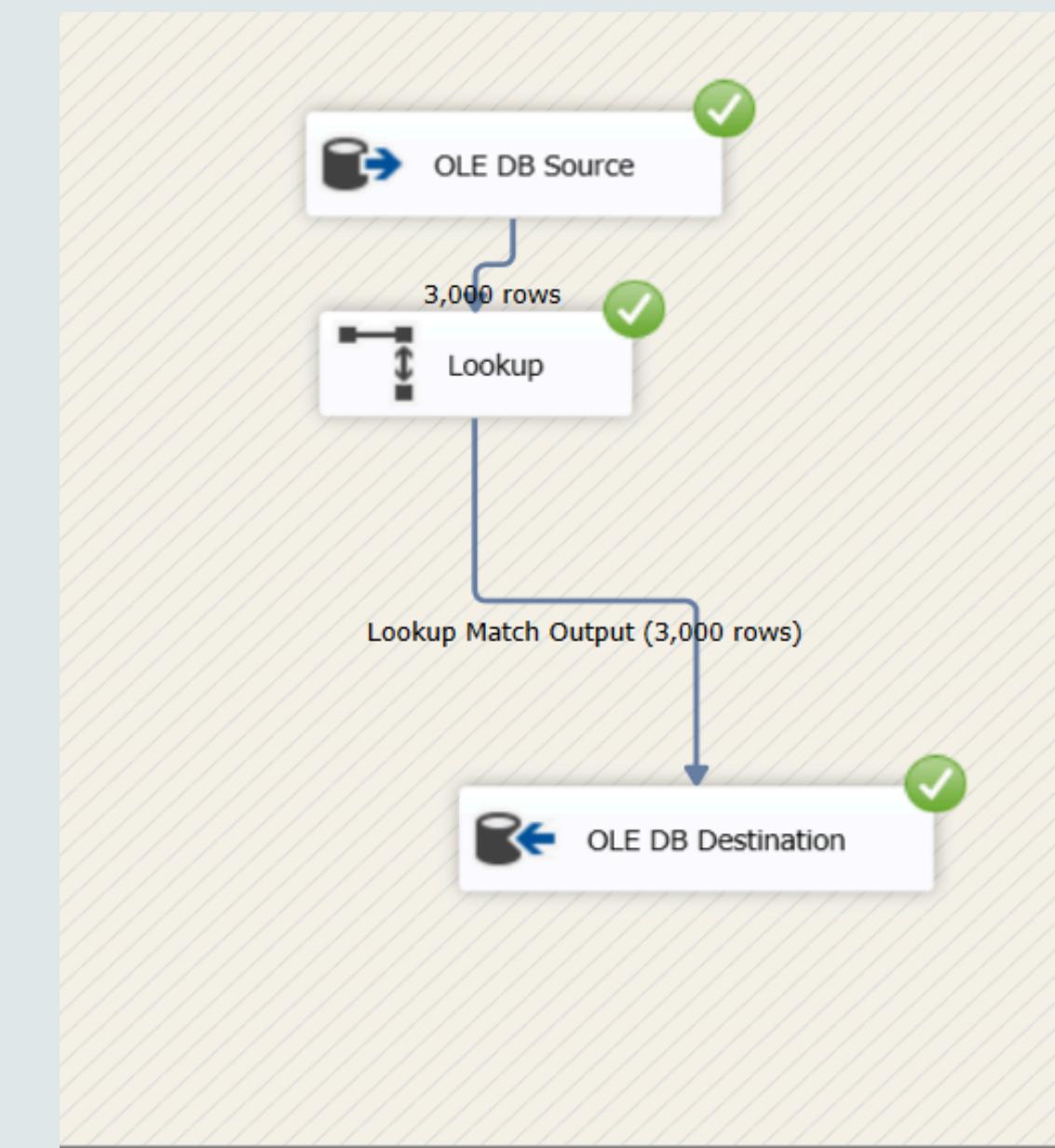


ETL PROCESS (SSIS)

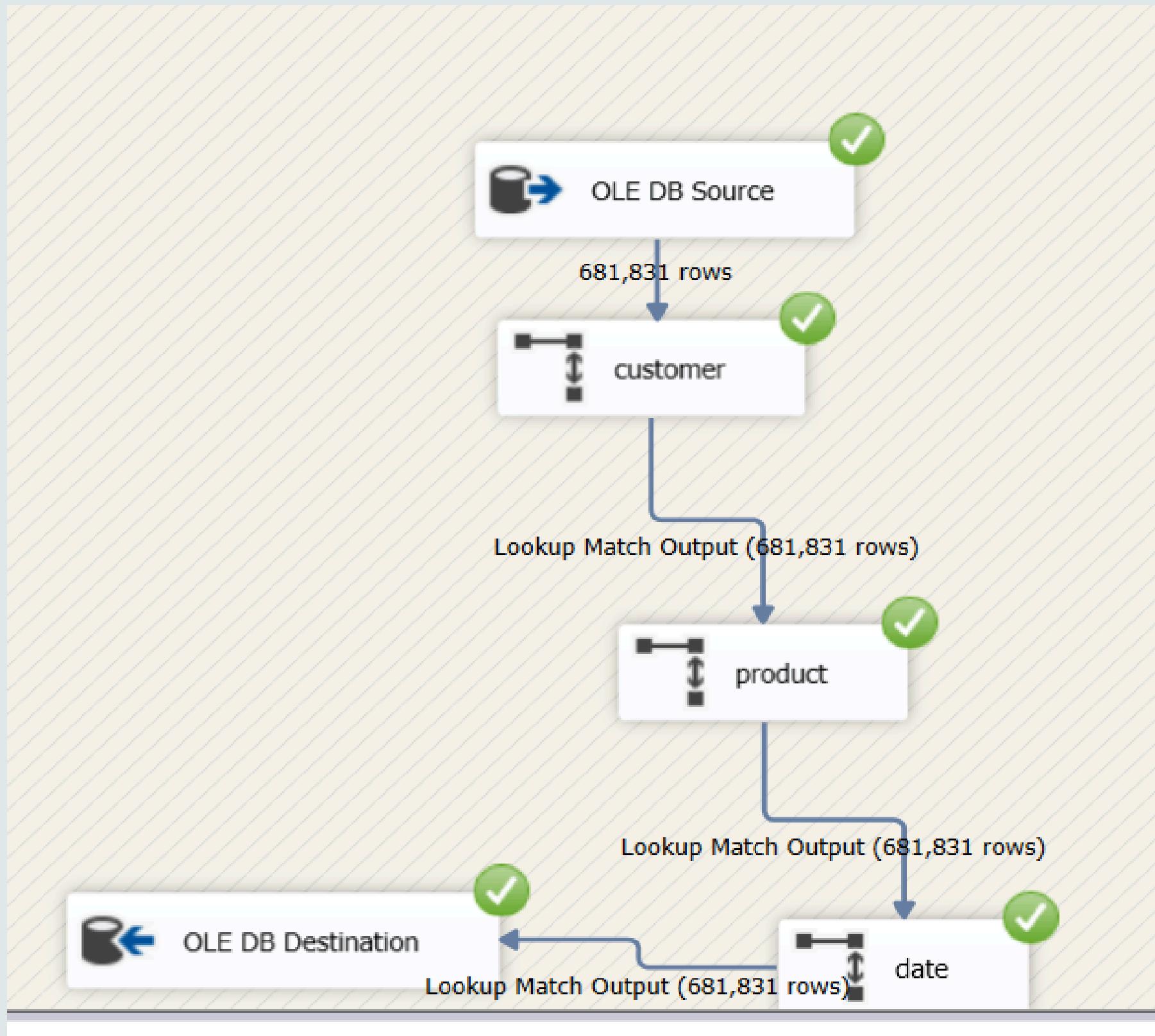
Dim-Customer



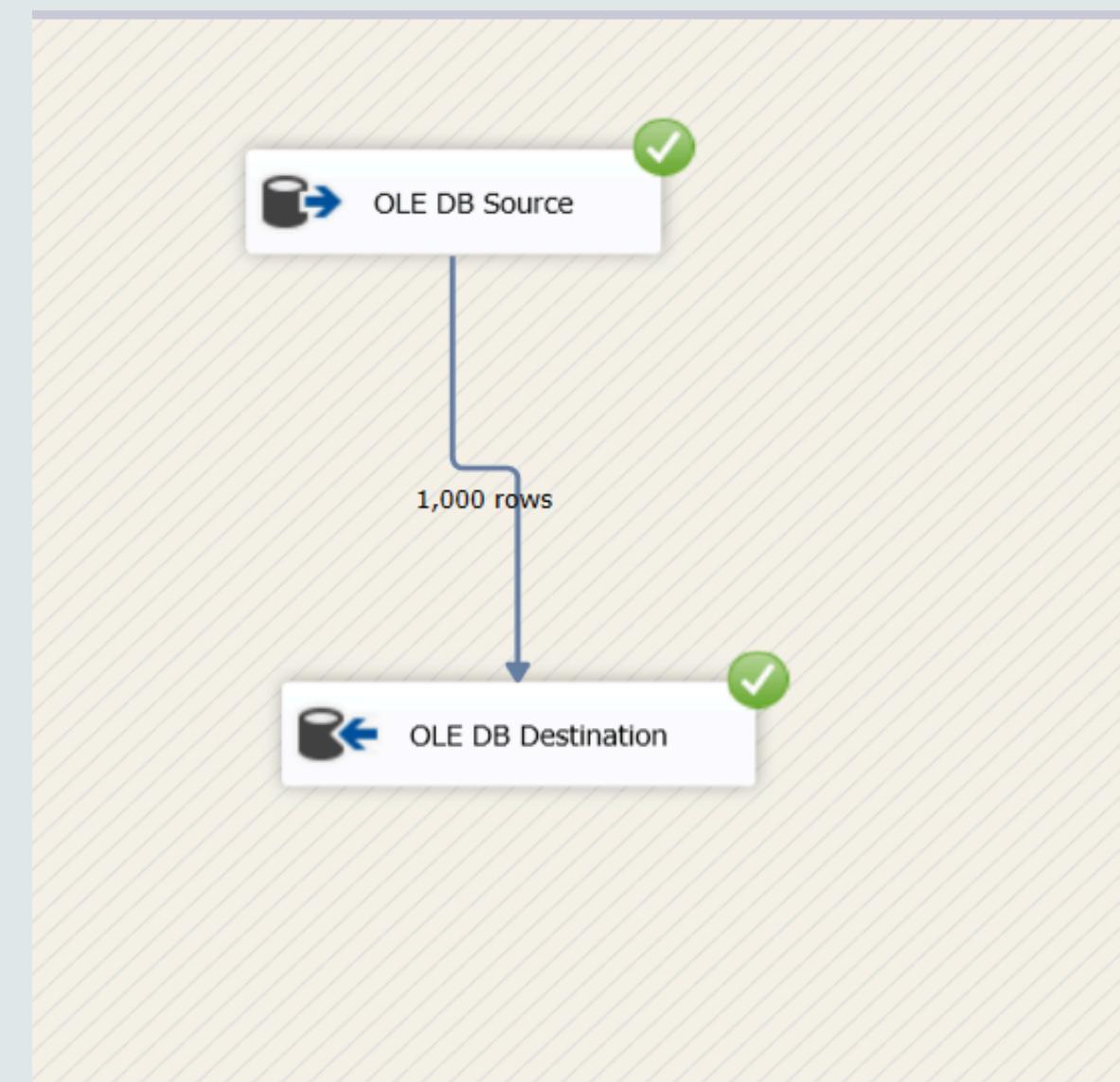
Fact-Payment



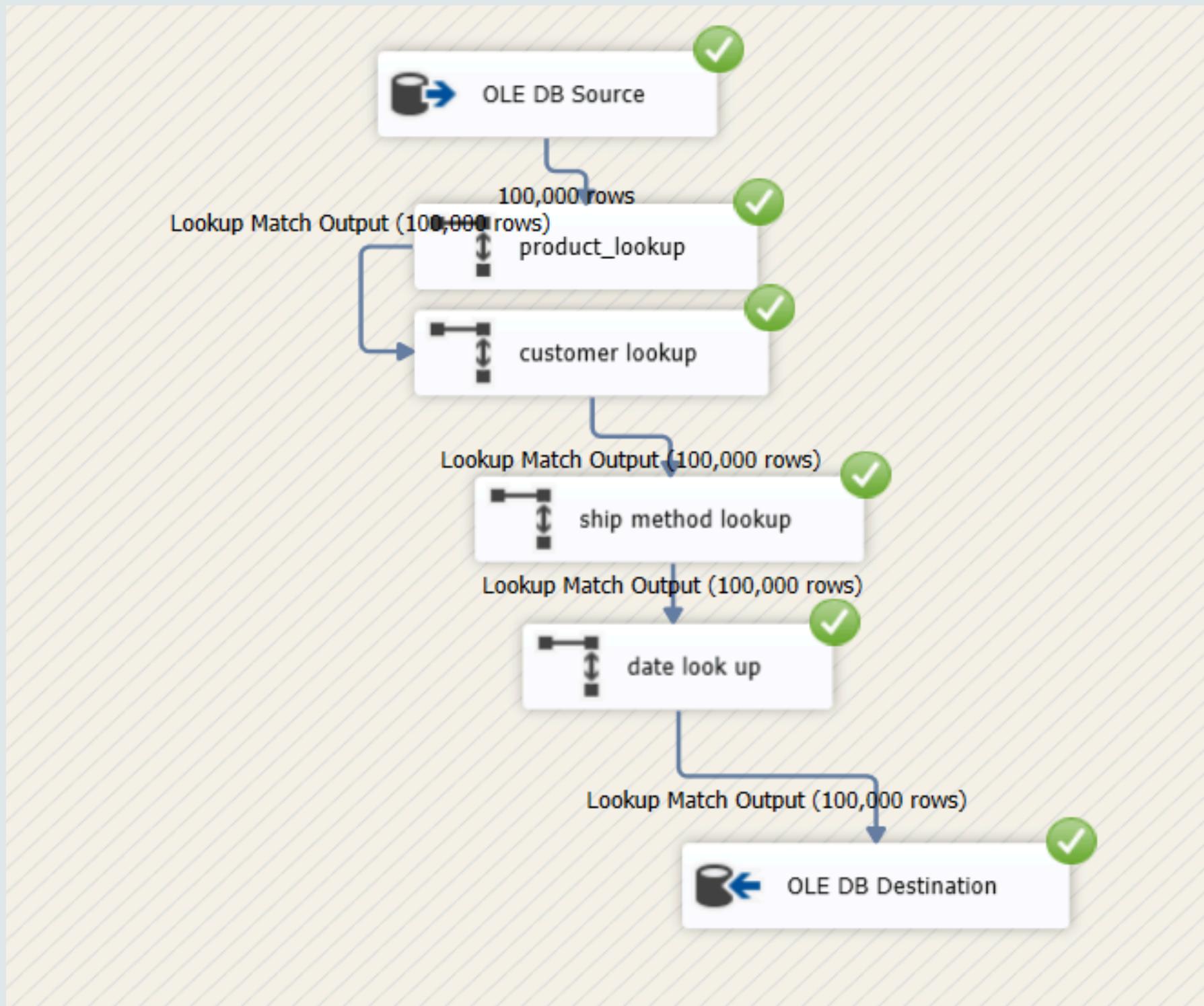
Fact-CartActivity



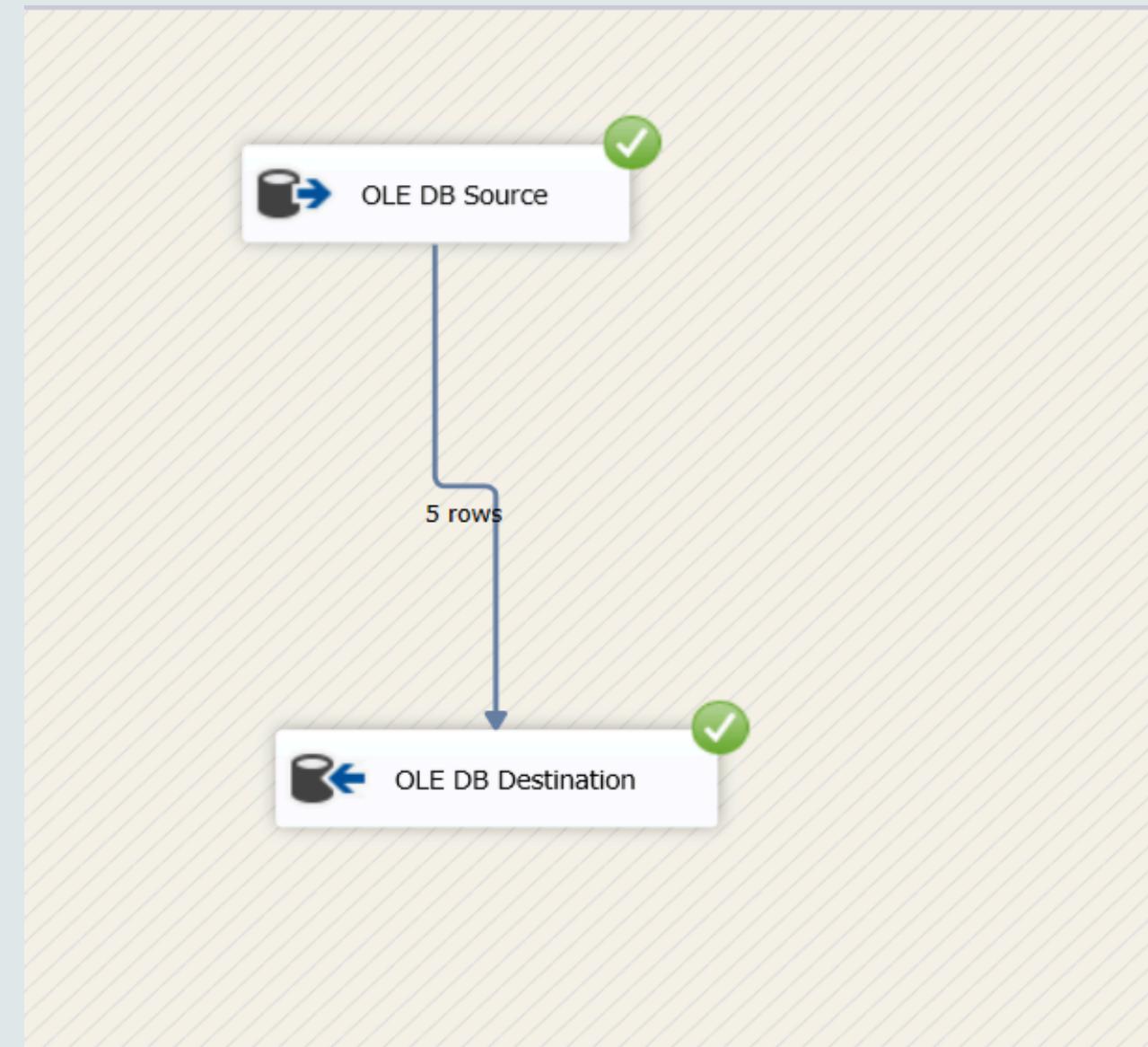
Dim-Product



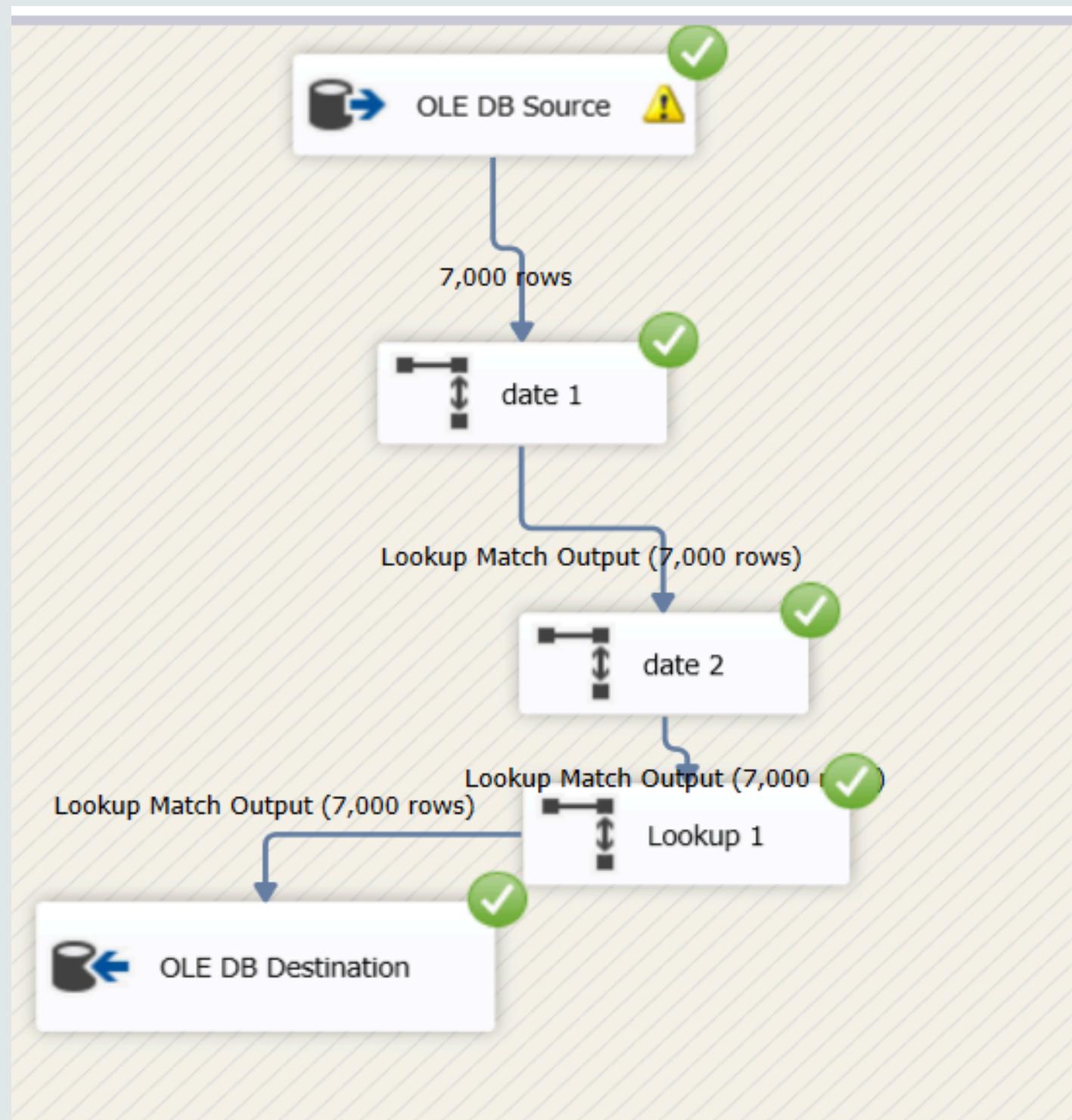
Fact-Sales



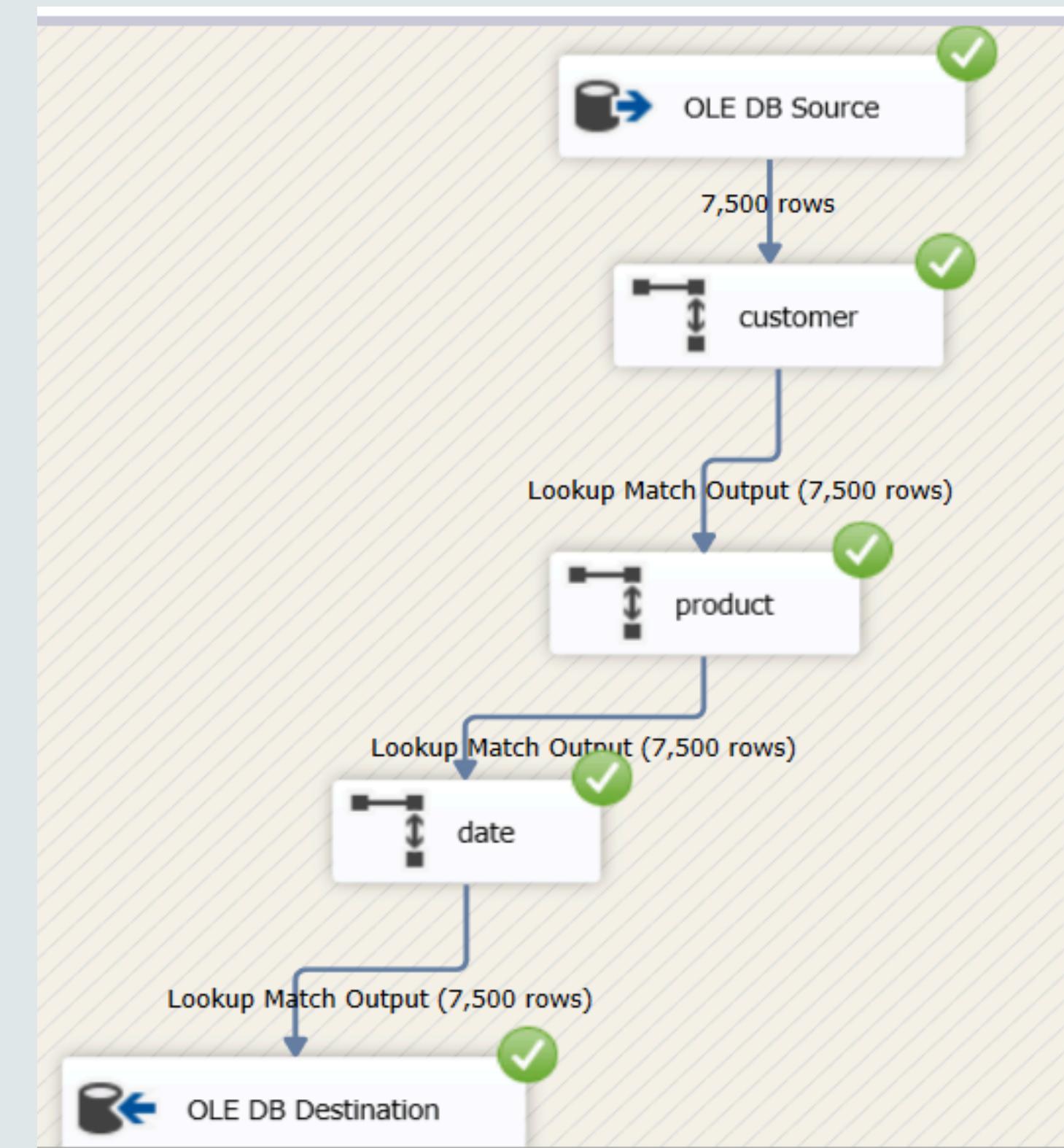
Dim-ShipMethod



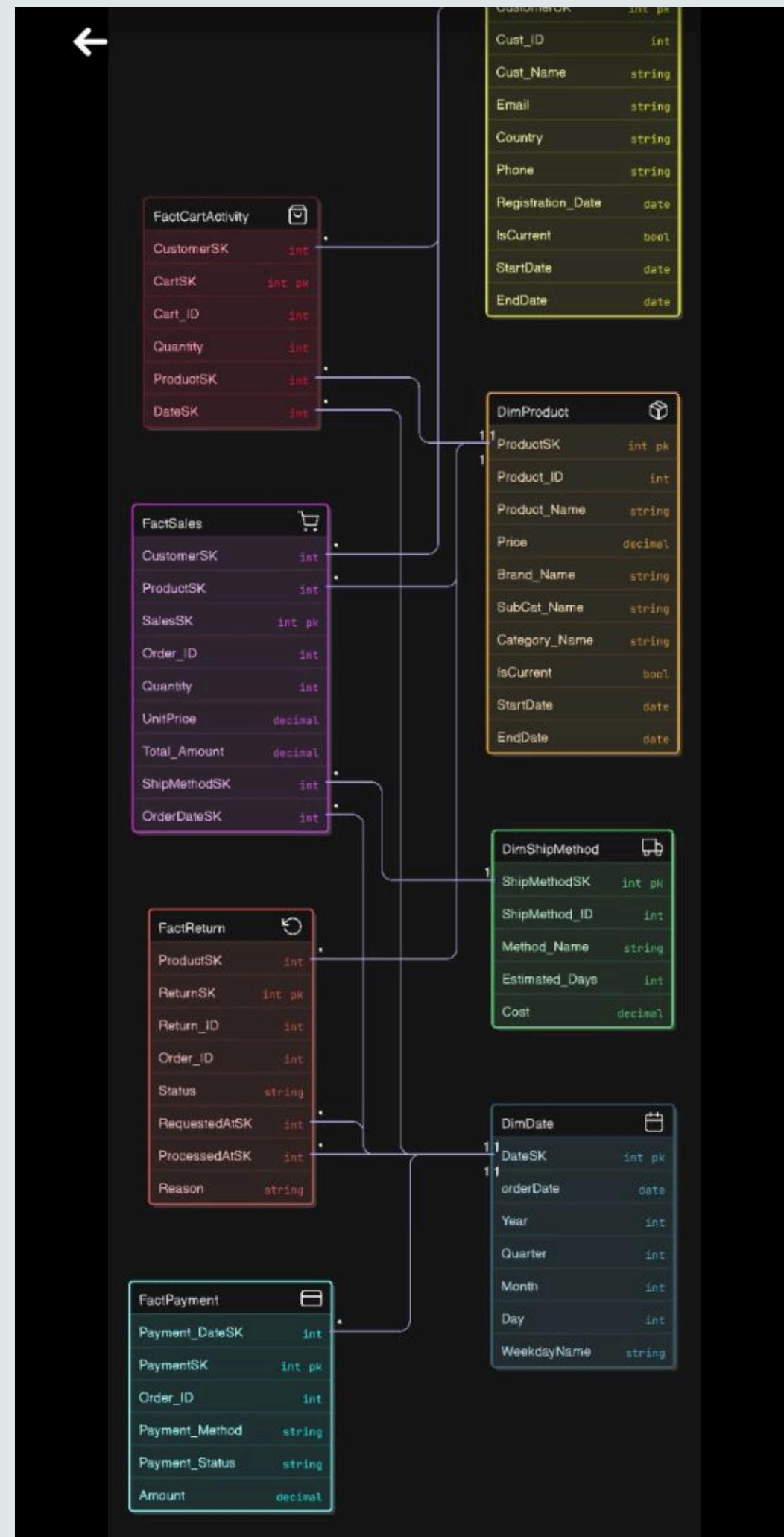
Fact-Return



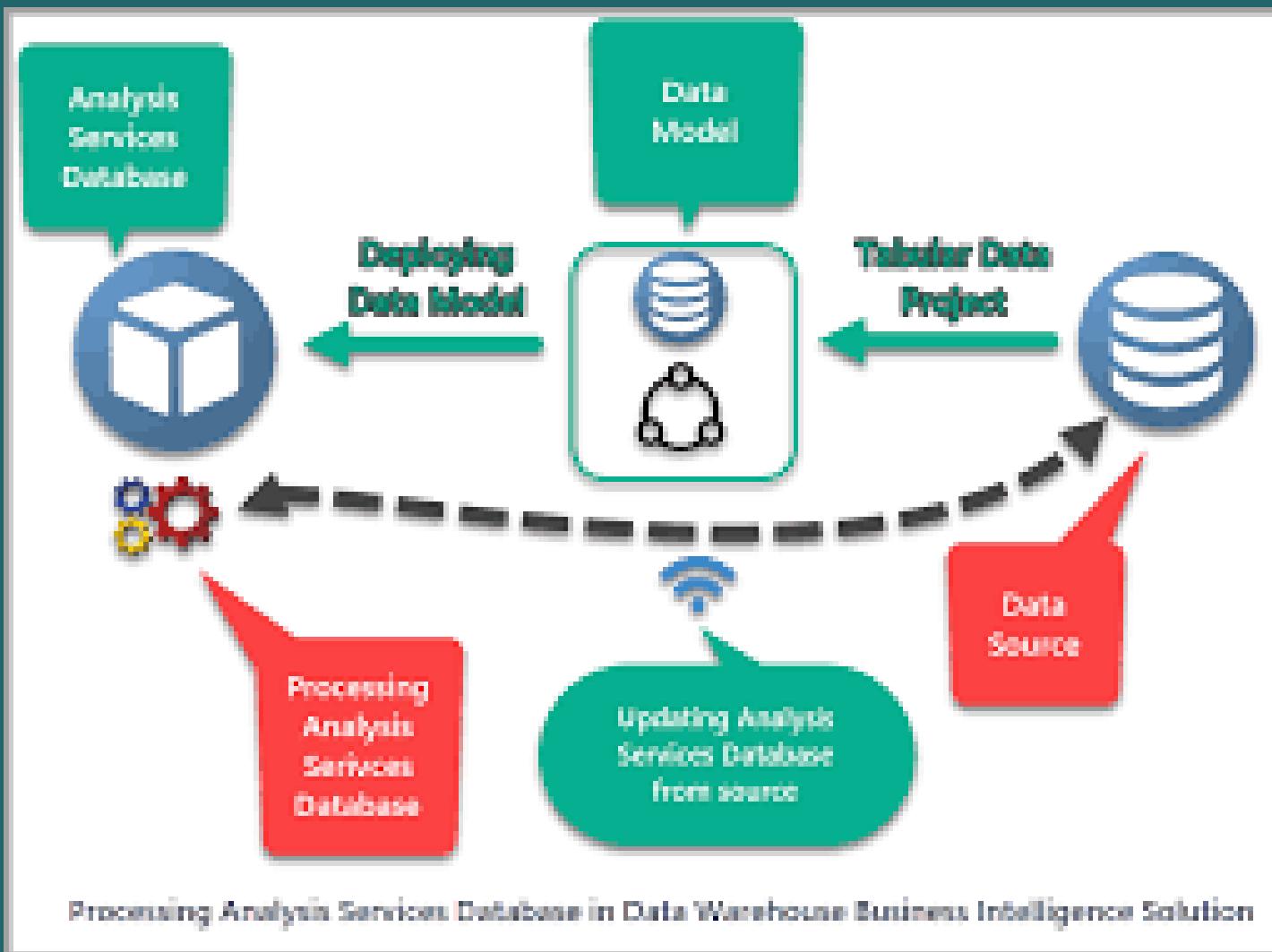
Fact-Review



Dimension Table(DWH)



DATA MODELING(SSAS)



1-Sales Cube

Sales analysis.csv [Design] ShippingEfficiencyCube.cube [Design] sales analysis.cube [Design] MultidimensionalProject1

Cube Structure Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... MDX

Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Country	Year	Quarter	Month	Category Name	Sub Cat Name	Product Name	Quantity	Unit Price	TOTAL Revenue
Afghani...	2021	3	8	Books	Fiction	Garden Tool ...	25	360.87	9021.75
Afghani...	2021	3	8	Books	Fiction	Herbal Tea Va...	90	436.78	39310.2
Afghani...	2021	3	8	Books	Non-Fiction	Artisan Pickles	27	79.3	2141.1
Afghani...	2021	3	8	Electronics	Headphones	DIY Candle Kit	53	479.27	25401.31
Afghani...	2021	3	8	Electronics	Laptops	Essential Oil R...	39	101.53	3959.67
Afghani...	2021	3	8	Electronics	Laptops	Sporty Cap	98	478.33	46876.34
Afghani...	2021	3	8	Electronics	Laptops	Wooden Kitc...	32	356.35	11403.2
Afghani...	2021	3	8	Electronics	Smartphones	Cotton Sweat...	41	499.44	20477.04
Afghani...	2021	3	8	Electronics	Smartphones	Honey Butter...	53	25.49	1350.97
Afghani...	2021	3	8	Fashion	Men Clothing	Chino Shorts	38	159.8	6072.4
Afghani...	2021	3	8	Fashion	Shoes	Coconut Milk ...	100	338.33	33833
Afghani...	2021	3	8	Fashion	Shoes	Electric Hot ...	57	424.37	24189.09
Afghani...	2021	3	8	Fashion	Women Cloth...	Black Bean So...	75	77.29	5796.75
Afghani...	2021	3	8	Health & Beauty	Hair Care	Backpacking ...	86	357.51	30745.86
Afghani...	2021	3	8	Health & Beauty	Hair Care	Tomatillo Salsa	33	478.17	15779.61
Afghani...	2021	3	8	Health & Beauty	Skincare	Home Karaok...	96	392.58	37687.68
Afghani...	2021	3	8	Health & Beauty	Supplements	Garlic and Her...	27	20.78	561.06
Afghani...	2021	3	8	Health & Beauty	Supplements	Lightweight ...	90	186.07	16746.3
Afghani...	2021	3	8	Health & Beauty	Supplements	Pizza Stone	67	182.24	12210.08
Afghani...	2021	3	8	Health & Beauty	Supplements	Spaghetti Sau...	59	313.95	18523.05
Afghani...	2021	3	8	Home & Kitchen	Decor	Adjustable Yo...	76	488.89	37155.64
Afghani...	2021	3	8	Home & Kitchen	Decor	Camping Tent	71	104.09	7390.39
Afghani...	2021	3	8	Home & Kitchen	Decor	Peach Green ...	93	204.34	19003.62
Afghani...	2021	3	8	Home & Kitchen	Decor	Recipe Book ...	70	69.9	4893
Afghani...	2021	3	8	Home & Kitchen	Furniture	Electric Blanket	99	253.41	25087.59
Afghani...	2021	3	8	Home & Kitchen	Kitchen Appla...	Coffee Capsul...	70	91.81	6426.7
Afghani...	2021	3	8	Home & Kitchen	Kitchen Appla...	Crew Neck S...	64	395.73	25326.72

Calculated Members

2- Payment Cube

Payment.cube [Design] X

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... MDX

Payment

Metadata

Measure Group:

<All>

Payment

Measures

Fact Payment

Total Payment

Num Orders

Number of Orders

Num Payments

Number of Payments

Total_Amount_By_PayMthod

KPIs

Dim Date

Date SK

Day

Month

Order Date

Quarter

Weekday Name

Year

Hierarchy

Fact Payment

Amount

Order ID

Calculated Members

Error List

Dimension	Hierarchy	Operator	Filter Expression	Parameters			
Dim Date	Year	Equal	{ 2024, 2023 }				
<Select dimension>							
Payment Method	Payment Status	Amount	Year	Month	Day	Quarter	Number of Orders
Bank Transfer	Completed	17313...	2023	4	12	2	1
Bank Transfer	Completed	21063...	2024	2	26	1	1
Bank Transfer	Completed	26315...	2023	11	10	4	1
Bank Transfer	Completed	27116...	2024	9	14	3	1
Bank Transfer	Completed	28333...	2024	4	19	2	1
Bank Transfer	Completed	29358...	2023	2	11	1	1
Bank Transfer	Completed	29766...	2023	3	6	1	1
Bank Transfer	Completed	30325...	2024	1	20	1	1
Bank Transfer	Completed	31249...	2024	11	4	4	1
Bank Transfer	Completed	31259...	2023	1	13	1	1
Bank Transfer	Completed	31933...	2023	2	2	1	1
Bank Transfer	Completed	31984...	2024	2	23	1	1
Bank Transfer	Completed	33114...	2023	1	8	1	1
Bank Transfer	Completed	33636...	2023	9	12	3	1
Bank Transfer	Completed	34200...	2024	5	6	2	1
Bank Transfer	Completed	34491...	2023	2	28	1	1
Bank Transfer	Completed	35253...	2024	3	3	1	1
Bank Transfer	Completed	35311...	2024	10	4	4	1
Bank Transfer	Completed	35389...	2024	2	1	1	1
Bank Transfer	Completed	36719...	2024	10	18	4	1
Bank Transfer	Completed	36905...	2024	1	30	1	1
Bank Transfer	Completed	37454...	2024	7	15	3	1
Bank Transfer	Completed	37649...	2023	6	7	2	1
Bank Transfer	Completed	37745	2024	10	3	4	1

3- ShipMethod Cube

Solution Explorer

Project Build Debug Test Analyze Tools Extensions Window Help Search (Ctrl+Q) MultidimensionalProject1

Develop Default Start

ShippingEfficiencyCube.csv [Design] sales analysis.csv [Design] ShippingEfficiencyCube.cube [Design] sales analysis.cube [Design]

Cube Struct... Dimension Usage Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Language: Default

Edit as Text Import... MDX

ShippingEfficiencyCube

Dimension Hierarchy Operator Filter Expression Parameters

<Select dimension>

Method Name	Country	Fact Sales Count
Economy Shipping	Afghanistan	65
Economy Shipping	Albania	120
Economy Shipping	Angola	59
Economy Shipping	Antigua and Barbuda	30
Economy Shipping	Argentina	288
Economy Shipping	Australia	39
Economy Shipping	Azerbaijan	88
Economy Shipping	Bangladesh	62
Economy Shipping	Belarus	32
Economy Shipping	Bolivia	61
Economy Shipping	Bosnia and Herzegovina	40
Economy Shipping	Botswana	43
Economy Shipping	Brazil	551
Economy Shipping	Bulgaria	126
Economy Shipping	Cambodia	74
Economy Shipping	Cameroon	34
Economy Shipping	Canada	328
Economy Shipping	Chile	39
Economy Shipping	China	3917
Economy Shipping	Colombia	181
Economy Shipping	Costa Rica	69
Economy Shipping	Croatia	110
Economy Shipping	Cuba	106
Economy Shipping	Czech Republic	467
Economy Shipping	Democratic Republic of the Congo	32
Economy Shipping	Denmark	60
Economy Shipping	Dominican Republic	74

Calculated Members

Dim Ship Method
Maximum Cost
Minimum Cost
Fact Sales
Fact Sales Count
Quantity
Unit Price
KPIs
Dim Customer
Country
Cust ID
Cust Name
Customer SK
Email
End Date
Is Current
Phone
Registration Date
Start Date
Dim Date
Dim Product
Dim Ship Method
Count

4- Return Cube

Screenshot of the Analysis Services Management Studio interface showing the configuration of a cube named "Cube_Return".

The ribbon menu at the top includes: Cube Struct..., Dimension Usage, Calculations, KPIs, Actions, Partitions, Aggregations, Perspectives, Translations, and Browser.

The Language dropdown is set to Default.

The MDX editor shows the following filter configuration:

Dimension	Hierarchy	Operator	Filter Expression	Parameters
Processed At SK	Processed At SK.Year	Equal	{ 2022, 2023, 2024 }	
<Select dimension>				

The left sidebar displays the cube's structure:

- Measure Group:** <All>
 - Dim Product
 - Price
 - Fact Return
 - Fact Return Count
 - Number of Returns
 - Order ID
 - Return SK Count
 - Fact Return 1
 - Distinct Returned Products
 - Return_Ratio
 - KPIs
 - Dim Product
 - Brand Name
 - Category Name
 - Price
 - Product ID
 - Product Name
 - Product SK
 - Sub Cat Name
 - Processed At SK
 - Processed At SK.Date SK

- Calculated Members:** (Empty)

The main grid displays the data results:

Product Name	Price	Brand Name	Category Name	Year	Month	Day	Number of Returns	Distinct Returned Products
Adjustable Bar Stools	149.99	Nike	Fashion	2022	11	9	1	1
Adjustable Bar Stools	149.99	Nike	Fashion	2022	7	2	1	1
Adjustable Bar Stools	149.99	Nike	Fashion	2022	9	15	1	1
Adjustable Bar Stools	149.99	Nike	Fashion	2023	3	3	1	1
Adjustable Bar Stools	149.99	Nike	Fashion	2023	3	9	1	1
Adjustable Bar Stools	149.99	Nike	Fashion	2023	5	18	1	1
Adjustable Dog Harness	24.99	Nike	Fashion	2022	2	2	1	1
Adjustable Dog Harness	24.99	Nike	Fashion	2022	4	29	1	1
Adjustable Dog Harness	24.99	Nike	Fashion	2022	6	5	1	1
Adjustable Dog Harness	24.99	Nike	Fashion	2022	9	26	1	1
Adjustable Dog Harness	24.99	Nike	Fashion	2023	7	5	1	1
Adjustable Dog Harness	24.99	Nike	Fashion	2023	8	16	1	1
Adjustable Dog Harness	24.99	Nike	Fashion	2023	9	4	1	1
Adjustable Dumbbells	249.99	Asus	Fashion	2022	6	17	1	1
Adjustable Dumbbells	249.99	Asus	Fashion	2022	7	18	1	1
Adjustable Dumbbells	249.99	Asus	Fashion	2022	7	5	1	1
Adjustable Dumbbells	249.99	Asus	Fashion	2022	9	24	1	1
Adjustable Dumbbells	249.99	Asus	Fashion	2023	1	26	1	1
Adjustable Dumbbells	249.99	Asus	Fashion	2023	5	16	1	1
Adjustable Dumbbells	249.99	Asus	Fashion	2023	8	11	1	1
Adjustable Dumbbells	249.99	Asus	Fashion	2023	8	26	1	1
Adjustable Dumbbells	249.99	Microsoft	Fashion	2022	5	28	1	1
Adjustable Dumbbells	249.99	Microsoft	Fashion	2023	3	4	1	1
Adjustable Garden Rake	22.99	Apple	Home & Kitchen	2022	12	4	1	1
Adjustable Garden Rake	22.99	Apple	Home & Kitchen	2022	2	2	1	1
Adjustable Garden Rake	22.99	Apple	Home & Kitchen	2022	8	19	1	1

5-ActivityCart Cube

The screenshot shows the Microsoft Analysis Services (SSAS) Designer application. The title bar indicates the current project is "V_CartActivity.cube [Design]". The left sidebar contains a tree view of the cube structure, including dimensions like Dim Date, Dim Customer, and Dim Product, and measures like Cust Name, Year, Month, Day, Country, Category Name, Cart ID Distinct Count, Product SK Distinct Count, and Quantity. The main workspace displays a grid of data for the year 2025, showing various customer details and their purchase activity. The bottom pane shows an "Error List" with 0 errors, 0 warnings, and 0 messages.

Cust Name	Year	Month	Day	Country	Category Name	Cart ID Distinct Count	Product SK Distinct Count	Quantity
Abby Crisall	2025	5	15	Greece	Books	1	9	643
Abby Crisall	2025	5	15	Greece	Electronics	1	13	396
Abby Crisall	2025	5	15	Greece	Fashion	1	12	824
Abby Crisall	2025	5	15	Greece	Health & Beauty	1	18	873
Abby Crisall	2025	5	15	Greece	Home & Kitchen	1	13	654
Abby Crisall	2025	5	15	Greece	Sports & Outd...	1	3	96
Abby Lomis	2025	4	8	Canada	Books	1	4	258
Abby Lomis	2025	4	8	Canada	Electronics	1	11	490
Abby Lomis	2025	4	8	Canada	Fashion	1	3	269
Abby Lomis	2025	4	8	Canada	Health & Beauty	1	4	270
Abby Lomis	2025	4	8	Canada	Home & Kitchen	1	4	223
Abby Lomis	2025	4	8	Canada	Sports & Outd...	1	4	179
Abigail Ky...	2025	3	20	Indonesia	Books	1	10	502
Abigail Ky...	2025	3	20	Indonesia	Electronics	1	8	530
Abigail Ky...	2025	3	20	Indonesia	Fashion	1	13	599
Abigail Ky...	2025	3	20	Indonesia	Health & Beauty	1	9	371
Abigail Ky...	2025	3	20	Indonesia	Home & Kitchen	1	14	753
Abigail Ky...	2025	3	20	Indonesia	Sports & Outd...	1	4	142
Abigale Du...	2025	2	13	Nepal	Books	1	10	573
Abigale Du...	2025	2	13	Nepal	Electronics	1	5	329
Abigale Du...	2025	2	13	Nepal	Fashion	1	6	344
Ahinsola Du...	2025	2	13	Nepal	Health & Beauty	1	4	171

REPORTING (SSRS)



1-Selling product

Selling Product in Countries per Category



Health & Beauty

Country	Sub Cat Name	Product Name	Avg Price	Total Quantity	Total Revenue
Brazil			900 \$	1780	1,601,982 \$
			899.99 \$	\$1780	1,601,982 \$
China			1,950 \$	41015	12,121,660 \$
			899.99 \$	\$5920	5,327,941 \$
	Supplements	Wireless Security System	299.99 \$	\$6481	1,944,235 \$
	Supplements	Foldable Electric Scooter	349.99 \$	\$4787	1,675,402 \$
			139.99 \$	\$7681	1,075,263 \$
			129.99 \$	\$8080	1,050,319 \$
	Skincare	Home Karaoke System	129.99 \$	\$8066	1,048,499 \$
France			900 \$	1998	1,798,180 \$
			899.99 \$	\$1998	1,798,180 \$
Indonesia			1,550 \$	15486	7,806,495 \$
			899.99 \$	\$4732	4,258,753 \$
	Supplements	Foldable Electric Scooter	349.99 \$	\$6433	2,251,486 \$
	Supplements	Wireless Security System	299.99 \$	\$4321	1,296,257 \$
Mexico			900 \$	1776	1,598,382 \$
			899.99 \$	\$1776	1,598,382 \$
			1250 \$	5404	2,401,205 \$

Selling Product in Countries per Category



Home & Kitchen

Country	Sub Cat Name	Product Name	Avg Price	Total Quantity	Total Revenue
China			850 \$	42644	7,050,774 \$
			199.99 \$	\$8850	1,769,912 \$
	Furniture	Digital Wireless Camera	199.99 \$	\$7736	1,547,123 \$
	Decor	Kids' Learning Tablet	129.99 \$	\$9984	1,297,820 \$
			199.99 \$	\$6340	1,267,937 \$
	Decor	Noise-Canceling Headphones	119.99 \$	\$9734	1,167,983 \$
Indonesia			200 \$	5094	1,018,749 \$
			199.99 \$	\$5094	1,018,749 \$

5 out of 6

Selling Product in Countries per Category



Books

Country	Sub Cat Name	Product Name	Avg Price	Total Quantity	Total Revenue
China			200 \$	5033	1,006,550 \$
	Non-Fiction	Underwater Camera	199.99 \$	\$5033	1,006,550 \$

1 out of 6

2- product Report

Sales By Product



Product Name	Year	Month	Quantity Sold	Total Sales	Sales Contribution %
Olive Oil	2021	8	883	26446126 M \$	0.02%
Crew Neck Sweater	2021	8	734	20684221 M \$	0.02%
Classic Pumps	2021	8	656	19276719 M \$	0.02%
Backpacking Tent	2021	8	521	16525317 M \$	0.01%
Fitness Foam Roller	2021	8	615	16188816 M \$	0.01%
Camping Tent	2021	8	612	16098716 M \$	0.01%
Classic Cheesecake Mix	2021	8	579	15899416 M \$	0.01%
Almond Butter Granola Bars	2021	8	431	15326515 M \$	0.01%
Vegetarian Stuffed Peppers	2021	8	697	15282615 M \$	0.01%
Herbal Tea Variety Pack	2021	8	493	14691715 M \$	0.01%
Kale Caesar Salad Kit	2021	8	425	14379514 M \$	0.01%
Hiking Gaiters	2021	8	466	14320014 M \$	0.01%
Spicy Hummus	2021	8	540	14296414 M \$	0.01%
Pest Control Traps	2021	8	498	14234214 M \$	0.01%
Roasted Garlic Pasta Sauce	2021	8	377	14120214 M \$	0.01%
Essential Oil Roller Bottles	2021	8	562	14049114 M \$	0.01%
Digital Drawing Tablet	2021	8	376	13709114 M \$	0.01%
Spicy Tuna Sushi Kit	2021	8	475	13407413 M \$	0.01%
Pet Grooming Scissors	2021	8	625	13139013 M \$	0.01%
Garlic Parmesan Roasted Nuts	2021	8	521	12406712 M \$	0.01%
Customizable Name Plate	2021	8	404	12345312 M \$	0.01%
All Products	2021	8	449	10004440 M \$	0.01%

3-Cart Report

Cart Activity Overview						
Cust Name	Product Name	Quantity	order Date	Country	Price	Total Amount
Hollyanne Fassman	Yoga Wheel	2	3/19/2025 12:00:00 AM	Uzbekistan	34.99	69.98
Hollyanne Fassman	Silicone Baking Mat	48	3/19/2025 12:00:00 AM	Uzbekistan	15.99	767.52
Hollyanne Fassman	Classic Watch	44	3/19/2025 12:00:00 AM	Uzbekistan	99.99	4399.56
Hollyanne Fassman	Kids' STEM Robotics Kit	40	3/19/2025 12:00:00 AM	Uzbekistan	59.99	2399.60
Hollyanne Fassman	Portable Hand Warmer	65	3/19/2025 12:00:00 AM	Uzbekistan	24.99	1624.35
Hollyanne Fassman	Mini Cordless Vacuum Cleaner	7	3/19/2025 12:00:00 AM	Uzbekistan	45.99	321.93
Hollyanne Fassman	Digital Drawing Tablet	77	3/19/2025 12:00:00 AM	Uzbekistan	79.99	6159.23
Hollyanne Fassman	Vegetable Pizza Rolls	22	3/19/2025 12:00:00 AM	Uzbekistan	6.49	142.78
Hollyanne Fassman	Mango Chunks	49	3/19/2025 12:00:00 AM	Uzbekistan	4.89	239.61
Hollyanne Fassman	Foldable Picnic Table	43	3/19/2025 12:00:00 AM	Uzbekistan	49.99	2149.57
Hollyanne Fassman	Mashed Sweet Potatoes	25	3/19/2025 12:00:00 AM	Uzbekistan	3.99	99.75
Hollyanne Fassman	Rice Pilaf Mix	41	3/19/2025 12:00:00 AM	Uzbekistan	2.59	106.19
Hollyanne Fassman	French Onion Dip	19	3/19/2025 12:00:00 AM	Uzbekistan	2.99	56.81
Hollyanne Fassman	Smart WiFi Plug	35	3/19/2025 12:00:00 AM	Uzbekistan	19.99	699.65
Hollyanne Fassman	Wireless Earbud Silicone Covers	41	3/19/2025 12:00:00 AM	Uzbekistan	9.99	409.59
Hollyanne Fassman	French Onion Dip	55	3/19/2025 12:00:00 AM	Uzbekistan	2.99	164.45
Hollyanne Fassman	Cheesy Cauliflower Bake	18	3/19/2025 12:00:00 AM	Uzbekistan	6.49	98.82
Hollyanne Fassman	Peanut Butter Pretzel Nuggets	64	3/19/2025 12:00:00 AM	Uzbekistan	3.29	210.56
Hollyanne Fassman	Organic Black Beans	47	3/19/2025 12:00:00 AM	Uzbekistan	1.29	60.63
Hollyanne Fassman	Adjustable Pedicure Footrest	5	3/19/2025 12:00:00 AM	Uzbekistan	39.99	199.95
Hollyanne Fassman	Electric Knife	42	3/19/2025 12:00:00 AM	Uzbekistan	39.99	1679.58
Hollyanne Fassman	Comfortable Jogger Pants	90	3/19/2025 12:00:00 AM	Uzbekistan	29.99	2699.10
Hollyanne Fassman	Personalized Pet ID Tags	34	3/19/2025 12:00:00 AM	Uzbekistan	9.99	339.66
Hollyanne Fassman	Trendy Bomber Jacket	22	3/19/2025 12:00:00 AM	Uzbekistan	69.99	1539.78
Hollyanne Fassman	Banana Nut Oatmeal Cups	67	3/19/2025 12:00:00 AM	Uzbekistan	2.99	200.33
Hollyanne Fassman	Tomatillo Salsa	2	3/19/2025 12:00:00 AM	Uzbekistan	3.29	6.58
Hollyanne Fassman	Zesty Cilantro Lime Dressing	52	3/19/2025 12:00:00 AM	Uzbekistan	3.29	171.08



Total Customers:
2242

4-Customer Report

Sales By Country And Top Customers



Country	Total Customers	Total Sales	Top Customer
China	418	236112015.16	Bayard Loosley
Indonesia	271	148839685.70	Mil Cowdry
Philippines	126	71380905.17	Nikki Capelow
Russia	117	66916162.91	Tiler Torricina
Brazil	81	48842685.47	Marice Willmott
Poland	75	43938365.34	Julio Benediktsson
France	69	39098665.14	Max MacCall
Portugal	66	34700560.33	Arluene Daintrey
Sweden	60	31853957.52	Inesita Lempel
United States	42	25480074.12	Janetta Zanioletti
Peru	43	23823501.13	Shurwood Sofe
Czech Republic	33	21894733.70	Jephthah Greder
Canada	41	21722028.80	Philbert Shimmin
Ukraine	37	21108570.50	Miner Grishunin
Thailand	37	20418600.66	Elicia Ovell
Japan	35	19379309.23	Danyette Spata
Greece	34	19224662.32	Clemmy Ulyatt
Argentina	31	17421448.33	Gabby Tredger
Mexico	28	15958760.32	Bekki Pollendine
Colombia	25	13431435.21	Inglebert Berger
Vietnam	22	13323904.28	Melonie Dibley
Nigeria	25	10994603.48	Kennett O'Carroll
Croatia	19	9405015.21	Chelsea Gossage

5-Return Report

Product Return Analysis



Product Name	Total Returns	Return Rate	Common Reason
Cinnamon Raisin Bread	3437	2.00	Other
Essential Oil Roller Bottles	3076	2.00	Wrong product
Deluxe First Aid Kit	2978	2.00	Wrong product
Spicy Tuna Sushi Kit	2688	2.00	Wrong product
Roasted Garlic Mashed Potatoes	2546	2.00	Wrong product
Kale Caesar Salad Kit	2519	2.00	Wrong product
Aged White Cheddar Popcorn	2505	2.00	Wrong product
Kombucha Drink	2503	2.00	Wrong product
Crew Neck Sweater	2486	2.00	Wrong product
Almond Butter Cups	2396	2.00	Wrong product
Multi-Layer Food	2391	2.00	Wrong product
Non-Slip Yoga Socks	2322	2.00	Wrong product
Pest Control Traps	2313	2.00	Wrong product
Sculpting Kit	2289	2.00	Wrong product
Sweet Potato Mash	2217	2.00	Wrong product
Banana Nut Oatmeal Cups	2206	2.00	Wrong product
Reusable Silicone Food Storage Bags	2166	2.00	Wrong product
Pasta (Linguine)	2146	2.00	Wrong product
Over-the-Door Shoe	2133	2.00	Wrong product

Max Total Returns

3437

VISUALIZATION (POWER BI)





E-Commerce
YOUR TROLLEY HERE

Sales

Products

Customer

Ship Method

Cart

Review

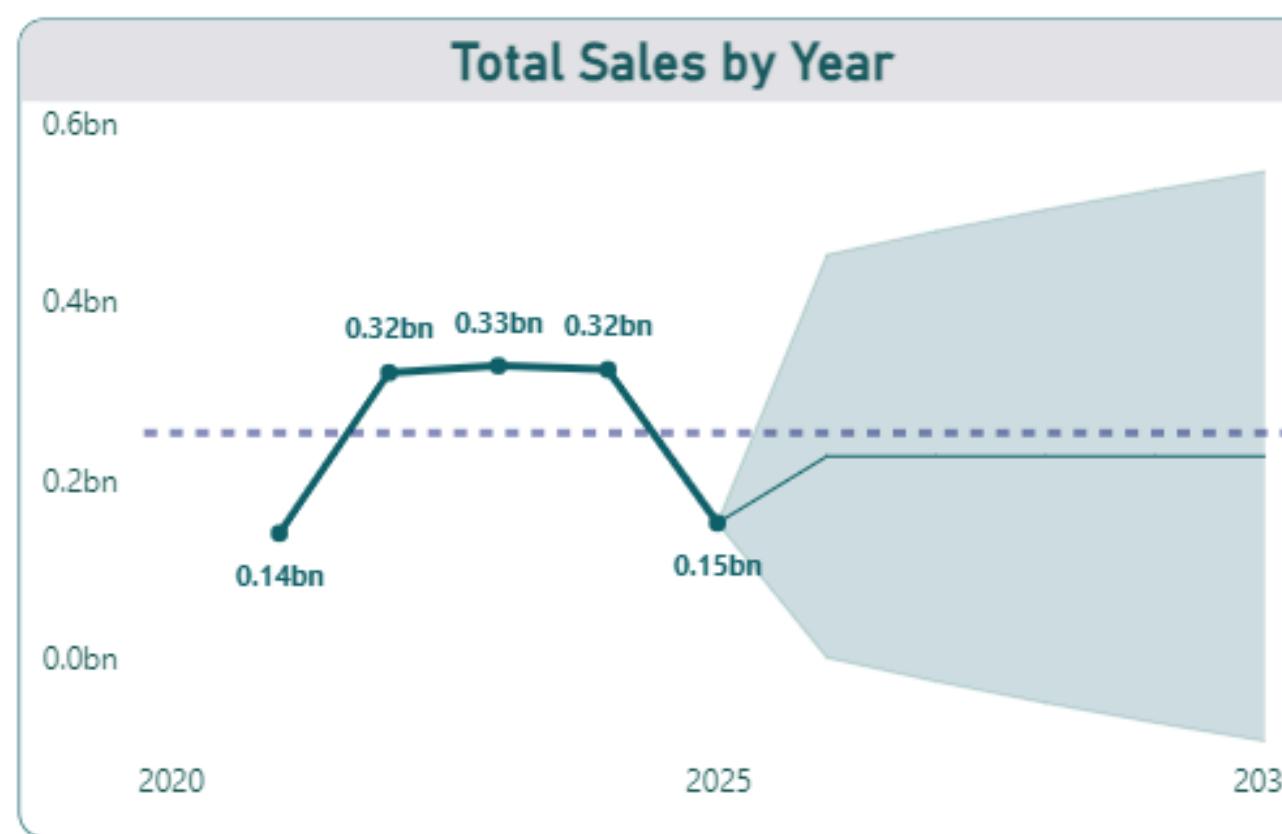
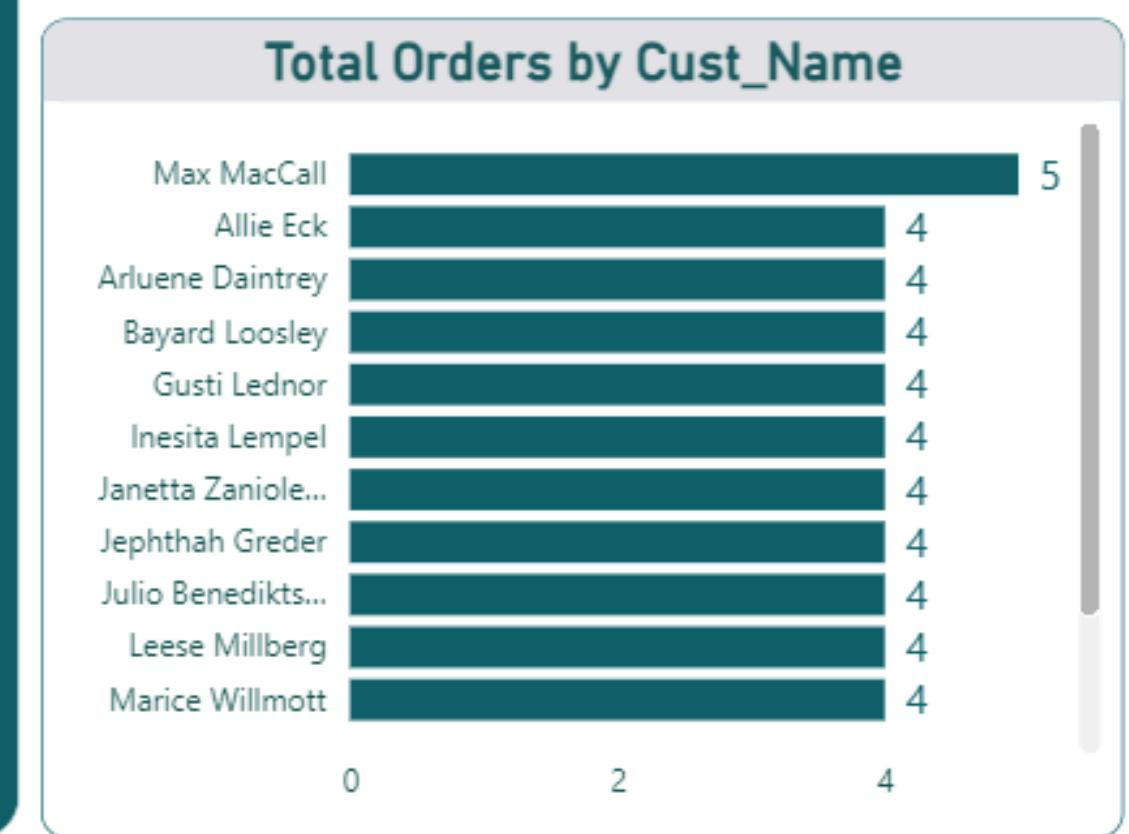
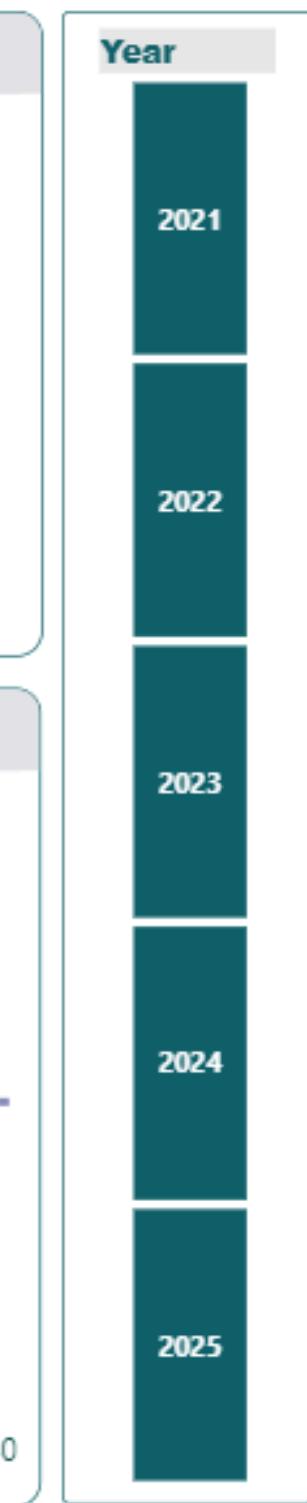
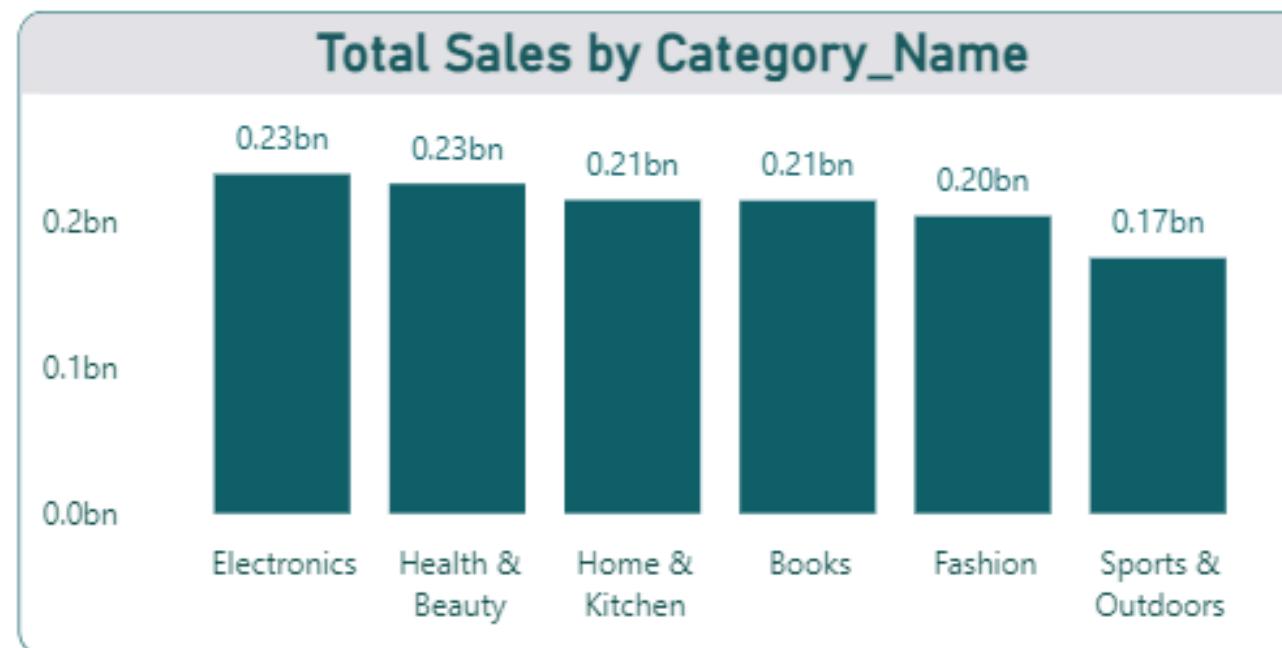
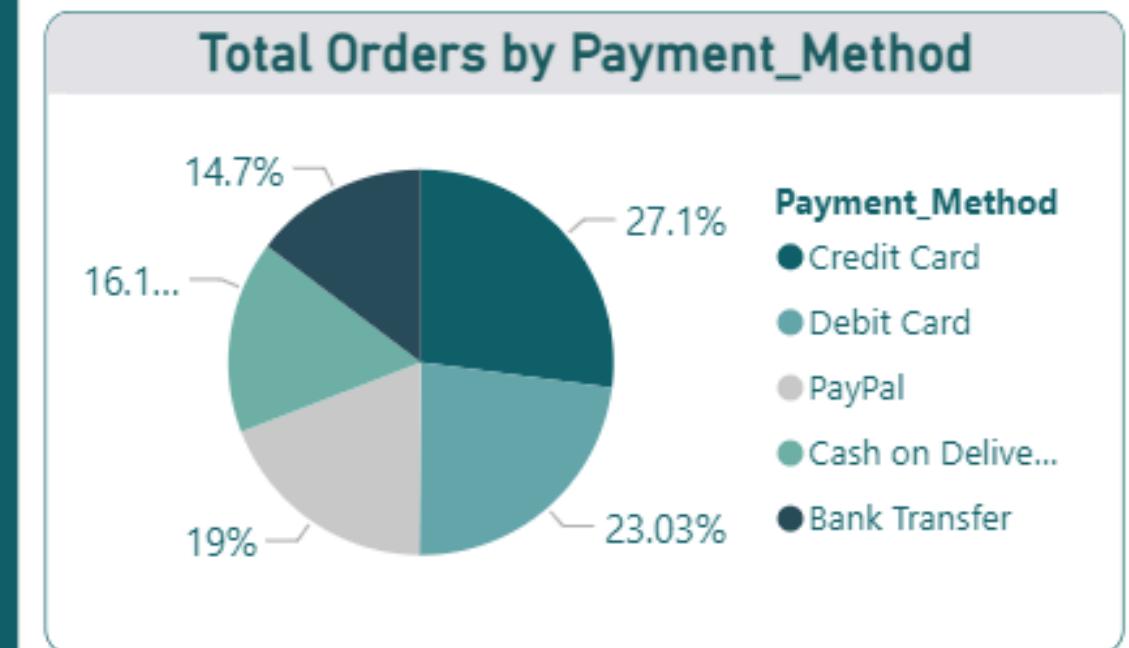
Payment

Return

Total Sales
1.26bn

Total Orders
3000

Average Unit Price
250.27





Sales



Total Quantity

5M

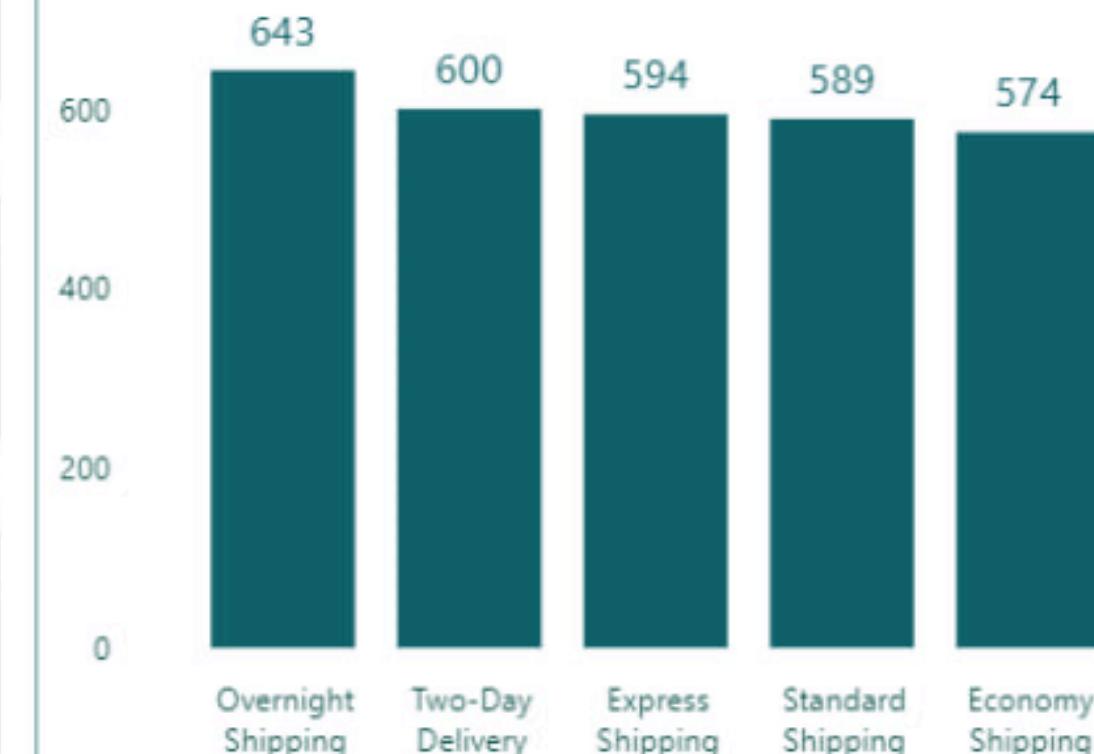
Sales Per Customer

563.62K

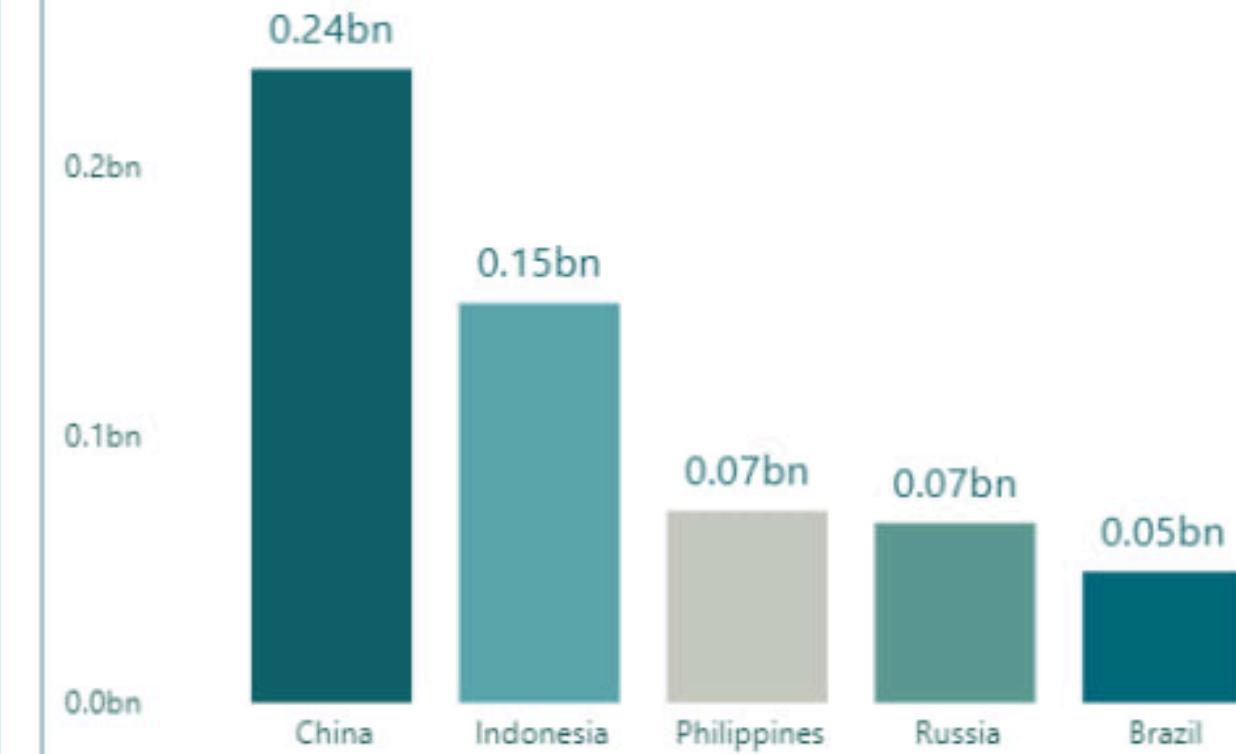
Sales Per Product

1.26M

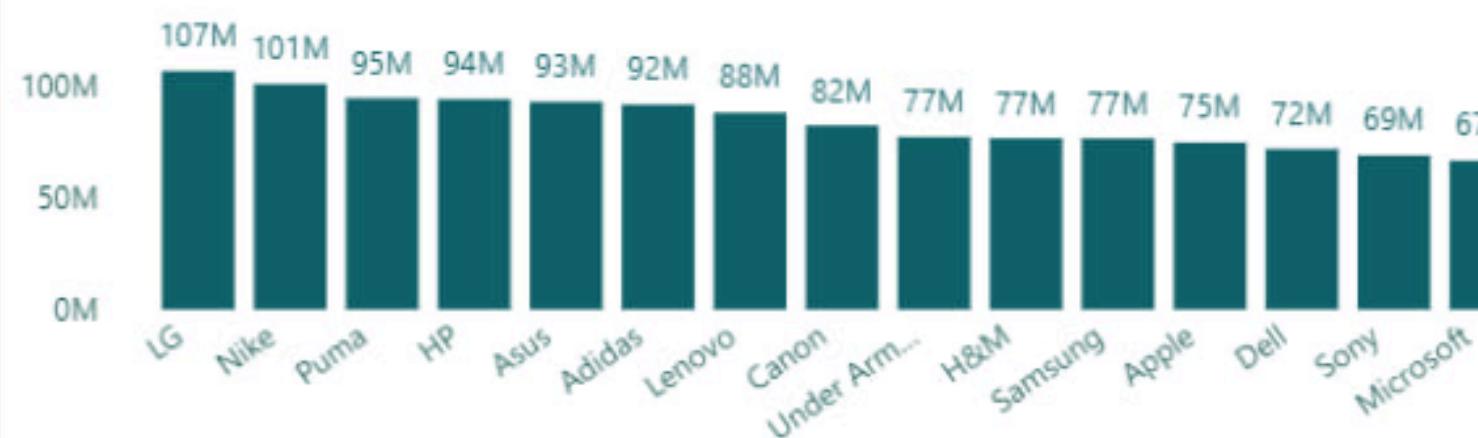
Total Orders by Method_Name



Top 5 Country Per Total Sales



Total Sales by Brand_Name



Total Sales by Month





Products



Total Products

1000

Average Product Price

26.40

Abandoned Products

681K

Category_Name

Books

Electronics

Fashion

Health & Beauty

Home & Kitchen

Sports & Outdoors

Total Sales by Category_Name



Top 10 Product Per Total Sales



Category_Name

Home & Kitchen

SubCat_Name

Decor

Product_Name

Roasted Garlic Mashed.

Total Orders
3000

Home & Kitchen
2984

Books
2984

Decor
2631

Kitchen Appliances
2530

Roasted Garlic Mashed.
215

Maple Pecan Oatmeal ..
117

Total Products by Brand_Name

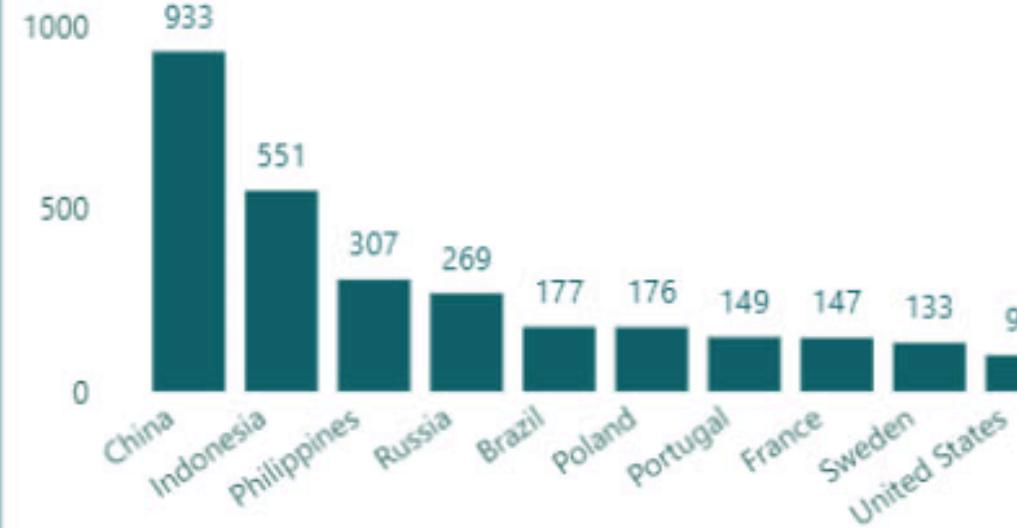
LG	Asus	Lenovo	Apple	H&M	Samsu...
85	74	69			
Nike	HP	Canon	60	59	59
80	74	66			
Puma	Adidas	Under Armour	58		Micro...
76	70	61	Sony	55	54



Customer



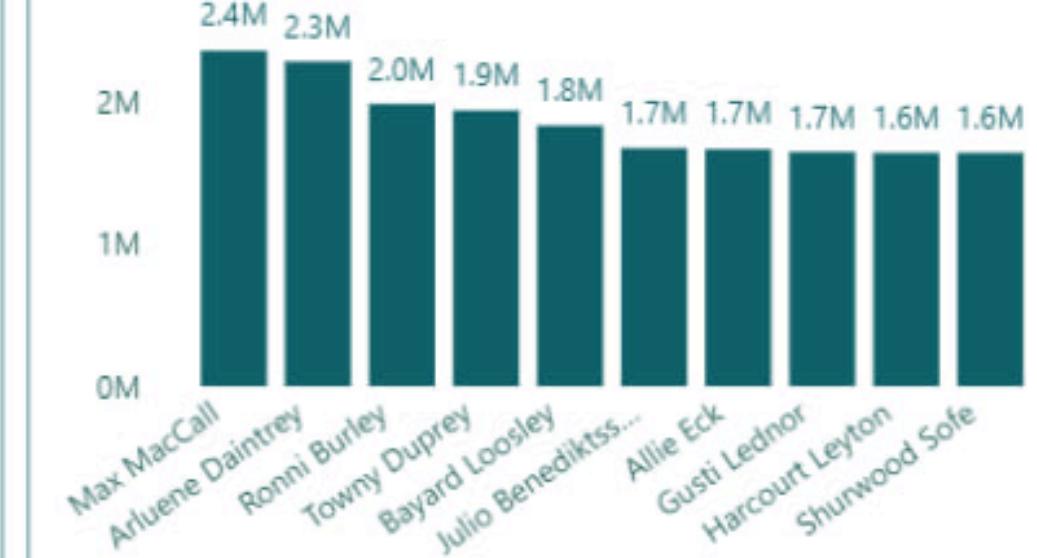
Top 10 countries Per Customer



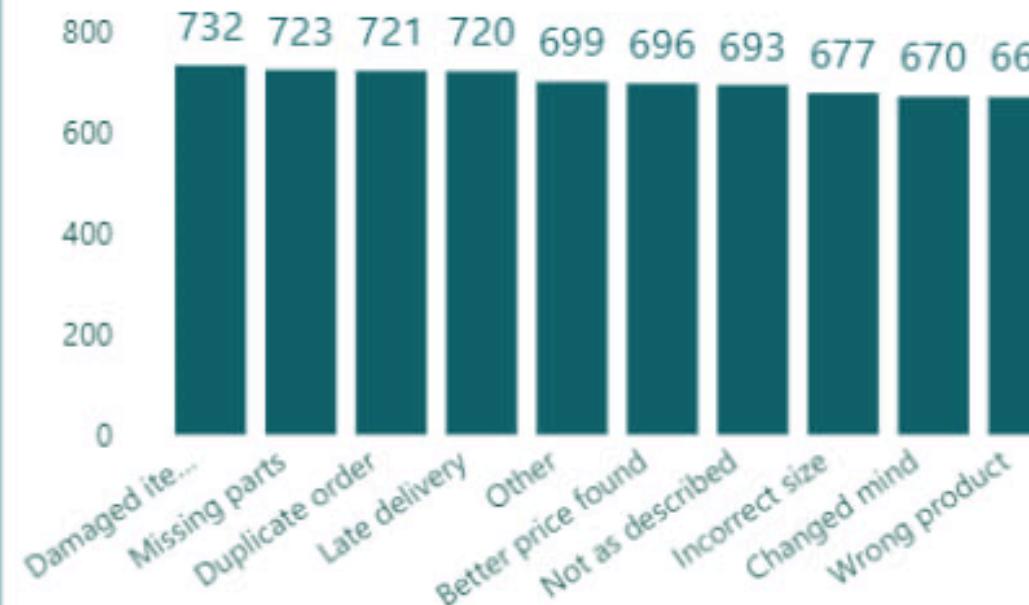
Customer Growth Over Time



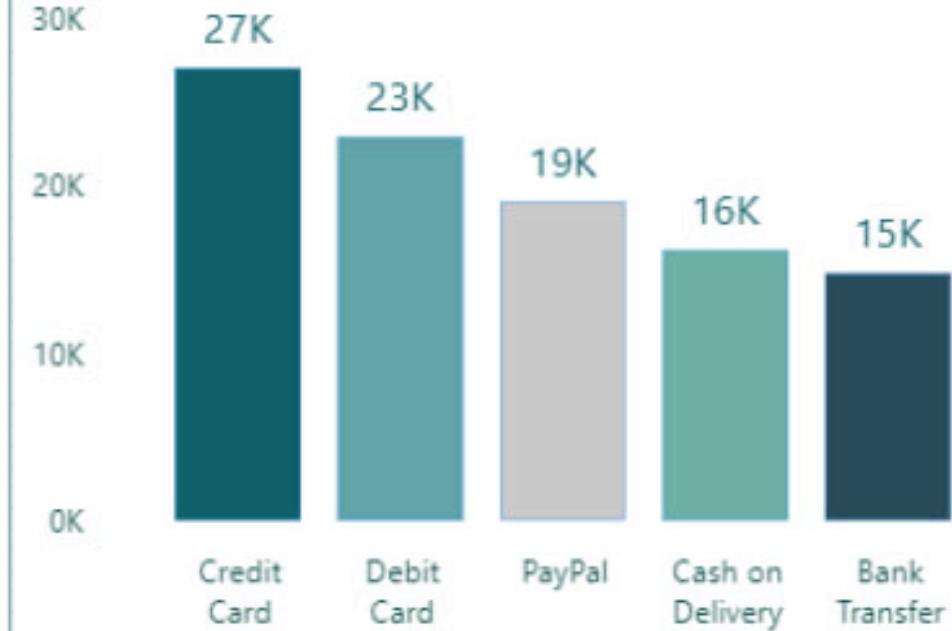
Top 10 Customer Per Total Revenue



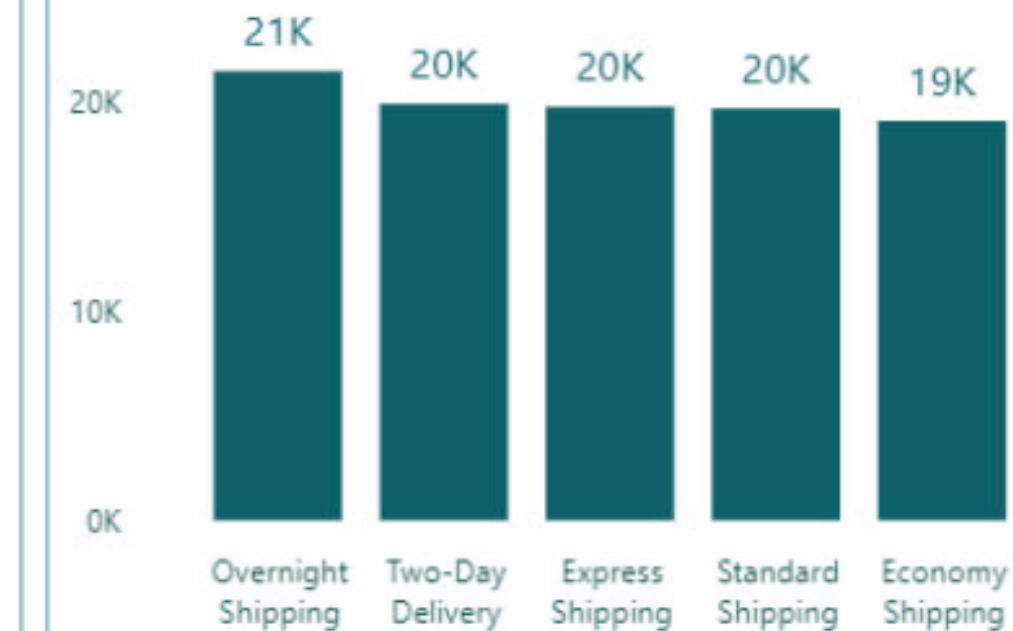
Return Orders By Reason



Customer Payment Method

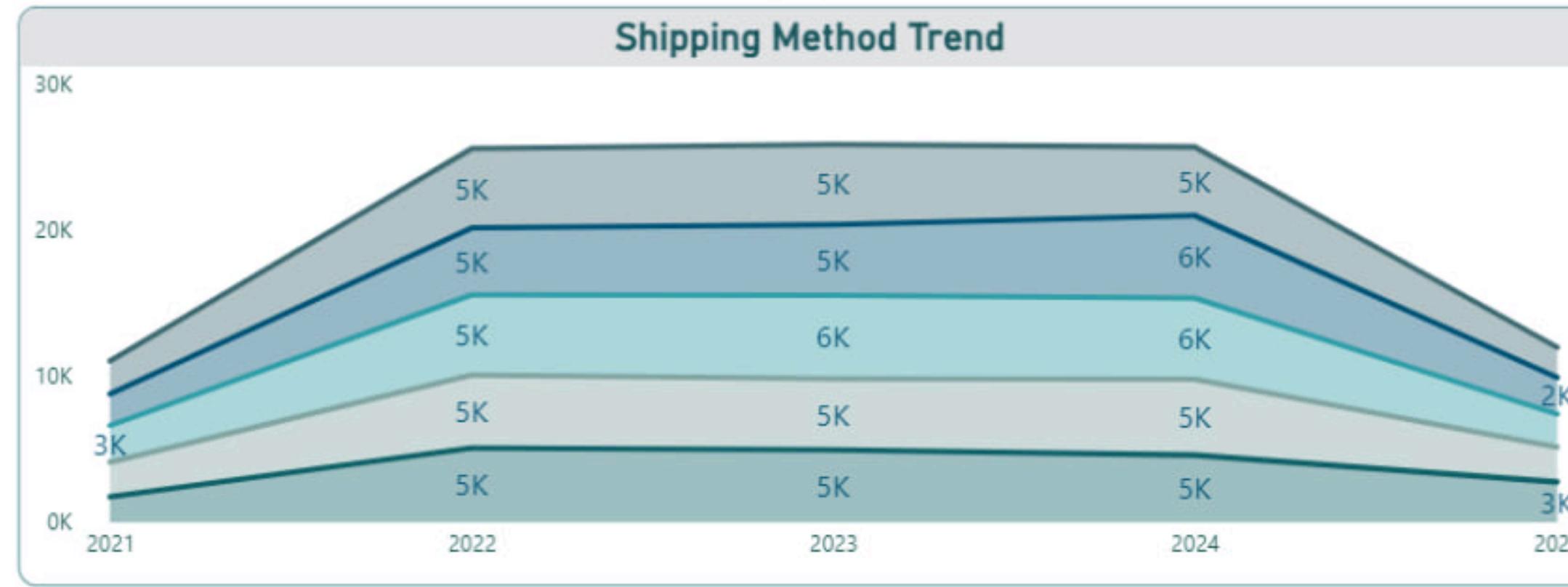
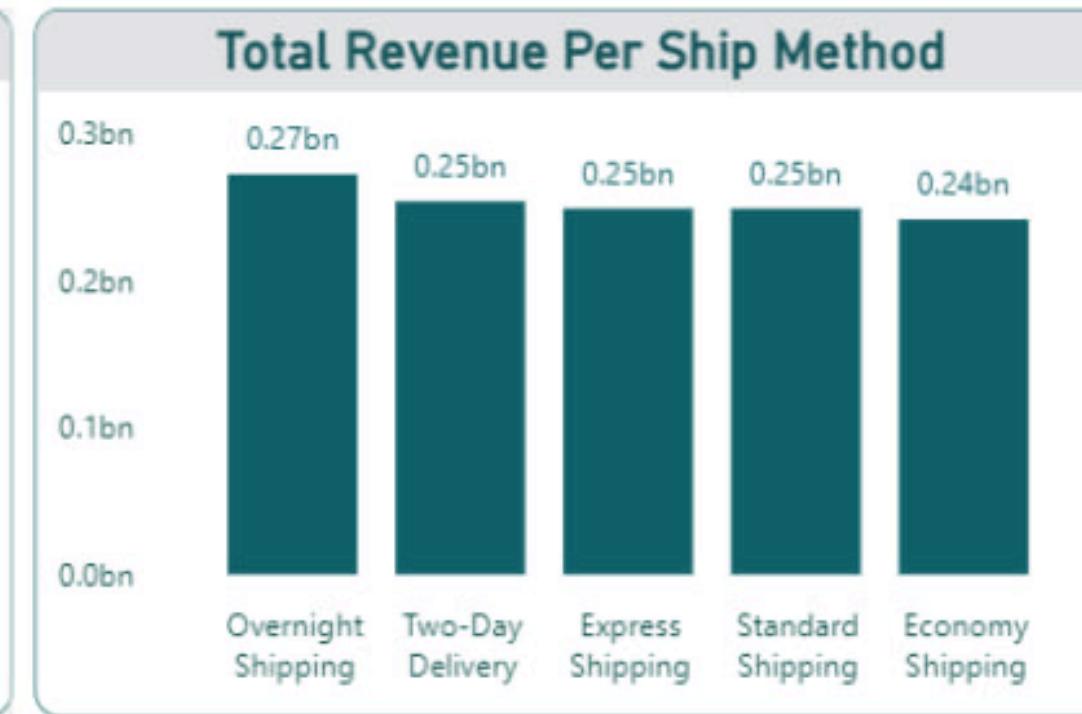
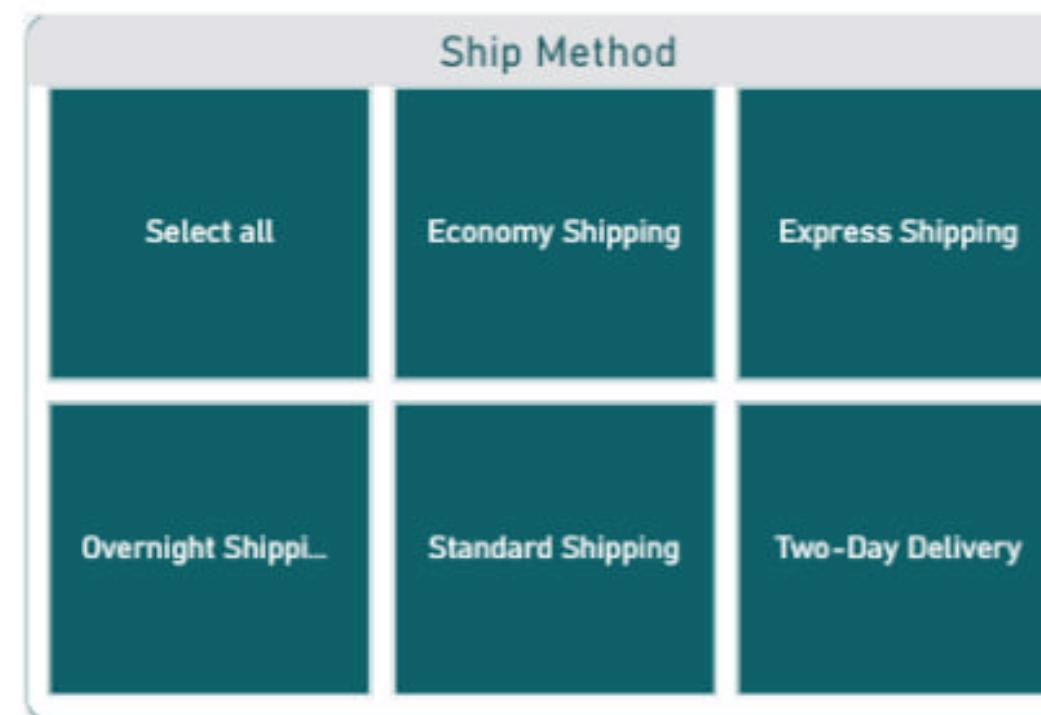


Ship Method Used By Customer





Ship Method





Country	Customer	Quantity	UnitPrice	Orders	Total Revenue
China	933	939423	4,684,694.91	18682	236,112,015.16
Total	933	939423	4,684,694.91	18682	236,112,015.16



ToolTip

Drilling Through

Orders
100K

Customer
5K

Average_Order...
12.64K

Total Revenue
1.26bn



Cart



...

Num of Carts Used

15K

Customers Used Carts

2242

Unique Products in Carts

1000

Total Products in Carts

682K

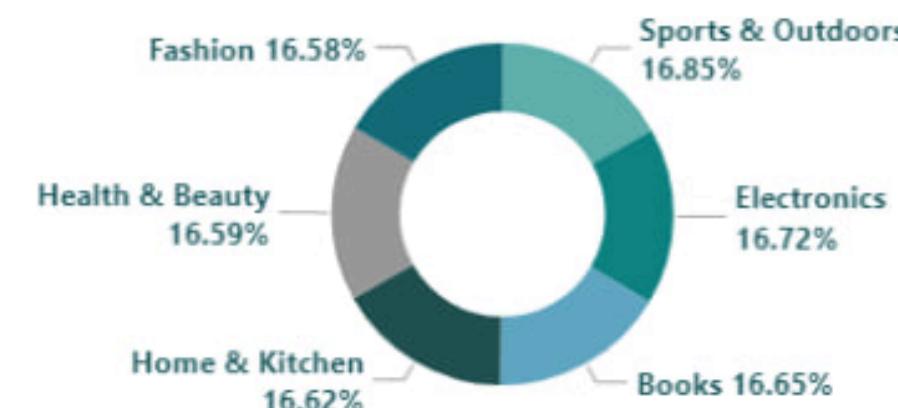
Total Qty of Products

35.23M

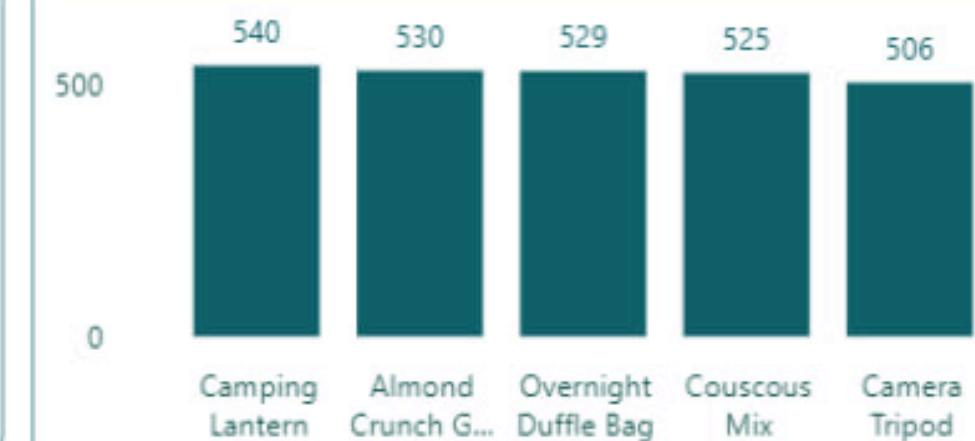
Top 10 Products Used in Carts



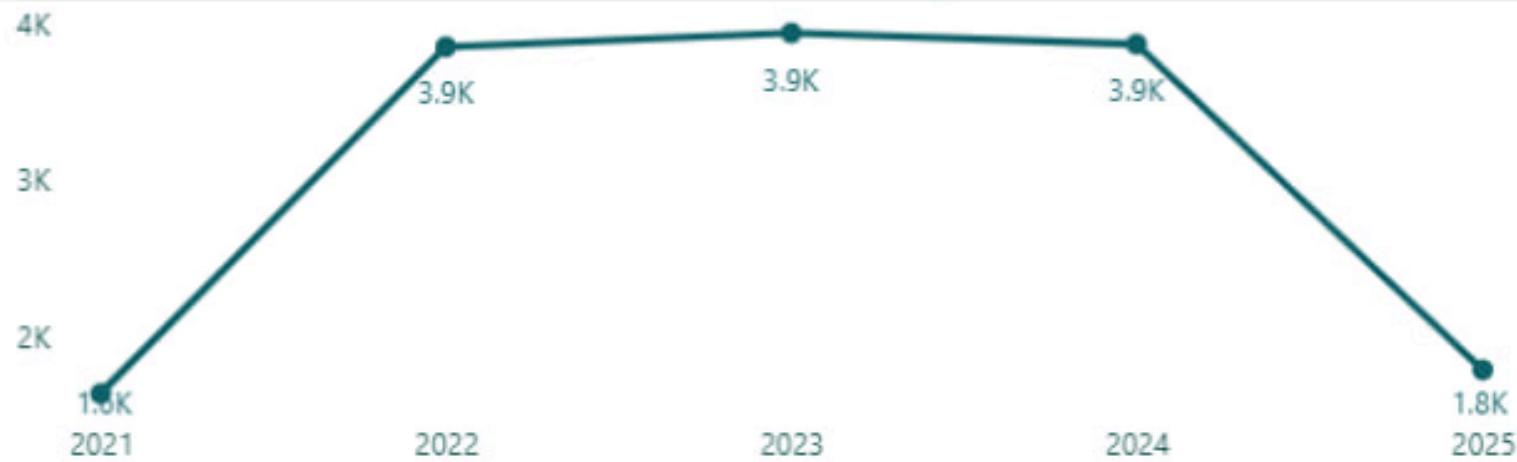
Avg Qty by Category in Carts



Bottom 5 Products Used in Carts



Num of Carts Used by Year



Country





Review



Avg Rating

3.02

Total Reviews

7500

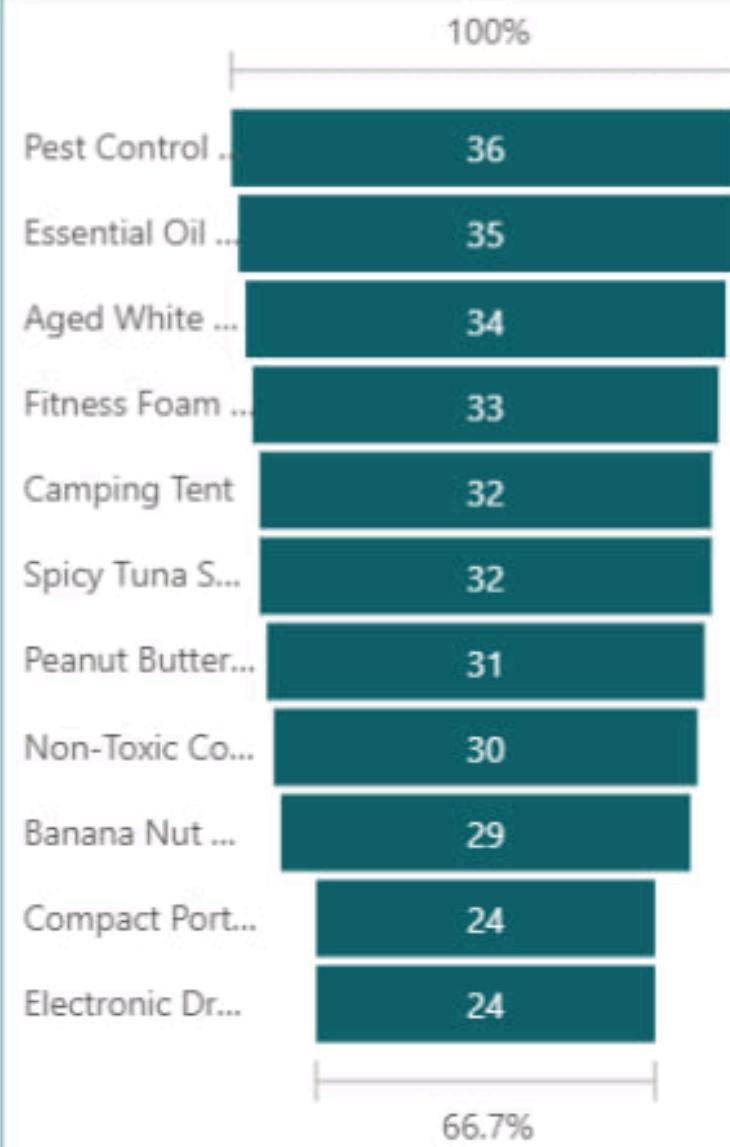
Customers Reviewed

3911

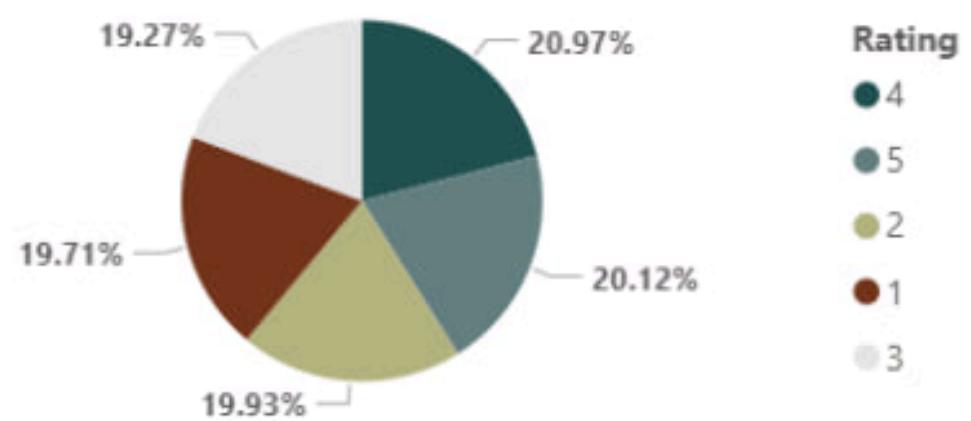
Products Reviewed

1000

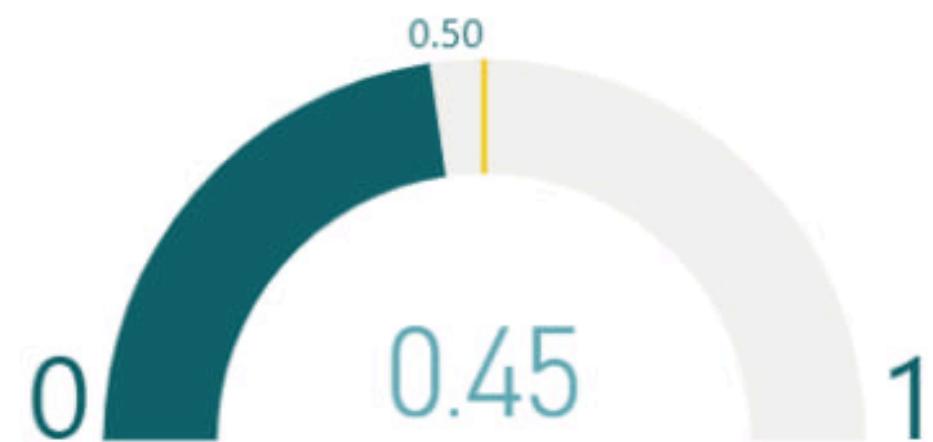
Total Reviews by Product_Name



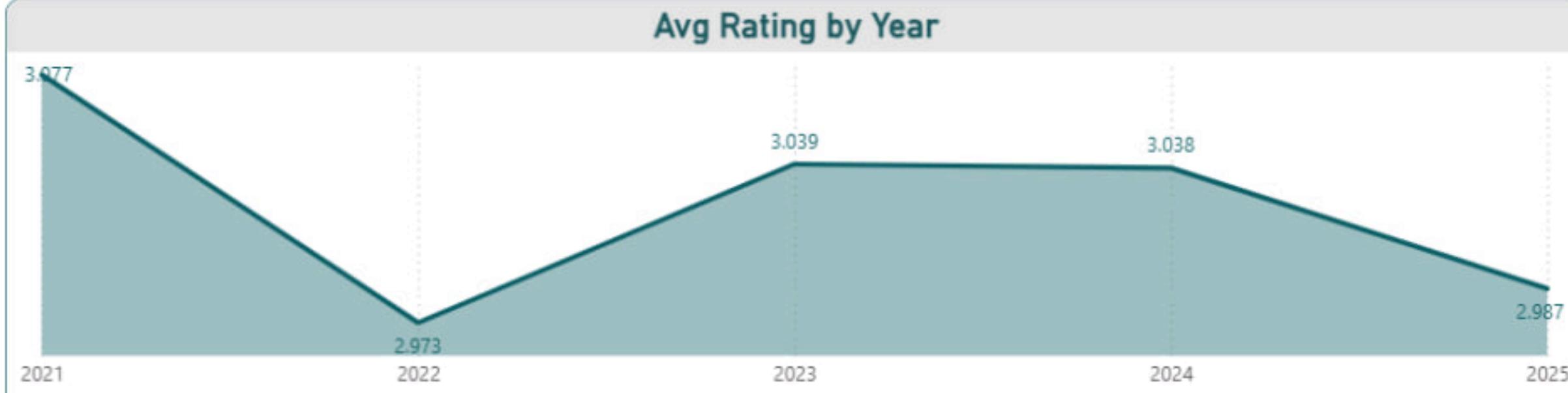
Total Reviews by Rating



Reviewed Orders as % of Total Orders



Avg Rating by Year





Payment



Total Amount

1.26bn

Failed Payment Rate

656

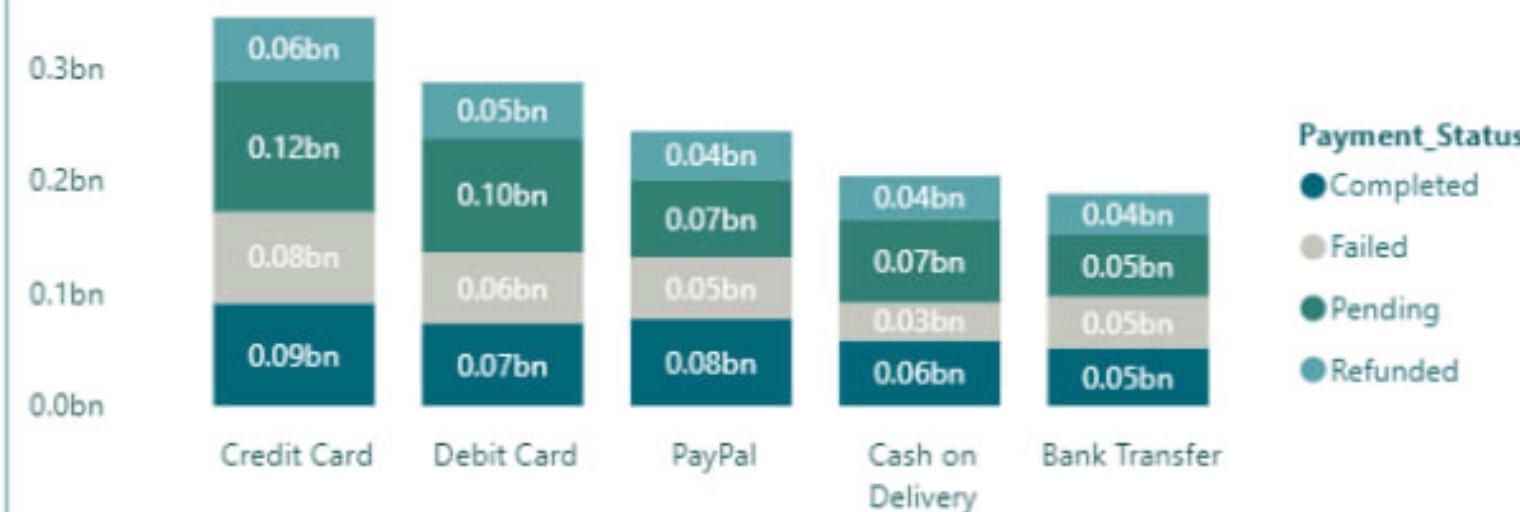
Number of Payments

3000

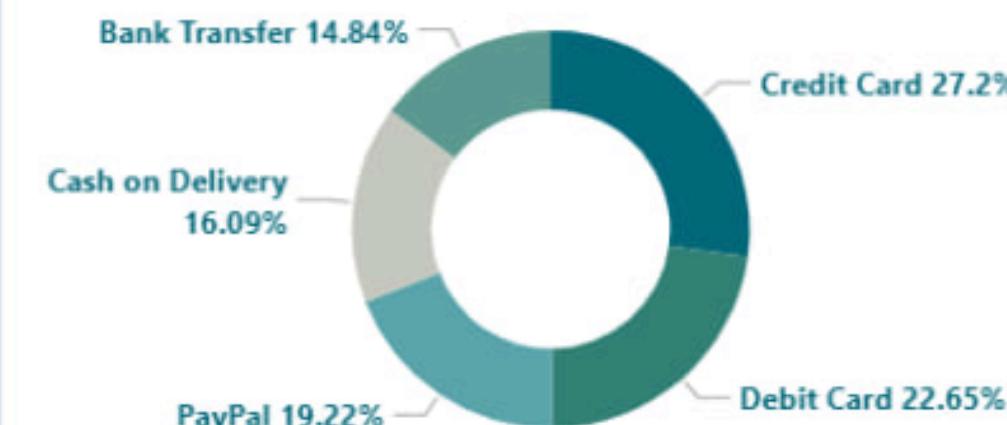
Average Payment

421.21K

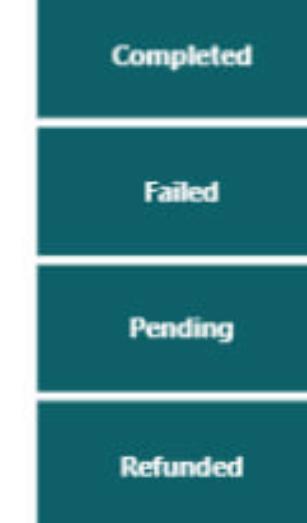
Payment Status Distribution by Method



Payment Method Distribution



Payment_Status



Payment Status by Method





Failed Payments

834

Pending Payments

987

Refunded Payments

523

Payment_Method

Bank Transfer

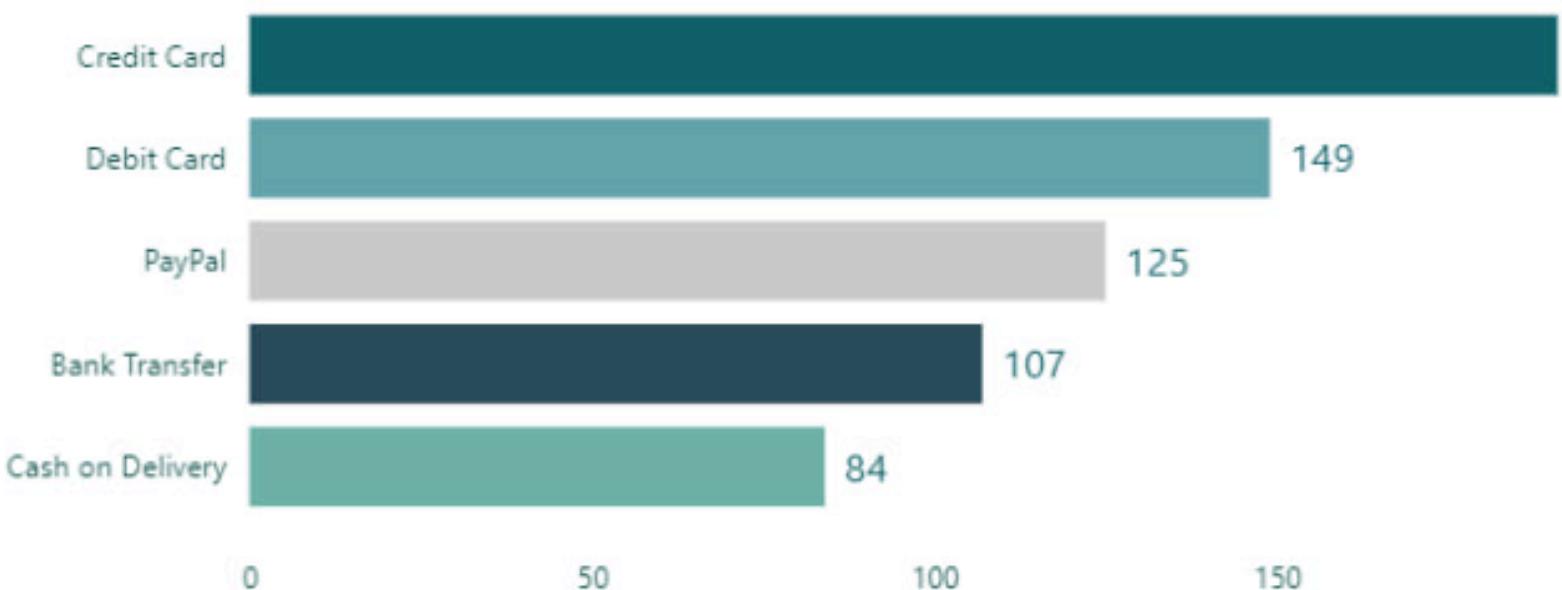
Cash on Delivery

Credit Card

Debit Card

PayPal

Failed Payments by Payment_Method



Payment Value by Method

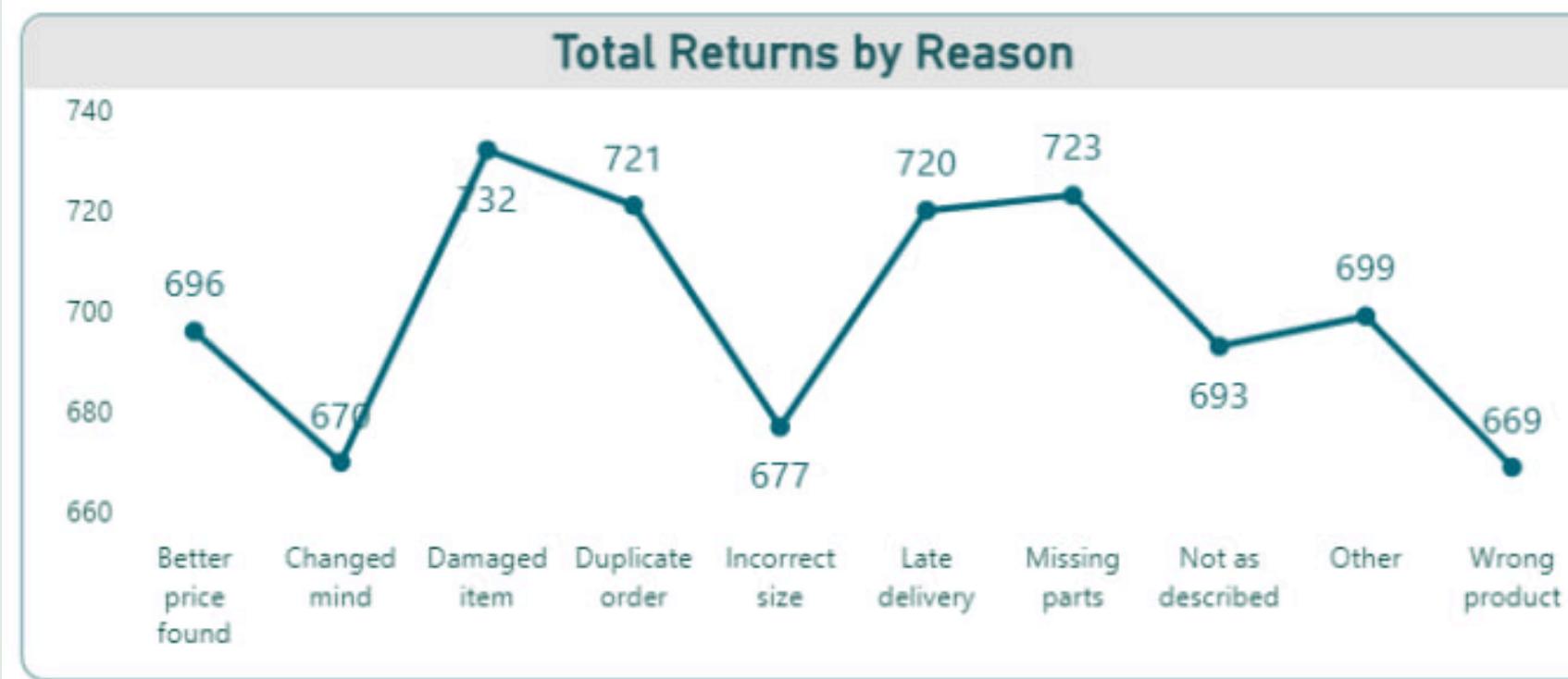
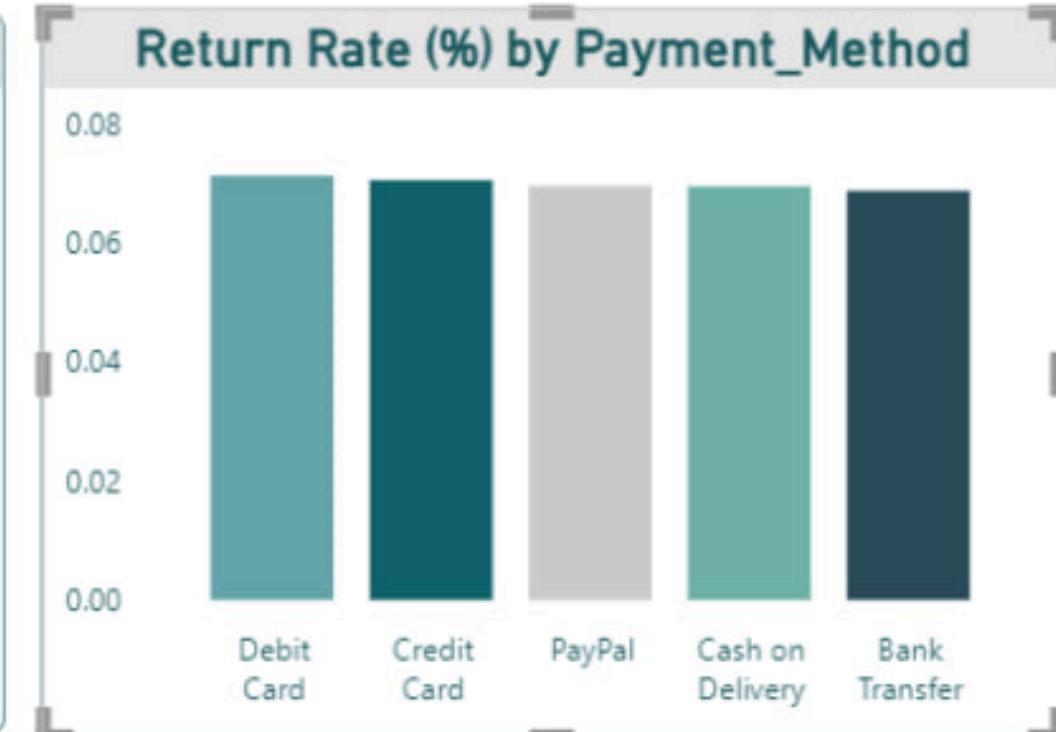
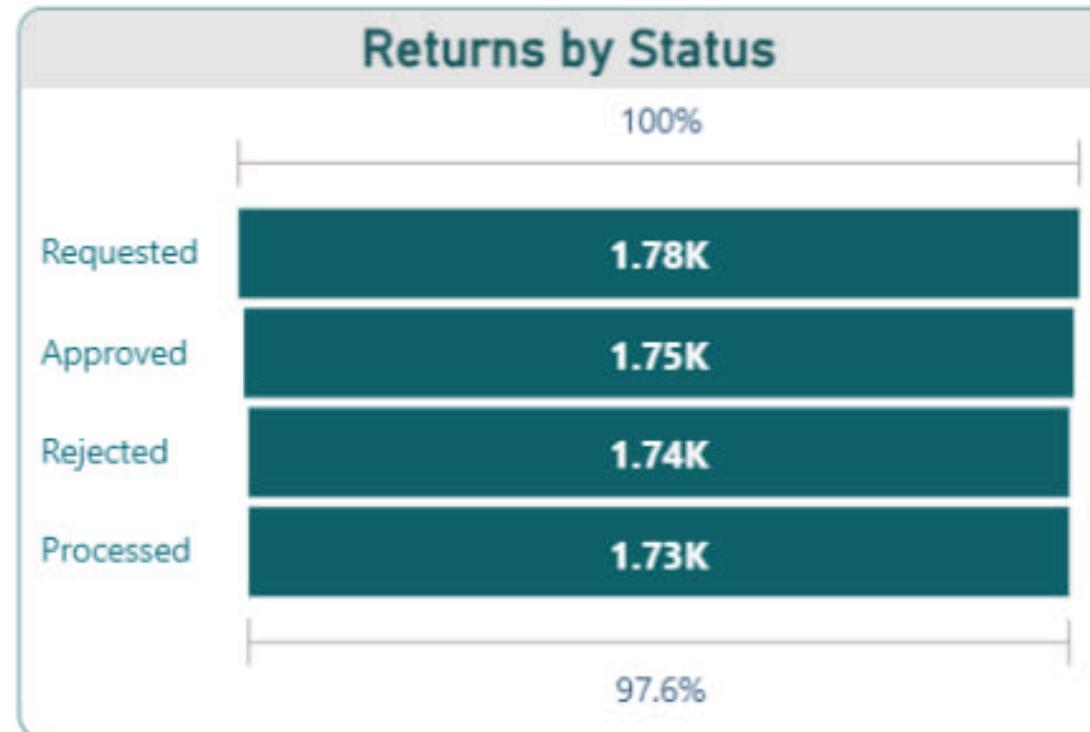


Payment Summary by Method & Status

Payment_Status	Completed		Failed		Pending		Refunded		Total	
Payment_Method	Count of Order_ID	Total Amount								
Bank Transfer	120	51,306,047.77	107	45,535,305.10	128	54,440,224.77	86	36,237,841.86	441	187,519,419.5
Cash on Delivery	138	57,885,311.47	84	33,488,342.98	173	74,288,903.69	90	37,625,668.84	485	203,288,226.9
Credit Card	216	90,915,767.46	191	80,622,132.76	275	115,419,558.77	131	56,780,109.34	813	343,737,568.5
Debit Card	178	73,350,994.82	149	62,356,457.48	245	100,751,487.69	119	49,710,158.99	691	286,169,098.5
PayPal	182	76,838,469.92	125	54,517,883.45	166	69,547,936.50	97	42,009,673.58	570	242,913,963.4
Total	834	350,296,591.44	656	276,520,121.77	987	414,448,111.42	523	222,363,452.61	3000	1,263,628,277.2



Return



RFM

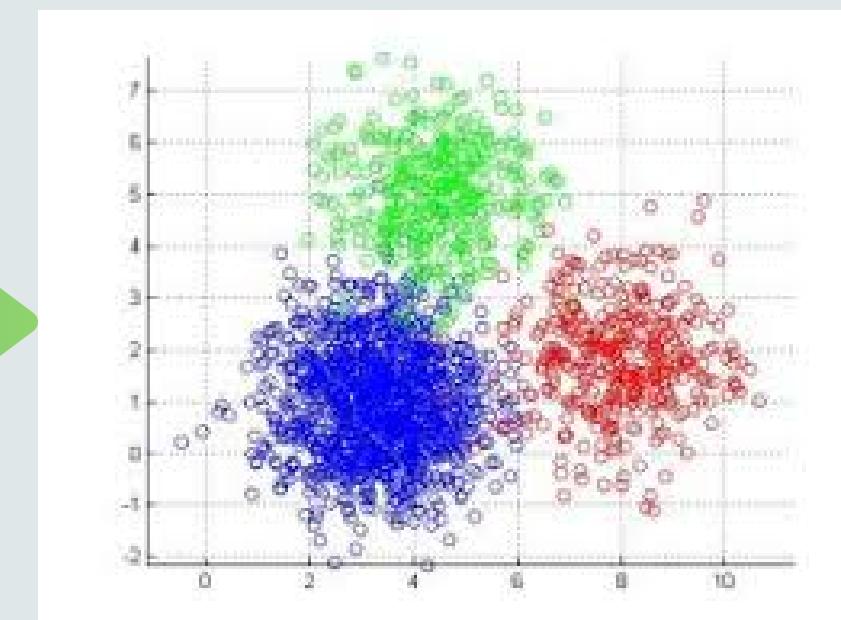
Recency: The number of days since the last transaction – the fewer, the better.

Frequency: The number of purchases – the higher, the better.

Monetary: The monetary value – the higher, the better.

Ai Insights

K_Means Clustering



Segment	Recency	Frequency	Monetary	Count
0	1091.140000	1.008750	4.224179e+05	800
1	302.238938	3.123894	1.331252e+06	113
2	481.978431	2.001961	8.459469e+05	510
3	362.424908	1.000000	4.198163e+05	819



Customer Segmentation



Total Customers

2242

Total Revenue

1.26bn

VIP Customers

113

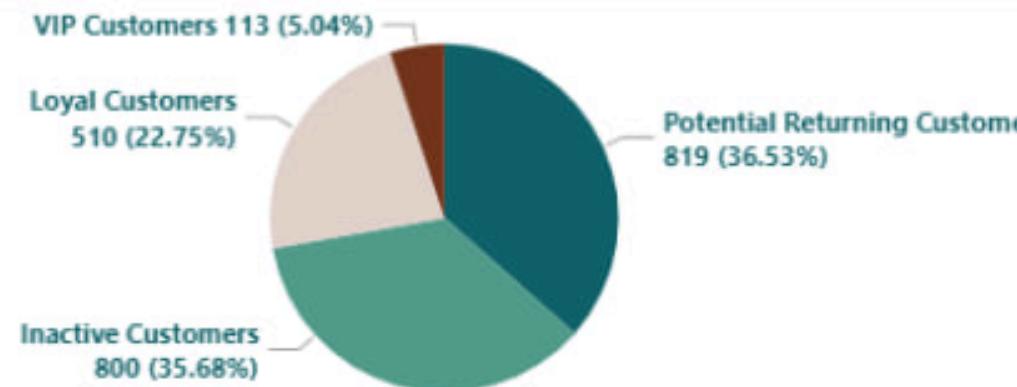
Inactive Customers

800

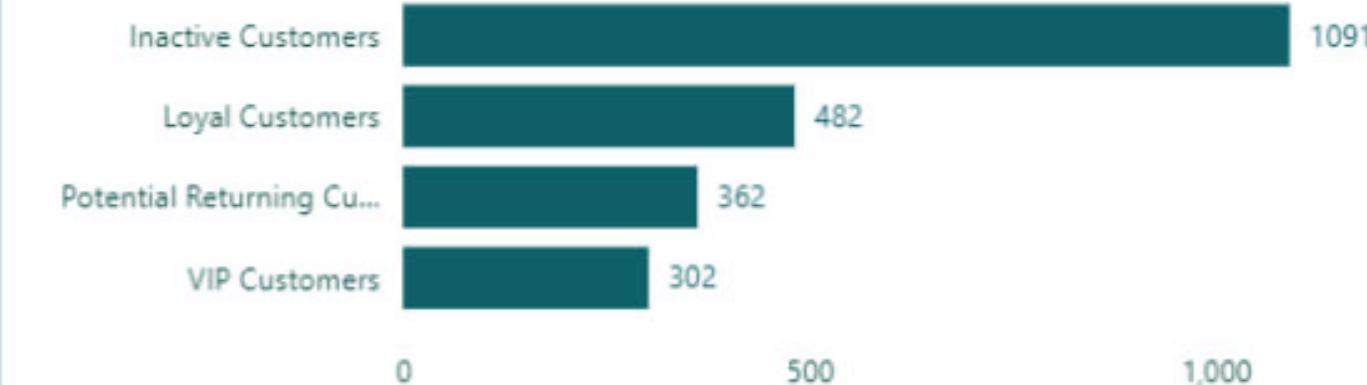
Average Recency

646.61

Total Customers by SegmentName



Average Recency by SegmentName



SegmentName ▾

Select all

(Blank)

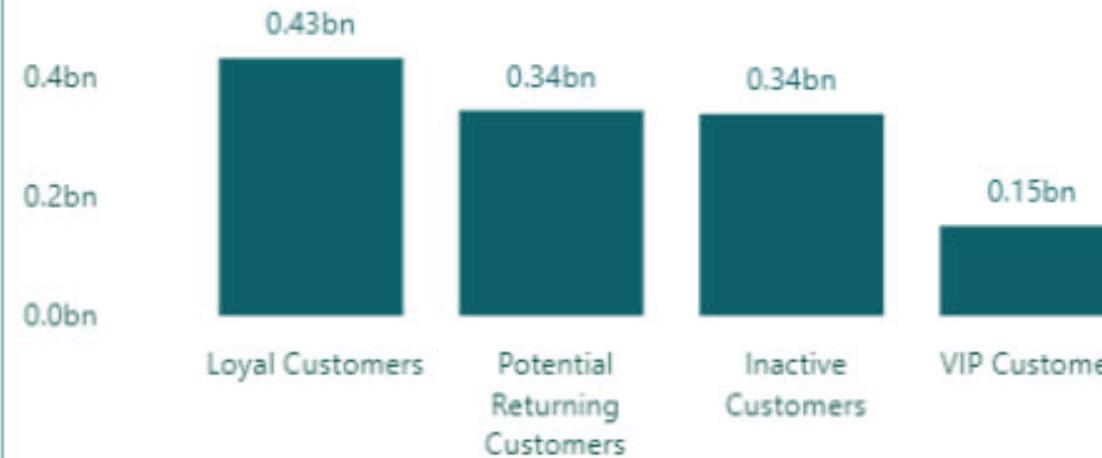
Inactive
Customers

Loyal
Customers

Potential
Returning
Customers

VIP
Customers

Total_Revenue by SegmentName



Average Frequency by SegmentName





VISUALIZATION (TABLEAU)

E-COMMERCE INSIGHTS

TOTAL SALES
\$502.93B

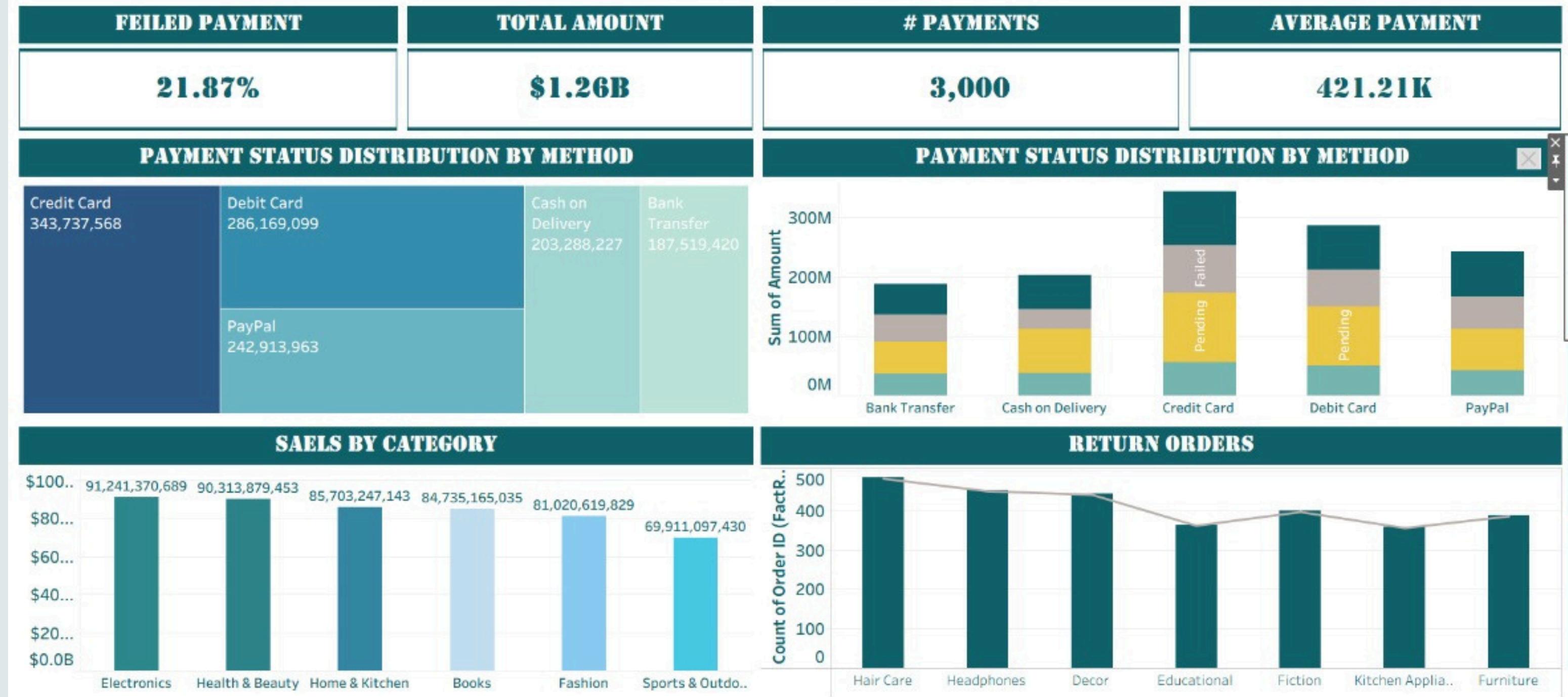
AVERAGE SALES PER TRANSACTION
\$12.98K

TOTAL ACTIVE CUSTOMERS
5,000



Page 1
Page 2
Page 3

E-COMMERCE INSIGHTS



E-Commerce
Your Future Store

Page 1

Page 2

Page 3

E-COMMERCE INSIGHTS

TOTAL CUSTOMERS

5,003

TOTAL ACTIVE CUSTOMERS

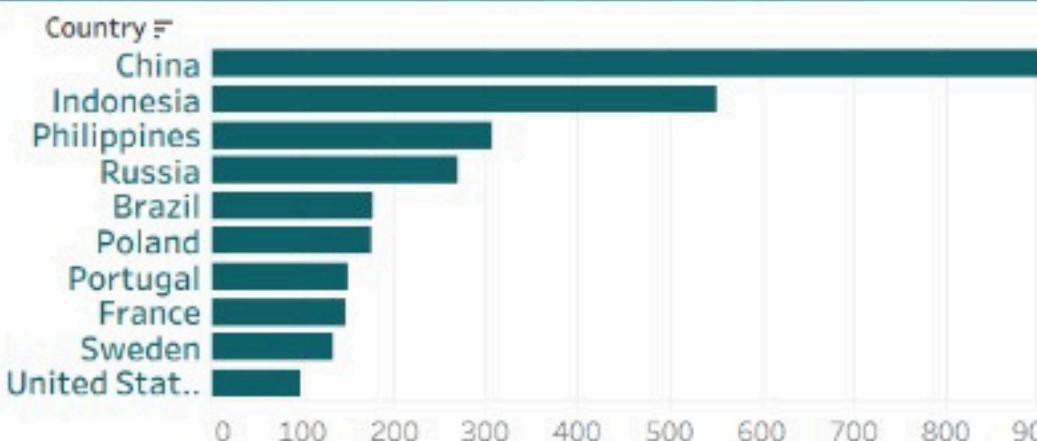
5,000

INACTIVE CUSTOMERS

3



CUSTOMER COUNT BY COUNTRY



CUSTOMER DISTRIBUTION BY COUNTRY



NEW CUSTOMERS MONTHLY



Page 1

Page 2

Page 3

1 unknown

E-Commerce WebSite



Welcome Back

Sign in to access your analytics dashboard

Email

Password

Sign In

Don't have an account? [Sign up here](#)



Create Account

Sign up to start analyzing your data

Full Name

Email

Password

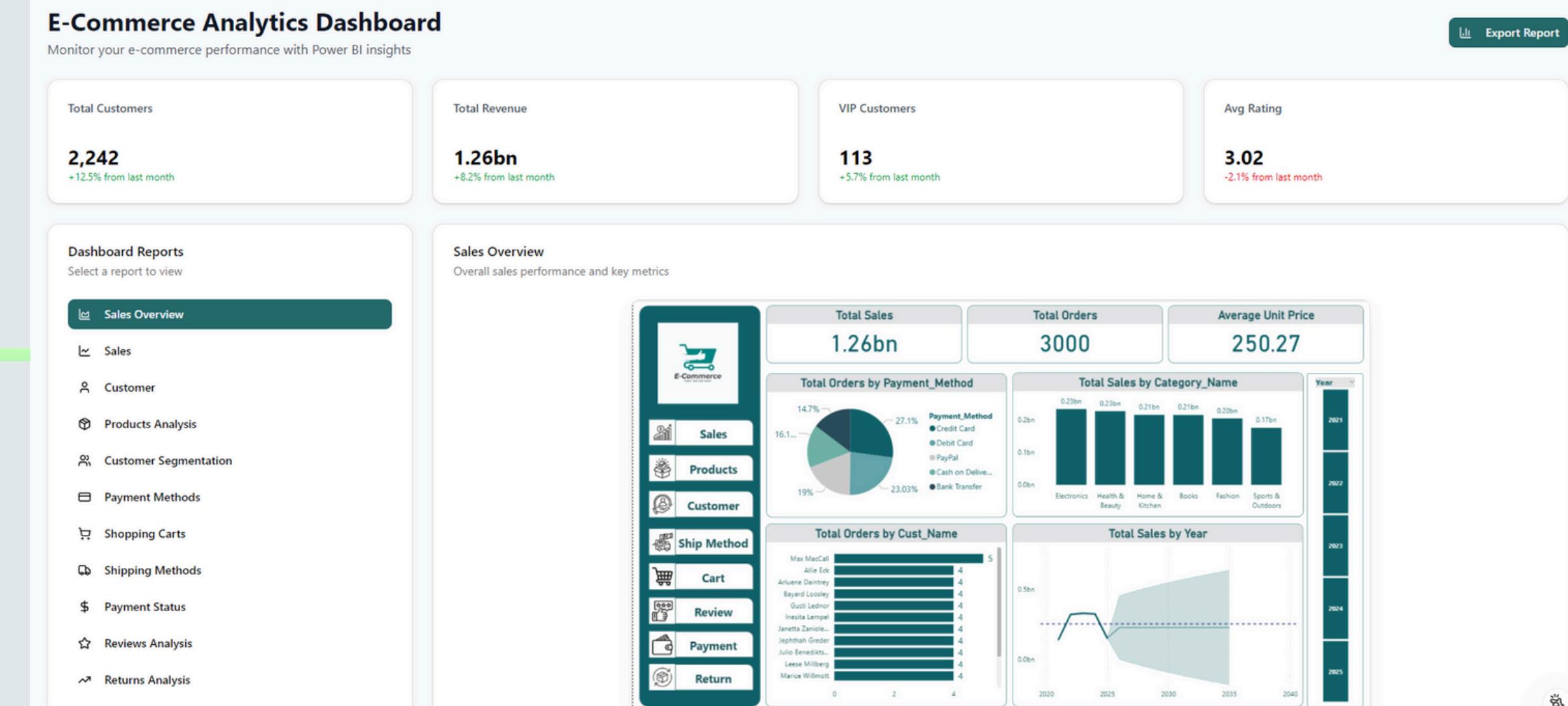
 

Confirm Password

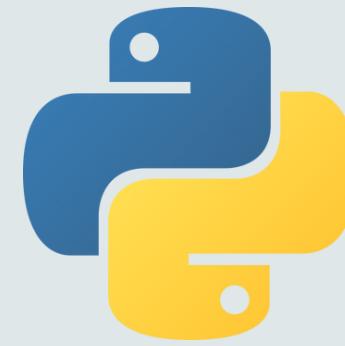
Sign Up

Already have an account? [Sign in here](#)



URL: <https://ixhvepez.manus.space/?code=5mi2zLEBJgW2Drg4YBhmgR>

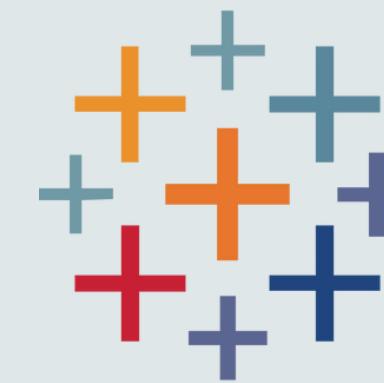
Tools & Technologies Used



Python



Power BI



Tableau



Canva



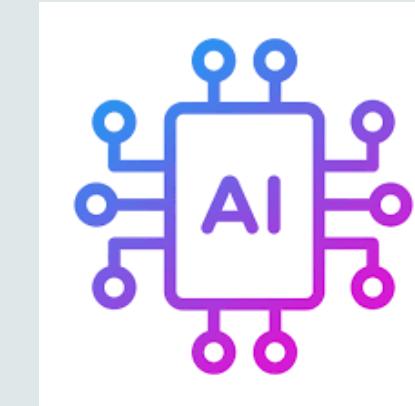
SQL Server



Visual Studio



Colab



Generative



Miro



Google Meet

Thank you

