Classic Models DashBoard Report

Data File which is in sql file
link:https://drive.google.com/file/d/1OB_iGw6vVS5KS7QwiwVChbeTfR4WvUy3/view
From the Sql file after running the file classicmodels database

"MySQL Sample Database Schema The MySQL sample database schema consists of the following 8 tables:
1.Customers: stores customer's data.
2.Products: stores a list of scale model cars.
3.ProductLines: stores a list of product line categories.
4.Orders: stores sales orders placed by customers.
5.OrderDetails: stores sales order line items for each sales order.
6.Payments: stores payments made by customers based on their accounts.
7.Employees: stores all employee information as well as the organization structure such as who reports to whom.
8.Offices: stores sales office data"

After running data in sql workbench i connected the mysql workbench with powerbi by giving mysql credentials and giving database name classicmodels

Data Extraction,Cleaning,Loading and Transforming
After getting data i have open power query editor (transformation) to transform data
I have seen many null values in address columns in customer table i replace null with "NOT AVAILABLE"" i replaced all nulls which are in text data type with "Not Available"

I replaced the null values in ordersDetails table shippedDated column null value with "01-01-3000" and there are many null values in comment column and replaced with "NOT AVAILABLE"

I changed the price to $ type in the price columns in a couple of tables.

Data Modeling
After cleaning data without any empty , null , duplicate values and changed same data types i have done data modeling for to build the relationship between the 8 tables which is only only starSchema one to many relationship

Data Analysis
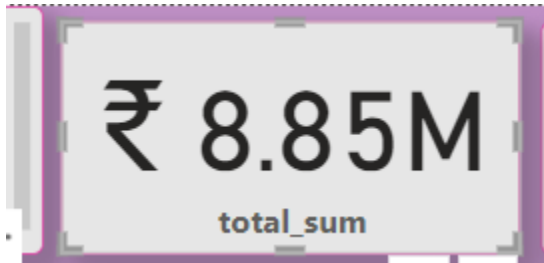After observation of all tables
I have taken payments table has all customers payments in amount column
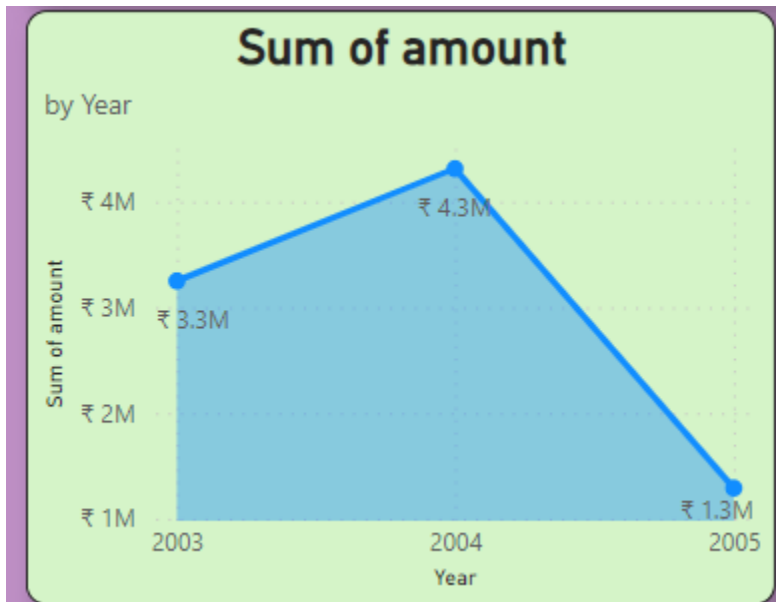I have created a measure by creating formula
```
total_sum = sum('classicmodels payments'[amount])
```
After i have taken a card visualization for to visualize the total sum by customers

Orders_Sales_Report Page

From the payments table i want to show that total amount of sales by customers in
Area line Chart

On x-axis payment dates
On y -axis sum of amount
From the above visualization we can see the sales amount in
In 2003 is 3.3Million
In 2004 4.3 Million sum of amount increased in line trend
In 2005 1.3 Million trend falls down from 4.3 to 1.3

Its very curies that why sales suddenly falls
Then i have taken orders,orderDetails,customers also data
Then i have taken some visualization cards to show how many orders have placed by
customers

326
Total Number of Orders

There are 326 total orders from orders table just did orderNumber to card visualization to know the count as same as for customer numbers (total 122 customers has placed orders)

122
Total No of Customers

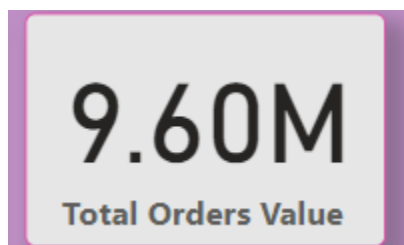For to know the total order values i have taken orderDetails table
There i have created a new column for to calculate the sum of totalOrdervalue
```
totalOrderValue = 'classicmodels
orderdetails'[quantityOrdered]*'classicmodels
orderdetails'[priceEach]
```
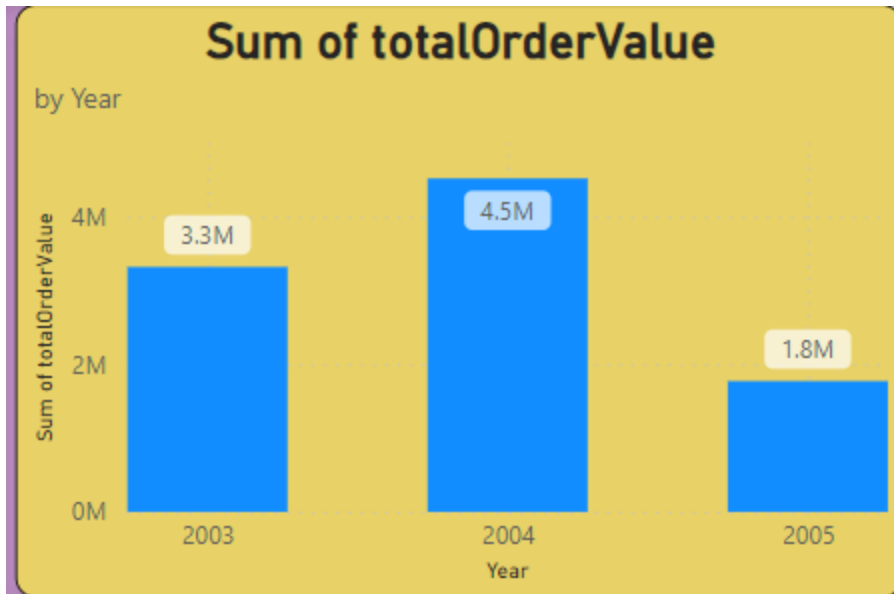By using Dax Formulas and card visualization we can below

9.60M
Total Orders Value

Total orders value is 9.60M

For to visualization how many orders have placed each year,each quarter ,each month on bar chart below

Sum of totalOrderValue by Year

Sum of totalOrderValue by Year and Quarter

On x-axis order dates
On y -axis sum of totalOrderValues

We can observe from above chart
In 2003 Qtr4>Qtr3>Qtr2>Qtr1 and **sum of totalOrderValue(3.3M)**
In 2004 Qtr4>Qtr3>Qtr2>=Qtr1 and **sum of totalOrderValue(4.5M)**
In 2005 Qtr2<Qtr1 and **sum of totalOrderValue(1.8M)**

From the above chart we can say that **totalOrderValue** is increased from 2003 to 2004
But in 2005 orders are in only two qtrs(qtr1 and qtr2)
In 2005 qtr1 and qtr2 values are more comparing with previous years 2003 and 2004 q1 and q2

There are no orders in 2005 qtr3 and qtr4

**Note: we can see the number of orders by click on each quarter or year in visualization and we can see totalOrderValues and Number of customers count
On top respective card visualizations**

Next i want see that there are productLines in orderDetails Tables,i have taken Donut Chart
To show that how much distribution or area occupied in that sum of totalOrderValues in each category
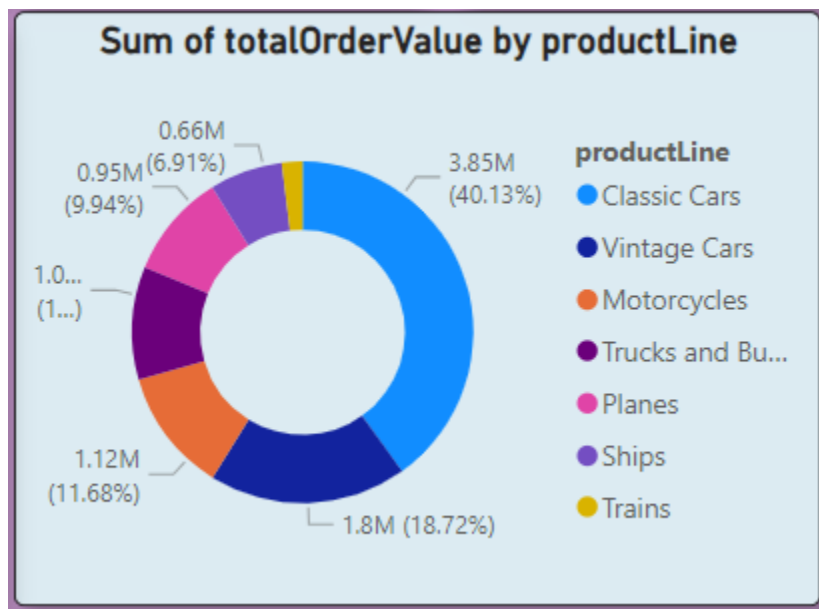
We can see the percentages of productLines
Classic Cars orderValues(40.13%) are more than order lines
As we can click on each portion we can see data changes as respectively in dashboard

Next i want to know that country wise data means each country has how many orders,sum of TotalOrderValue by country,sum of amount by country

For that i have taken table visualization

country	ordersCount ▼	Sum of totalOrderValue	Sum of amount
USA	112	32,73,280.05	₹ 30,40,029.52
France	37	10,07,374.02	₹ 9,65,750.58
Spain	36	10,99,389.09	₹ 9,94,438.53
Australia	19	5,62,582.59	₹ 5,09,385.82
New Zealand	15	4,76,847.01	₹ 3,92,486.59
UK	13	4,36,947.44	₹ 3,91,503.9
Italy	10	3,60,616.81	₹ 3,25,254.55
Finland	9	2,95,149.35	₹ 2,95,149.35
Norway	9	2,70,846.30	₹ 2,70,846.3
Singapore	9	2,63,997.78	₹ 2,61,671.6
Austria	7	1,88,540.06	₹ 1,36,119.99
Belgium	7	1,00,068.76	₹ 91,471.03
Canada	7	2,05,911.86	₹ 2,05,911.86
Denmark	7	2,18,994.92	₹ 1,97,356.3
Germany	7	1,96,470.99	₹ 1,96,470.99
Sweden	7	1,87,638.35	₹ 1,20,457.09
Japan	6	1,67,909.95	₹ 1,67,909.95
Philippines	3	87,468.30	₹ 87,468.3
Hong Kong	2	45,480.79	₹ 45,480.79
Ireland	2	49,898.27	₹ 49,898.27
Switzerland	2	1,08,777.92	₹ 1,08,777.92
Total	**326**	**96,04,190.61**	**₹ 88,53,839.23**

We can see columns
 country,count of orders in each country ,sum of totalorderValue ,sum of amount
Total for respective columns

Now i want to know that business intelligence year to date data on total orderValues in YTD
DAX formula by using quick measure in powerBI tool

```
totalOrderValue YTD =
IF(
    ISFILTERED('classicmodels orders'[orderDate]),
    ERROR("Time intelligence quick measures can only be grouped or
filtered by the Power BI-provided date hierarchy or primary date
column."),
    TOTALYTD(
        SUM('classicmodels orderdetails'[totalOrderValue]),
        'classicmodels orders'[orderDate].[Date]
    )
)
```
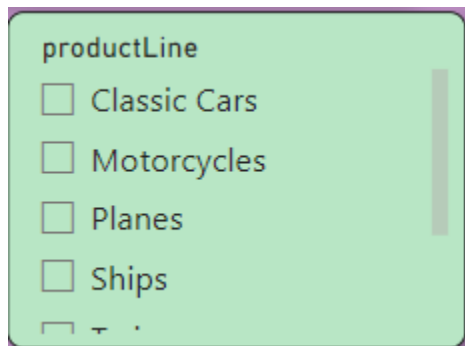
Year	Sum of totalOrderValue	totalOrderValue YTD
⊟ **2003**	**33,17,348.39**	**33,17,348.39**
⊞ Qtr 1	4,05,613.55	4,05,613.55
⊞ Qtr 2	5,15,754.91	9,21,368.46
⊞ Qtr 3	6,16,895.32	15,38,263.78
⊞ Qtr 4	17,79,084.61	33,17,348.39
⊟ **2004**	**45,15,905.51**	**45,15,905.51**
⊞ Qtr 1	7,99,579.31	7,99,579.31
⊞ Qtr 2	7,79,271.81	15,78,851.12
⊞ Qtr 3	10,28,690.38	26,07,541.50
⊞ Qtr 4	19,08,364.01	45,15,905.51
⊟ **2005**	**17,70,936.71**	**17,70,936.71**
⊞ Qtr 1	9,84,641.15	9,84,641.15
⊞ Qtr 2	7,86,295.56	17,70,936.71
⊞ Qtr 3		17,70,936.71
⊞ Qtr 4		17,70,936.71
Total	**96,04,190.61**	**17,70,936.71**

From the above pic(Matrix Chart) we can see that cumulative sum in YTD column of previous values of totalOrderValues
But in 2005 Qtr3,Qtr4 by means total 6 month there is no order

Then i have taken a slicer to filter the data in sheet

As we can filter as on our productLine category

Next i have created a new column cart_value to categories the totalOrderValue in orderDetails table by condition
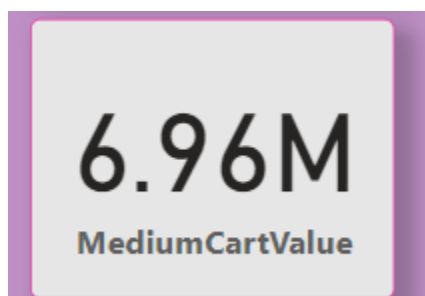DAX if Function

```
cart_value = if('classicmodels
orderdetails'[totalOrderValue]<1000,"LOW",
IF('classicmodels orderdetails'[totalOrderValue]<5000,"MEDIUM",
IF('classicmodels orderdetails'[totalOrderValue]<10000,"HIGH","VERY
HIGH")))
```

Then after i created measure on Cart_value column to know medium category cart value

```
MediumCartValue = CALCULATE(sum('classicmodels
orderdetails'[totalOrderValue]),'classicmodels
orderdetails'[cart_value]=="MEDIUM")
```

We can see medium category cart value below

I have created some measures to know max,min of totalOrderValue column

```
min_order_val = min('classicmodels
orderdetails'[totalOrderValue])
max_order_val = max('classicmodels
orderdetails'[totalOrderValue])
```

Orders_cancelled_etc Page

In this page i have to Analysis the status column on orders tables

I want to know the average days to deliver from ordered date to shipped date

I have created a column DaysToDeliver column by using

DAX DATEDIFF function

```
DaysToDeliver = DATEDIFF('classicmodels
orders'[orderDate],'classicmodels orders'[shippedDate],DAY)
```

In the shippedDate column, I have replaced Null dates with "3000-1-01" to know that it is a null value cell.

DaysToDeliver column 6 cells has more to delivers like 30000+days

So i have to replace that cells with 0

So I have created a new column FixedDeliveyDays.

```
fixedDeliveyDays = if('classicmodels
orders'[DaysToDeliver]>3000,0,'classicmodels
orders'[DaysToDeliver])
```
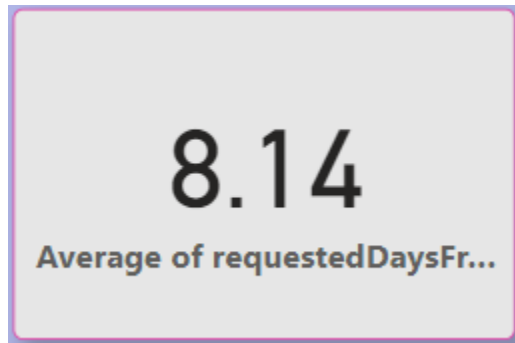
To minimize the lie factor

Then i have create a card Visual to show average delivery days

3.60
Average of fixedDeliveyDays
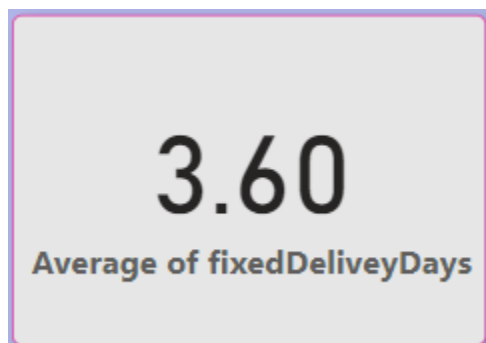
Here in orders table there is column name requiredDate

I have created new column requestedDaysFromOrderDate to know the average
days to deliver to as they requiredDate

We can see visual here

8.14
Average of requestedDaysFr...

Next I have Create Multi row card visual to know the status column counts

How many orders were canceled ,shipped,on hold etc..

Cancelled
6
Count of customerNumber

Disputed
3
Count of customerNumber
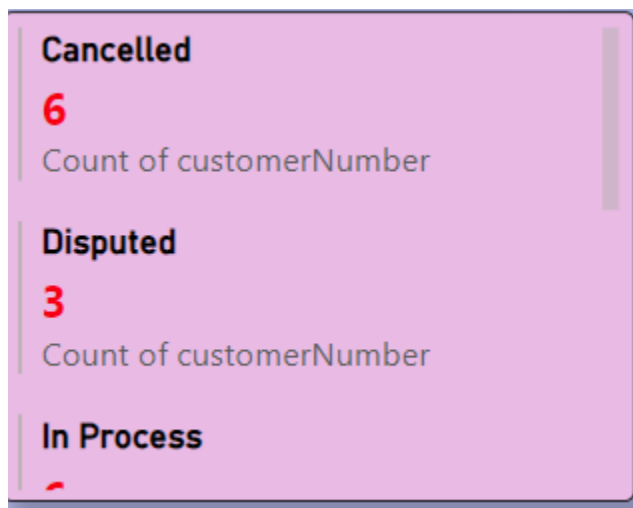
In Process

I have taken status and customerNumber(count)

We can see count of customers we canceled ,disputed,in process etc

From the above image we can see after click on cancelled (6)

We can see customer numbers ,country ,year,month and dates of cancelled orders

I have created a table to know the status records of customers

Order numbers ,names,dates of orders .

For this visual i have taken table with

Date columns,country column,orderNumber column,CustomerNumber column

Then I want to know the comments of every customer to know how they gave feedback to the product or service.

So i have taken a table chart added columns

Comments column and count of status (whether it may be in cancelled,shipped,onhold,in process etc)

comments
▲

| I need all the information I can get on our competitors. |
| Can we deliver the new Ford Mustang models by end-of-quarter? |
| Can we renegotiate this one? |
| Cautious optimism. We have happy customers here, if we can keep them well stocked. I need all the information I can get on the planned shippments of Porches |
| Check on availability. |
| Custom shipping instructions sent to warehouse |
| Custom shipping instructions were sent to warehouse |

Total

	Count of status
ormation I can get on our competitors.	1
he new Ford Mustang models by end-of-quarter?	3
iate this one?	3
sm. We have happy customers here, if we can keep ed. I need all the information I can get on the ents of Porches	3
bility.	3
g instructions sent to warehouse	3
g instructions were sent to warehouse	1
	326

Count of customerNumber

Resolved

4

Count of customerNumber

Shipped

303

Count of customerNumber
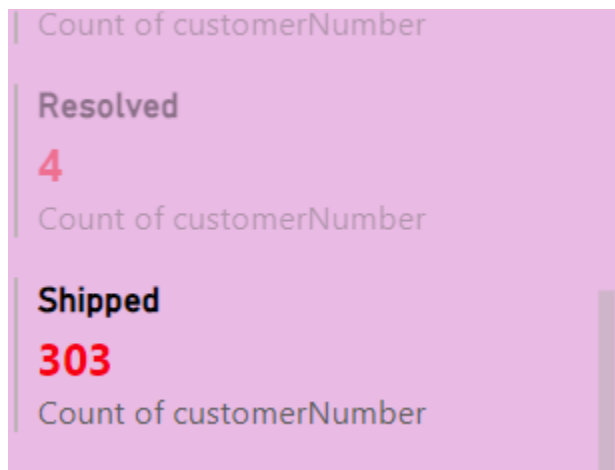
comments	Count of status
I need all the information I can get on our competitors.	1
Can we deliver the new Ford Mustang models by end-of-quarter?	3
Can we renegotiate this one?	3
Cautious optimism. We have happy customers here, if we can keep them well stocked. I need all the information I can get on the planned shippments of Porches	3
Check on availability.	3
Custom shipping instructions sent to warehouse	3
Customer has worked with some of our vendors in the past and is aware of their MSRP	3
Customer inquired about remote controlled models and gold models.	2
Customer is interested in buying more Ferrari models	3
Customer requested special shippment. The instructions were passed along to the warehouse	3
Customer requested that ad materials (such as posters, pamphlets) be included in the shippment	3
Customer requested that DHL is used for this shipping	6
Customer requested that FedEx Ground is used for this shipping	4
Customer very concerned about the exact color of the models. There is high risk that he may dispute the order because there is a slight color mismatch	3
Customer will send a truck to our local warehouse on 7/1/2004	1
Difficult to negotiate with customer. We need more marketing materials	3
NOT AVAILABLE	241
They want to reevaluate their terms agreement with Finance.	7
They want to reevaluate their terms agreement with the VP of Sales	1
This order was on hold because customers's credit limit had been exceeded. Order will ship when payment is received	1
We must be cautions with this customer. Their VP of Sales resigned. Company may be heading down.	3
We need to keep in close contact with their Marketing VP. He is the decision maker for all their purchases.	3

By clicking on status in multi row card

We can read the comments of costumes in comments table

But we can see there are 241 customers have not given any comments

In shipped status..

So here we can think about why the customers have not given feedback.

If we know how they feel about our products we can improve better service to

them.

For example we have seen 2005 has no sales in last 2 quarters

We can see below images

country	orderNumber	customerNumber	Year	Quarter	Month	Day
enmark	10406	145	2005	Qtr 2	April	15
ustralia	10415	471	2005	Qtr 2	May	9
pain	10417	141	2005	Qtr 2	May	13

Cancelled
6
Count of customerNumber

Disputed
3
Count of customerNumber

In Process

Year	totalOrderValue	totalOrderValue YTD
⊟ 2005	61,158.78	61,158.78
⊞ Qtr 2	61,158.78	61,158.78
⊞ Qtr 3		61,158.78
⊞ Qtr 4		61,158.78
Total	61,158.78	61,158.78

In 2005 three customers has in disputed stage and we can see the

totalOrderValue amount in matrix chart also

we can easily solve their concerns by knowing there comments or feedback

	Count of customerNumber
In Process	
6	
Count of customerNumber	
On Hold	
4	
Count of customerNumber	

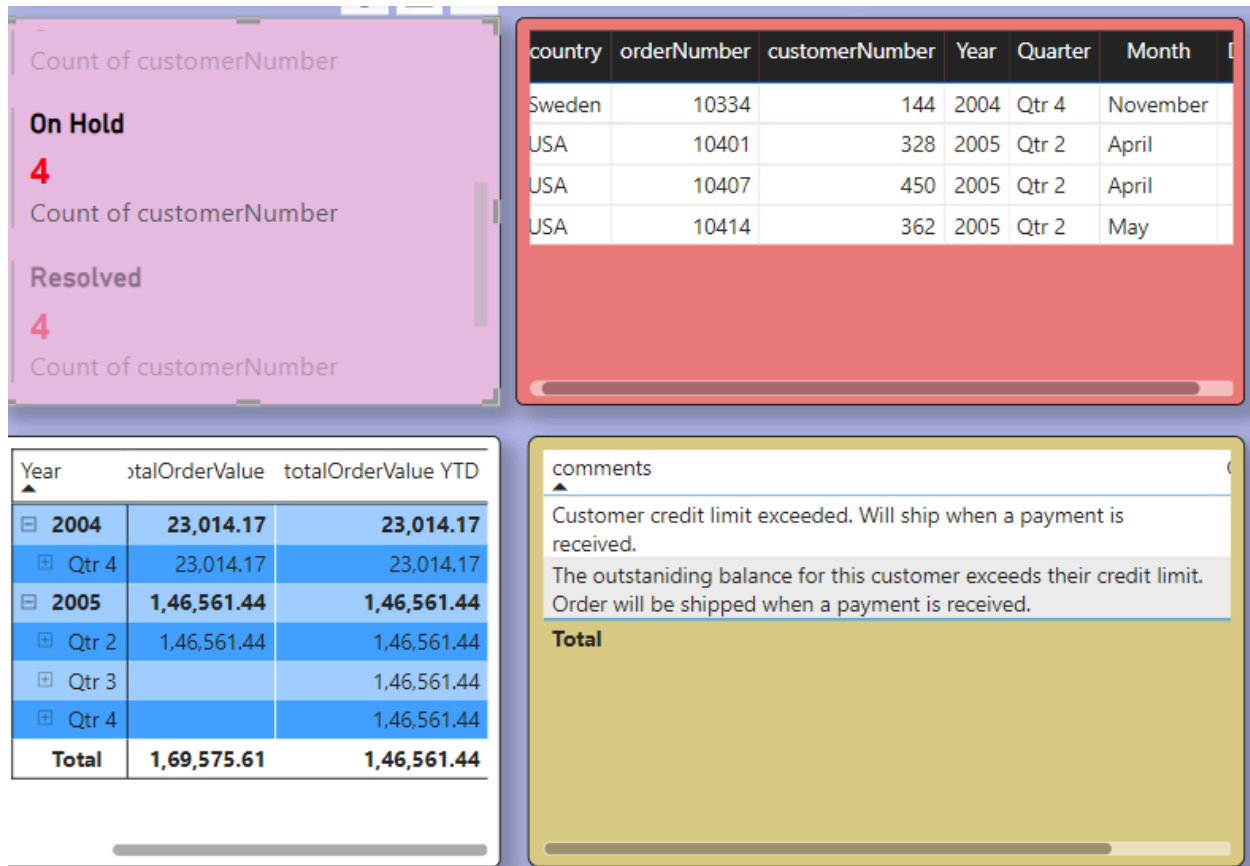| country	orderNumber	customerNumber	Year	Quarter	Month	Day
ustralia	10420	282	2005	Qtr 2	May	29
JSA	10421	124	2005	Qtr 2	May	29
JSA	10422	157	2005	Qtr 2	May	30
elgium	10423	314	2005	Qtr 2	May	30
pain	10424	141	2005	Qtr 2	May	31
rance	10425	119	2005	Qtr 2	May	31

Year	otalOrderValue	totalOrderValue YTD
⊟ **2005**	**1,35,271.52**	**1,35,271.52**
⊞ Qtr 2	1,35,271.52	1,35,271.52
⊞ Qtr 3		1,35,271.52
⊞ Qtr 4		1,35,271.52
Total	**1,35,271.52**	**1,35,271.52**

comments	Count of status
Custom shipping instructions were sent to warehouse	1
NOT AVAILABLE	5
Total	**6**

From the above pic we can see 6 in process stage all are in 2005 year

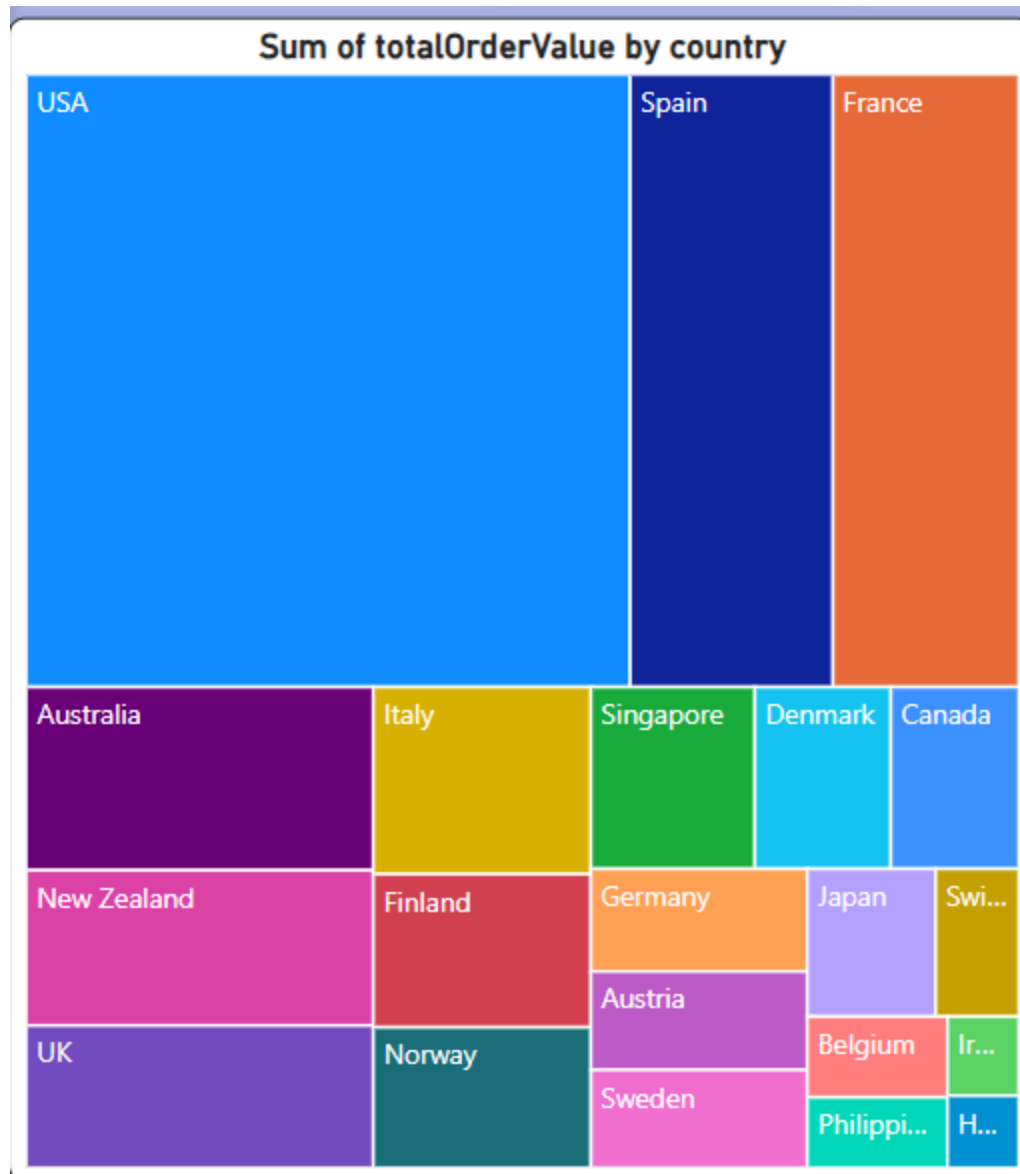The total amount we can see here is 135271.52 in the matrix table.

We can also know whether he commented or not in comments table

On Hold

4

Count of customerNumber

Resolved

4

Count of customerNumber

country	orderNumber	customerNumber	Year	Quarter	Month
Sweden	10334	144	2004	Qtr 4	November
USA	10401	328	2005	Qtr 2	April
USA	10407	450	2005	Qtr 2	April
USA	10414	362	2005	Qtr 2	May

Year	otalOrderValue	totalOrderValue YTD
⊟ 2004	23,014.17	23,014.17
⊞ Qtr 4	23,014.17	23,014.17
⊟ 2005	1,46,561.44	1,46,561.44
⊞ Qtr 2	1,46,561.44	1,46,561.44
⊞ Qtr 3		1,46,561.44
⊞ Qtr 4		1,46,561.44
Total	1,69,575.61	1,46,561.44

comments

Customer credit limit exceeded. Will ship when a payment is received.

The outstaniding balance for this customer exceeds their credit limit. Order will be shipped when a payment is received.

Total

Same as in on hold stage again 2005 year orders are there

Next I want to know how big the country size in totalOrderValue

So that i have taken treemap

Sum of totalOrderValue by country

USA	Spain	France
Australia	Italy	Singapore / Denmark / Canada
New Zealand	Finland	Germany / Japan / Swi...
UK	Norway	Austria / Sweden / Belgium / Ir... / Philippi... / H...

From totalOrderColumn

Country column

This page give Insights how to improve service as per customers comments

We can know the stages of orderNumbers clearly.

Instock_products_Report Page

In this page we can know how much stock is there like how much quantity in stock ,how much profits we can make by instock products

This chart is created by Products Table

I come to known that total stock quantity by card visual below
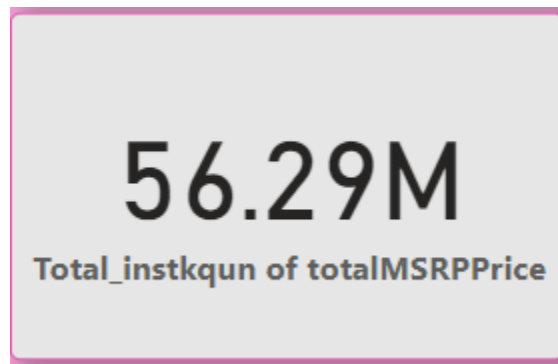

I have created three New columns

totalBuyPrice

totalBuyPrice = 'classicmodels
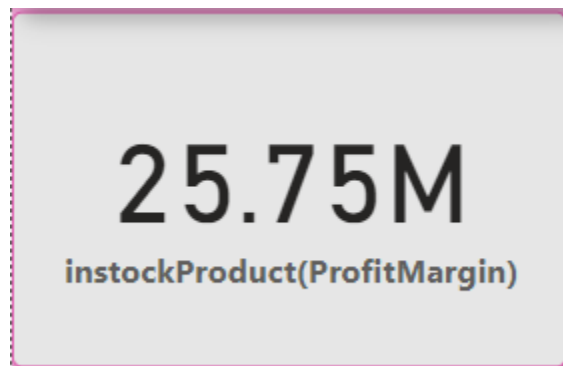products'[quantityInStock]*'classicmodels products'[buyPrice]
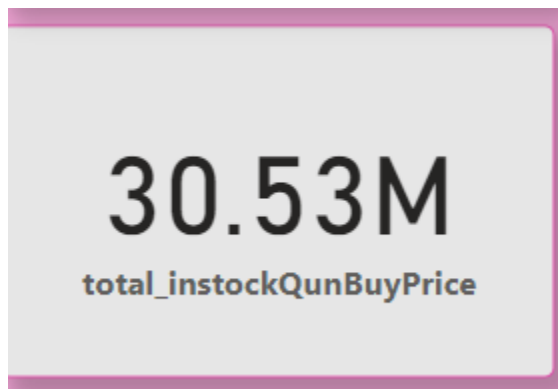
totalMSRPPrice

```
totalMSRPPrice = 'classicmodels
products'[quantityInStock]*'classicmodels products'[MSRP]
```

56.29M

Total_instkqun of totalMSRPPrice

profit_margin

```
profit_margin = 'classicmodels
products'[totalMSRPPrice]-'classicmodels
products'[totalBuyPrice]
```
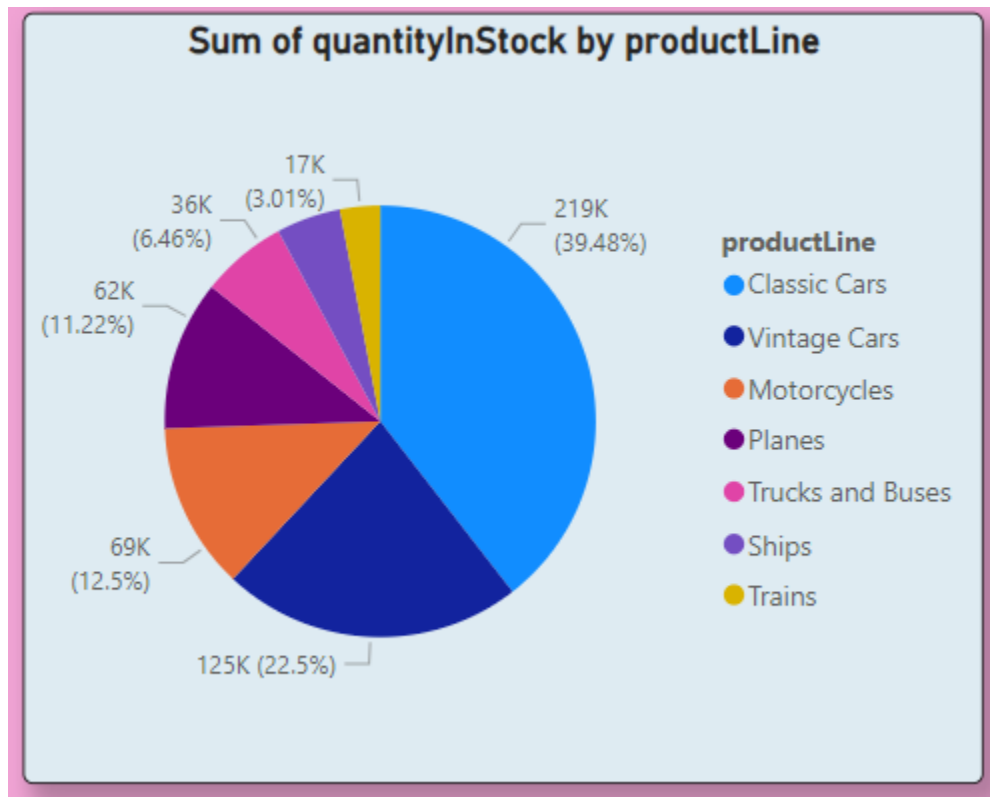
25.75M

instockProduct(ProfitMargin)

From above images we can know their respective values all are by card visual

Now i want to know that in each category means in each productLine Column

How much stock quantity ,how much by price,how much profit we can get
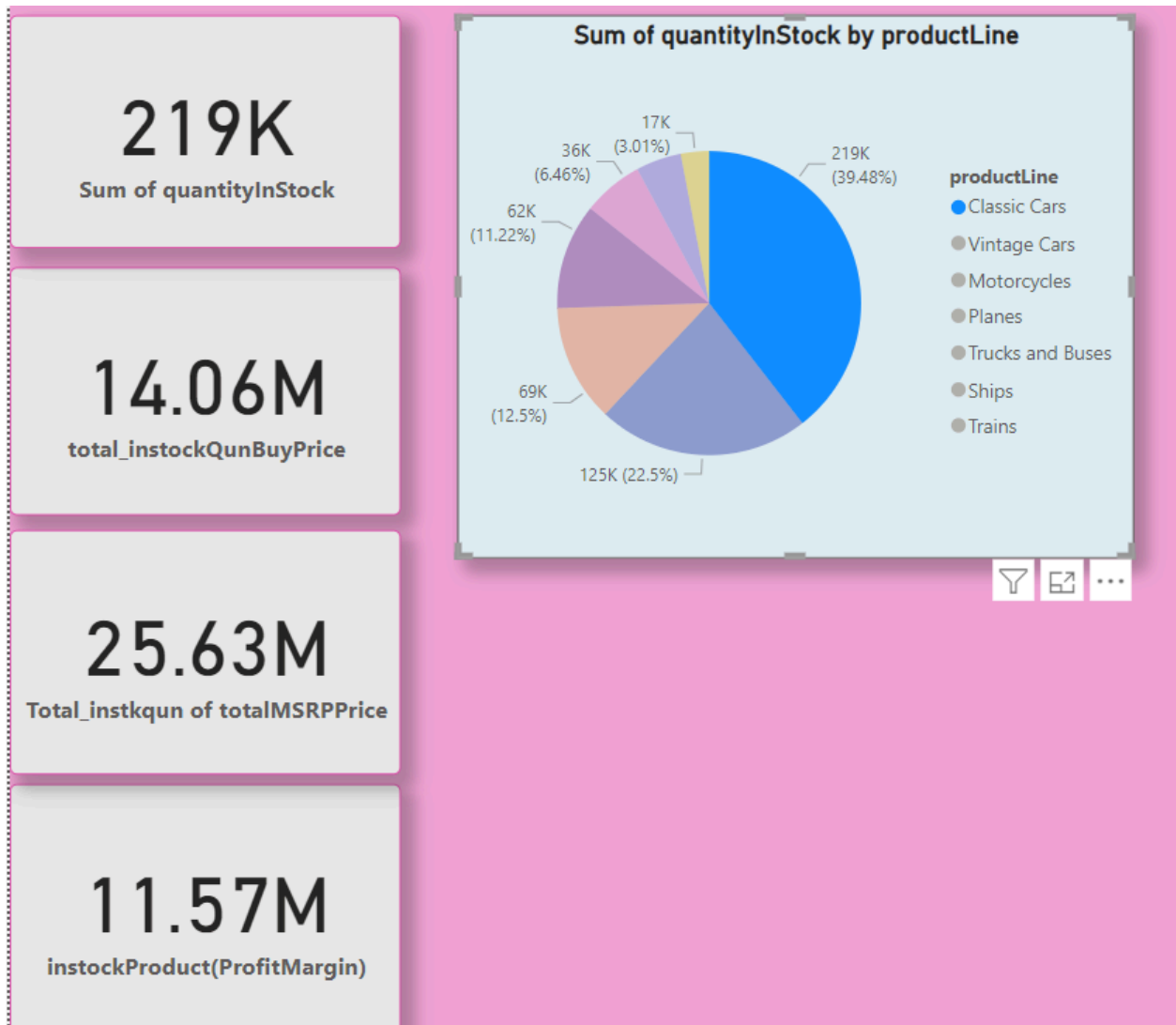
We can see below image

I used Pie chart to know

Sum of quantityInStock by productLine

productLine
● Classic Cars
● Vintage Cars
● Motorcycles
● Planes
● Trucks and Buses
● Ships
● Trains

219K (39.48%)
17K (3.01%)
36K (6.46%)
62K (11.22%)
69K (12.5%)
125K (22.5%)

Taken productLine on legend

Values as sum of quantityInStock

We can see each ProductLline distribution below

We can see classic cars ProductLine has major portion in pie chart

We can see the data in card as respectively

Finally Customers_Reports Page

In this we can see the customers from which country,

From which country we have orders,how many order from each country

Customer name as priority on count of orders they made

customerName	customerNumber	Count of orderNumber
Euro+ Shopping Channel	141	26
Mini Gifts Distributors Ltd.	124	17
Australian Collectors, Co.	114	5
Danish Wholesale Imports	145	5
Dragon Souveniers, Ltd.	148	5
Total		**326**

In this table chart we can see the customerName,customerNumber,count of

OrderNumbers

Count we can change from DESC TO ASC or ASC TO DESC
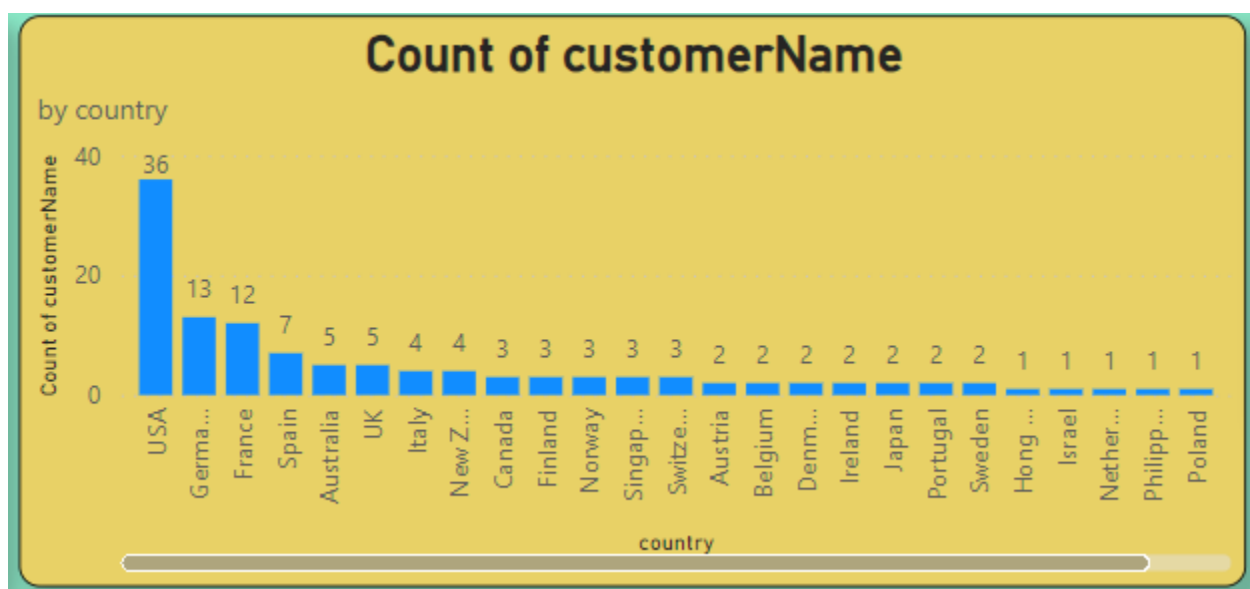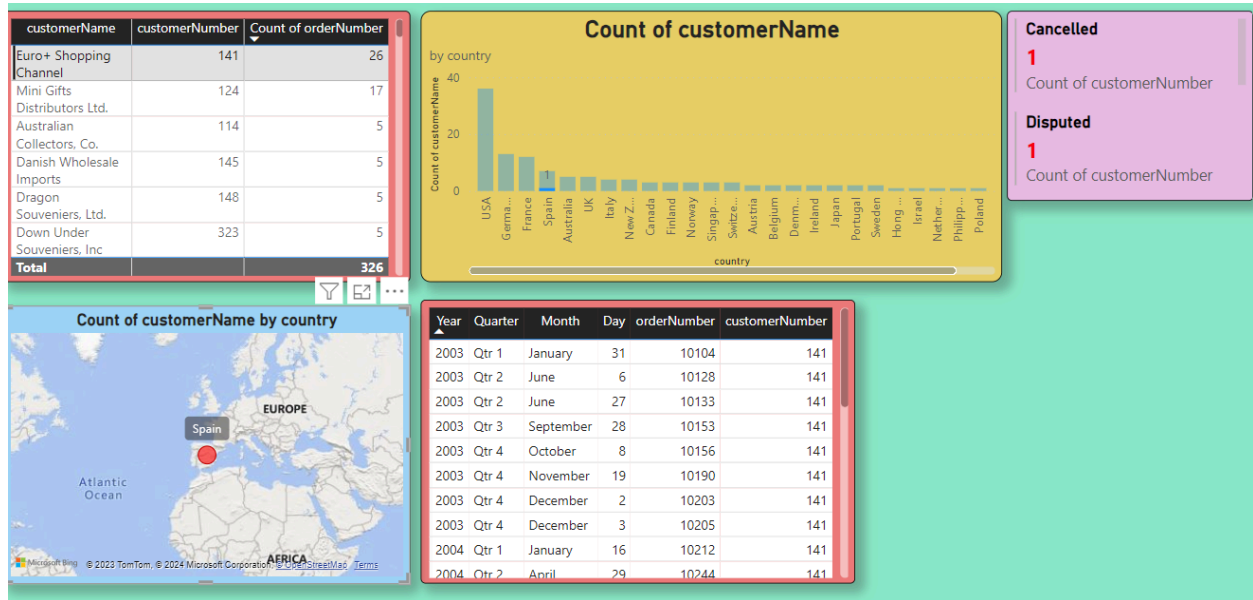
X-axis:country

Y-axis:count of customerName

From the above bar chart we can see that USA has more customer ,

Has 36 Customers from USA ,13 from Germany ,12 from France

We can also see the MAP chart that USA Bubble is big that means the more

number of customers from USA

We can see other countries too

If we click on top most ordered customer(**Euro+ shipping Channel 126 orders,141 customer number**) we can see his country **Spain**

We can see his order numbers in another table ,we can see the status of that orders

We can say USA has major customers for us

We have to improve our sales in other countries

Some countries has only 1 orders like hongkong ,japan

So countries we have customers from canada,south africa but not ordered.

Thank You