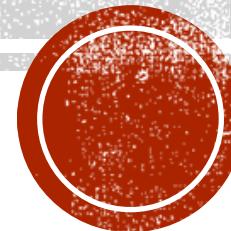


# **FINANCIAL PERFORMANCE ANALYSIS: WESTERN COUNTRIES CASE STUDY"**



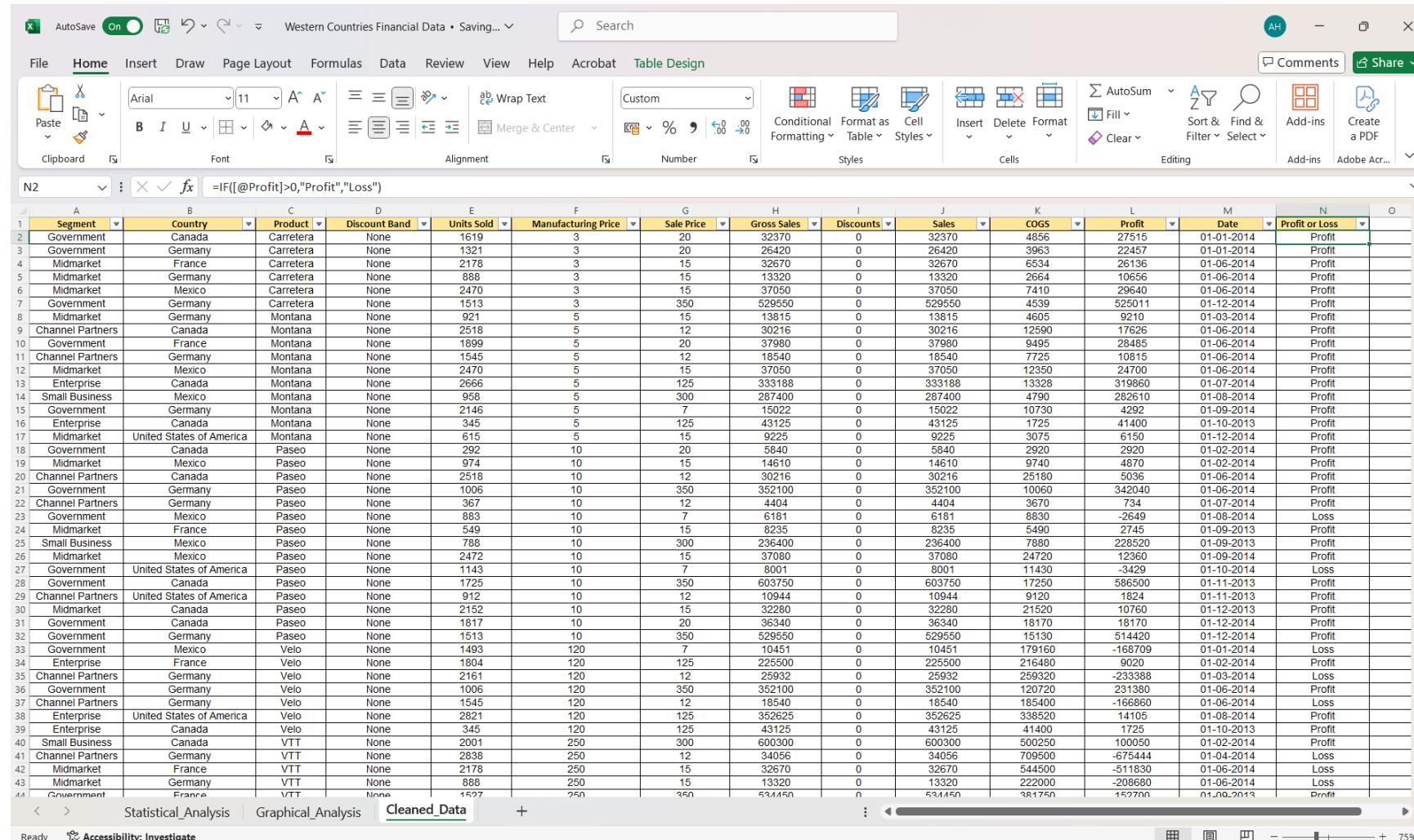
**A Capstone Project Demonstrating Data Cleaning, Statistical Analysis, SQL Queries, and Power BI Dashboards"**

## **EXPLORE THE DATA USING EXCEL . UNDERSTAND THE DATA AND PREPARE A SHORT SUMMARY ABOUT THE DATASET.**

- This dataset shows product sales in different countries for the year 2013, 2014. It includes details like segment, product name, units sold, sales price, and profit. It helps track how much was sold, how much it cost to make, and the profit earned. Each row is a sales transaction with its date and country. It can be used to analyze sales trends, performance, and profitability.



# PERFORM DATA CLEANING IF REQUIRED AND THEN DO STATISTICAL ANALYSIS ON DATA USING STATISTICAL TOOLS.



A	Segment	Country	Product	Discount Band	Units Sold	Manufacturing Price	Sale Price	Gross Sales	Discounts	Sales	COGS	Profit	Date	Profit or Loss
2	Government	Canada	Carretera	None	1619	3	20	32370	0	32370	4856	27515	01-01-2014	Profit
3	Government	Germany	Carretera	None	1321	3	20	26420	0	26420	3963	22457	01-01-2014	Profit
4	Midmarket	France	Carretera	None	2178	3	15	32670	0	32670	6534	26136	01-06-2014	Profit
5	Midmarket	Germany	Carretera	None	888	3	15	13320	0	13320	2664	10565	01-06-2014	Profit
6	Midmarket	Mexico	Carretera	None	2470	3	15	37050	0	37050	7410	29640	01-06-2014	Profit
7	Government	Germany	Carretera	None	1513	3	350	529550	0	529550	4539	525011	01-12-2014	Profit
8	Midmarket	Germany	Montana	None	921	5	15	13815	0	13815	4605	9210	01-03-2014	Profit
9	Channel Partners	Canada	Montana	None	2518	5	12	30216	0	30216	12590	17626	01-06-2014	Profit
10	Government	France	Montana	None	1899	5	20	37980	0	37980	9495	28485	01-06-2014	Profit
11	Channel Partners	Germany	Montana	None	1545	5	12	18540	0	18540	7725	10815	01-06-2014	Profit
12	Midmarket	Mexico	Montana	None	2470	5	15	37050	0	37050	12350	24700	01-06-2014	Profit
13	Enterprise	Canada	Montana	None	2666	5	125	333188	0	333188	13328	319860	01-07-2014	Profit
14	Small Business	Mexico	Montana	None	958	5	300	287400	0	287400	4790	282610	01-08-2014	Profit
15	Government	Germany	Montana	None	2146	5	7	15022	0	15022	10730	4292	01-09-2014	Profit
16	Enterprise	Canada	Montana	None	345	5	125	43125	0	43125	1725	41400	01-10-2013	Profit
17	Midmarket	United States of America	Montana	None	615	5	15	9225	0	9225	3075	6150	01-12-2014	Profit
18	Government	Canada	Paseo	None	292	10	20	5840	0	5840	2920	2920	01-02-2014	Profit
19	Midmarket	Mexico	Paseo	None	974	10	15	14610	0	14610	9740	4870	01-02-2014	Profit
20	Channel Partners	Canada	Paseo	None	2518	10	12	30216	0	30216	25180	5036	01-06-2014	Profit
21	Government	Germany	Paseo	None	1006	10	350	352100	0	352100	10060	342040	01-06-2014	Profit
22	Channel Partners	Germany	Paseo	None	367	10	12	4404	0	4404	3670	734	01-07-2014	Profit
23	Government	Mexico	Paseo	None	883	10	7	6181	0	6181	8830	-2649	01-08-2014	Loss
24	Midmarket	France	Paseo	None	549	10	15	8235	0	8235	5490	2745	01-09-2013	Profit
25	Small Business	Mexico	Paseo	None	788	10	300	236400	0	236400	7880	228520	01-09-2013	Profit
26	Midmarket	Mexico	Paseo	None	2472	10	15	37080	0	37080	24720	12360	01-09-2014	Profit
27	Government	United States of America	Paseo	None	1143	10	7	8001	0	8001	11430	-3429	01-10-2014	Loss
28	Government	Canada	Paseo	None	1725	10	350	603750	0	603750	17250	586500	01-11-2013	Profit
29	Channel Partners	United States of America	Paseo	None	912	10	12	10944	0	10944	9120	1824	01-11-2013	Profit
30	Midmarket	Canada	Paseo	None	2152	10	15	32280	0	32280	21520	10760	01-12-2013	Profit
31	Government	Canada	Paseo	None	1817	10	20	36340	0	36340	18170	18170	01-12-2014	Profit
32	Government	Germany	Paseo	None	1513	10	350	529550	0	529550	15130	514420	01-12-2014	Profit
33	Government	Mexico	Velo	None	1493	120	7	10451	0	10451	179160	-168709	01-01-2014	Loss
34	Enterprise	France	Velo	None	1804	120	125	225500	0	225500	216480	9020	01-02-2014	Profit
35	Channel Partners	Germany	Velo	None	2161	120	12	25932	0	25932	259320	-233388	01-03-2014	Loss
36	Government	Germany	Velo	None	1006	120	350	352100	0	352100	120720	231380	01-06-2014	Profit
37	Channel Partners	Germany	Velo	None	1545	120	12	18540	0	18540	185400	-166860	01-06-2014	Loss
38	Enterprise	United States of America	Velo	None	2821	120	125	352625	0	352625	338520	14105	01-08-2014	Profit
39	Enterprise	Canada	Velo	None	345	120	125	43125	0	43125	41400	1725	01-10-2013	Profit
40	Small Business	Canada	VTT	None	2001	250	300	600300	0	600300	500250	100050	01-02-2014	Profit
41	Channel Partners	Germany	VTT	None	2838	250	12	34056	0	34056	709500	-675444	01-04-2014	Loss
42	Midmarket	France	VTT	None	2178	250	15	32670	0	32670	544500	-511830	01-06-2014	Loss
43	Midmarket	Germany	VTT	None	888	250	15	13320	0	13320	222000	-208680	01-06-2014	Loss
44	Government	France	VTT	None	1597	250	350	534450	0	534450	381750	152700	01-09-2013	Profit



# PERFORM DATA CLEANING IF REQUIRED AND THEN DO STATISTICAL ANALYSIS ON DATA USING STATISTICAL TOOLS.

Western Countries Financial Data • Saved

File Home Insert Draw Page Layout Formulas Data Review View Help Acrobat

Clipboard Font Alignment Number Styles Cells Editing Add-ins Adobe Ac...

L24

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1																	
2	<b>Units Sold</b>			<b>Manufacturing Price</b>			<b>Sale Price</b>			<b>Gross Sales</b>							
3																	
4	Mean	1608.294286		Mean	96.47714286		Mean	118.4285714		Mean	182759.4264						
5	Standard Error	32.78569136		Standard Error	4.104792908		Standard Error	5.169628528		Standard Error	9610.211032						
6	Median	1542.5		Median	10		Median	20		Median	37980						
7	Mode	727		Mode	10		Mode	20		Mode	37050						
8	Standard Deviation	867.4278591		Standard Deviation	108.6026122		Standard Deviation	136.7755146		Standard Deviation	254262.2844						
9	Sample Variance	752431.0907		Sample Variance	11794.52737		Sample Variance	18707.54139		Sample Variance	64649309257						
10	Kurtosis	-0.315317997		Kurtosis	-1.42896268		Kurtosis	-1.176789008		Kurtosis	2.054300583						
11	Skewness	0.436153562		Skewness	0.592583952		Skewness	0.771281871		Skewness	1.673921656						
12	Range	4292.5		Range	257		Range	343		Range	1205701						
13	Minimum	200		Minimum	3		Minimum	7		Minimum	1799						
14	Maximum	4492.5		Maximum	260		Maximum	350		Maximum	1207500						
15	Sum	1125806		Sum	67534		Sum	82900		Sum	127931598.5						
16	Count	700		Count	700		Count	700		Count	700						
17																	
18																	
19	<b>Discounts</b>			<b>Sales</b>			<b>COGS</b>			<b>Profit</b>							
20																	
21	Mean	13141.47463		Mean	169609.0718		Mean	152375.0186		Mean	17234.05323						
22	Standard Error	868.0867837		Standard Error	8947.414896		Standard Error	8077.714648		Standard Error	10841.34726						
23	Median	2563.6		Median	35540.2		Median	24377.5		Median	8827.875						
24	Mode	0		Mode	32670		Mode	79560		Mode	18170						
25	Standard Deviation	22967.41746		Standard Deviation	236726.3469		Standard Deviation	213716.2412		Standard Deviation	286835.0872						
26	Sample Variance	527502264.8		Sample Variance	56039363321		Sample Variance	45674631752		Sample Variance	82274367274						
27	Kurtosis	7.901558337		Kurtosis	2.188633088		Kurtosis	1.641939498		Kurtosis	1.611671865						
28	Skewness	2.684329462		Skewness	1.696295217		Skewness	1.557466737		Skewness	0.138529571						
29	Range	149677.5		Range	1157544.92		Range	1096428		Range	2042181.6						
30	Minimum	0		Minimum	1655.08		Minimum	642		Minimum	-917481.6						
31	Maximum	149677.5		Maximum	1159200		Maximum	1097070		Maximum	1124700						
32	Sum	9199032.24		Sum	118726350.3		Sum	106662513		Sum	12063837.26						
33	Count	700		Count	700		Count	700		Count	700						
34																	

Graphical\_Analysis Statistical\_Analysis Cleaned\_Data +

Ready Accessibility: Investigate

94%

# PERFORM GRAPHICAL ANALYSIS ON THE DATA USING EXCEL AND DERIVE INSIGHTS FROM IT.

Western Countries Financial Data • Saved

K28

The screenshot shows a Microsoft Excel spreadsheet titled "Western Countries Financial Data". The data is organized into several tables and charts:

- Sum of Sales (Pie Chart):** Compares Segment Sum of Sales. The chart has five segments: Channel Partners (blue), Enterprise (orange), Government (grey), Midmarket (yellow), and Small Business (light blue). The data is as follows:

Segment	Sum of Sales
Channel Partners	1800593.64
Enterprise	19611694.38
Government	52504260.67
Midmarket	2381883.075
Small Business	42427918.5
Grand Total	118726350.3
- Sum of Profit (Pie Chart):** Compares Segment Sum of Profit. The chart has five segments: Channel Partners (blue), Enterprise (orange), Government (grey), Midmarket (yellow), and Small Business (light blue). The data is as follows:

Segment	Sum of Profit
Channel Partners	-15089724.36
Enterprise	4371006.375
Government	8172441.17
Midmarket	-11663091.93
Small Business	267273206
Grand Total	12063837.26
- Sum of Sales (Bar Chart):** Compares Country Sum of Sales. The chart has five countries: United States of America (blue), Mexico (light blue), Germany (orange), France (yellow), and Canada (light orange). The data is as follows:

Country	Sum of Sales
United States of America	24887654.89
France	24354172.28
Germany	23505340.82
Mexico	20949352.11
United States of America	25029830.17
Canada	18000000
Grand Total	118726350.3
- Sum of Profit (Pie Chart):** Compares Country Sum of Profit. The chart has five countries: Canada (blue), France (orange), Germany (yellow), Mexico (light blue), and United States of America (light orange). The data is as follows:

Country	Sum of Profit
Canada	2035760.385
France	1825899.28
Germany	3264748.82
Mexico	2976080.11
United States of America	1961258.665
Grand Total	12063837.26
- Sum of Sales (Bar Chart):** Compares Product Sum of Sales. The chart has five products: AMARILLA (blue), CARRETERA (light blue), MONTANA (orange), PASEO (yellow), and VELO (light orange). The data is as follows:

Product	Sum of Sales
AMARILLA	17747116.06
CARRETERA	13815307.89
MONTANA	15390801.88
PASEO	33011143.95
VELO	18250059.47
VTT	20511921.02
Grand Total	118726350.3
- Sum of Profit (Bar Chart):** Compares Product Sum of Profit. The chart has five products: AMARILLA (blue), CARRETERA (light blue), MONTANA (orange), PASEO (yellow), and VELO (light orange). The data is as follows:

Product	Sum of Profit
AMARILLA	-22634783.94
CARRETERA	13374769.89
MONTANA	14619811.88
PASEO	29627848.95
VELO	-1240880.535
VTT	-21683828.98
Grand Total	12063837.26

Below the charts, there are tabs for "Statistical\_Analysis", "Graphical\_Analysis" (which is selected), and "Cleaned\_Data". The status bar at the bottom shows "Ready" and "Accessibility: Investigate".



The **Enterprise** segment has the highest sales and strong profitability, while **Government** delivers high margins despite the lowest sales.

**Partners** and **Midmarket** segments are heavily loss-making, indicating strategic or cost issues.

The **USA** records the highest sales but has a lower profit margin, suggesting high operational costs or discounts.

**France** achieves the best profitability despite lower sales, showing efficient cost management.

**Mexico** and **Germany** also perform well, with healthy profit margins.

**Paseo** is the top-selling and most profitable product, contributing significantly to overall gains.

**Montana** has a small profit, while **Amarilla**, **Carretera**, **Velo**, and **VTT** suffer losses.

**Amarilla** and **VTT** have the largest losses among products, requiring urgent corrective action.

The gap between high sales and low profit in some areas suggests the need for margin improvement strategies.

Overall, focusing on profitable segments, countries, and products while reducing losses in underperforming areas can boost profitability.



**INSERT THE GIVEN DATA INTO THE SQL SERVER BY MAKING A DATABASE AND DEFINING THERE REQUIRED PARAMETERS FOR THE CONSTRUCTION OF DATABASE AND DATABASE TABLES.**

The screenshot shows the MySQL Workbench interface with the following details:

- Navigator:** Shows the schema structure. Under the **capstone** database, there is a **Tables** folder containing a **cleaned\_data** table. The **Columns** section for this table lists:
  - Segment
  - Country
  - Product
  - Discount Band
  - Units Sold
  - Manufacturing Price
  - Sale Price
  - Gross Sales
  - Discounts
  - Sales
- SQL File 4\***: The current tab in the editor contains the following SQL code:

```
1 • create database Capstone;
2 • use Capstone;
3
4 #1.Fix the table and columns names.
5
6 • alter table `cleaned financial dataset`
7 rename to cleaned_data;
8 • alter table cleaned_data
9 change column i»{Segment Segment varchar(50);
```
- Information:** A tooltip for the **Discount Band** column provides the following details:
  - Column:** Discount Band
  - Collation:** utf8mb4\_0900\_ai\_ci
  - Definition:** Discount Band text
- Output:** An empty pane labeled "Action Output".
- Status Bar:** Shows "Query interrupted".



# VERIFY IF THE DATA IS PROPERLY IMPORTED INTO THE SQL DATABASE (TRY RUNNING FEW QUERIES.)

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

attrition

captstone

Tables

cleaned\_data

Columns

Segment

Country

Product

Discount Band

Units Sold

Manufacturing Price

Sale Price

Gross Sales

Discounts

Sales

Administration Schemas

Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:

Discount Band text

Attrition Health\_Care SQL File 4\*

Limit to 1000 rows

10

11 #2. Show all data.

12 • select \* from cleaned\_data;

13

14

15

16

17

18

19

Result Grid

Filter Rows: Export: Wrap Cell Content: □

Segment	Country	Product	Discount Band	Units Sold	Manufacturing Price	Sale Price	Gross Sales	Discounts	Sales	COGS	Profit	Date	Profit or Loss
Government	Canada	Carretera	None	1618.5	3	20	32370	0	32370	4855.5	27514.5	41640	Profit
Government	Germany	Carretera	None	1321	3	20	26420	0	26420	3963	22457	41640	Profit
Midmarket	France	Carretera	None	2178	3	15	32670	0	32670	6534	26136	41791	Profit
Midmarket	Germany	Carretera	None	888	3	15	13320	0	13320	2664	10656	41791	Profit
Midmarket	Mexico	Carretera	None	2470	3	15	37050	0	37050	7410	29640	41791	Profit
Government	Germany	Carretera	None	1513	3	350	52950	0	52950	4539	525011	41974	Profit
Midmarket	Germany	Montana	None	921	5	15	13815	0	13815	4605	9210	41699	Profit
Channel Partners	Canada	Montana	None	2518	5	12	30216	0	30216	12590	17626	41791	Profit
Government	France	Montana	None	1899	5	20	37980	0	37980	9495	28485	41791	Profit
Channel Partners	Germany	Montana	None	1545	5	12	18540	0	18540	7725	10815	41791	Profit
Midmarket	Mexico	Montana	None	2470	5	15	37050	0	37050	12350	24700	41791	Profit
Enterprise	Canada	Montana	None	2665.5	5	125	333188	0	333188	13327.5	319860	41821	Profit
Small Business	Mexico	Montana	None	958	5	300	287400	0	287400	4790	282610	41852	Profit

cleaned\_data 10 x

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	22:22:49	select * from cleaned_data LIMIT 0, 1000	699 row(s) returned	0.016 sec / 0.000 sec

Object Info Session

Query Completed

## MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help



Navigator

SCHEMAS

Filter objects

- attrition
- capstone
  - Tables
    - cleaned\_data
    - Columns
      - Segment
      - Country
      - Product
      - Discount Band
      - Units Sold
      - Manufacturing Price
      - Sale Price
      - Gross Sales
      - Discounts
      - Sales

Administration Schemas

Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:  
Discount Band text

Attrition Health\_Care SQL File 4\*

```
15 • select distinct country
16   from cleaned_data;
17
18
19
20
21
22
23
24
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

country
Canada
Germany
France
Mexico
United States of America

Result Grid

Form Editor

Field Types

Query Stats

cleaned\_data 11 ×

Read Only

Output

Action Output

#	Time	Action
1	22:22:49	select * from cleaned_data LIMIT 0, 1000
2	22:24:52	select distinct country from cleaned_data LIMIT 0, 1000

Message

699 row(s) returned

Duration / Fetch

0.016 sec / 0.000 sec

5 row(s) returned

0.000 sec / 0.000 sec

Object Info Session

Query Completed

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator Attrition Health\_Care SQL File 4 ×

SCHEMAS

Filter objects

attrition

capstone

Tables

cleaned\_data

Columns

- Segment
- Country
- Product
- Discount Band
- Units Sold
- Manufacturing Price
- Sale Price
- Gross Sales
- Discounts
- Sales

Administration Schemas

Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:

Discount Band text

Attrition Health\_Care SQL File 4 ×

18 #4.Find the total number of units sold across all products

19 • select sum('units sold') as 'Total\_Units\_Sold'

20 from cleaned\_data;

21

22

23

24

25

26

27

Result Grid | Filter Rows: Export: Wrap Cell Content: Result Grid

Total\_Units\_Sold  
1125439

Form Editor

Field Types

Query Stats

Result 12 ×

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	22:22:49	select * from cleaned_data LIMIT 0, 1000	699 row(s) returned	0.016 sec / 0.000 sec
2	22:24:52	select distinct country from cleaned_data LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
3	22:26:39	select sum('units sold') as 'Total_Units_Sold' from cleaned_data;	1 row(s) returned	0.016 sec / 0.000 sec

Object Info Session

Query Completed

File Edit View Query Database Server Tools Scripting Help



## Navigator

## SCHEMAS

Filter objects

- attrition
- ▼ capstone
  - Tables
    - cleaned\_data
      - Columns
        - Segment
        - Country
        - Product
        - Discount Band
        - Units Sold
        - Manufacturing Price
        - Sale Price
        - Gross Sales
        - Discounts
        - Sales

Administration

Schemas

## Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:

Discount Band text

Attrition Health\_Care SQL File 4\* ×

```
22
23      #5. List all unique products available in the dataset.
24 •   select distinct product
25     from cleaned_data;
26
27
28
29
30
31
```

Result Grid

product
Carretera
Montana
Paseo
Velo
VTT
Amarilla

Result Grid

Form Editor

Field Types

Query Stats

cleaned\_data 13 ×

Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
1	22:22:49	select *from cleaned_data LIMIT 0, 1000	699 row(s) returned	0.016 sec / 0.000 sec
2	22:24:52	select distinct country from cleaned_data LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
3	22:26:39	select sum('units sold') as 'Total_Units_Sold'from cleaned_data...	1 row(s) returned	0.016 sec / 0.000 sec
4	22:28:09	select distinct product from cleaned_data LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Query Completed



## Navigator

## SCHEMAS

Filter objects	
▶	attrition
▼	capstone
▼	Tables
▼	cleaned_data
▼	Columns
◆	Segment
◆	Country
◆	Product
◆	Discount Band
◆	Units Sold
◆	Manufacturing Price
◆	Sale Price
◆	Gross Sales
◆	Discounts
◆	Sales

## Administration

## Schemas

## Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:  
Discount Band text

## Attrition Health\_Care SQL File 4\* ×

```

28 #6. Show the top 10 rows ordered by highest sales.
29 • select *
30   from cleaned_data
31   order by sales desc
32   limit 10;
33
34
35
36
37

```

	Segment	Country	Product	Discount Band	Units Sold	Manufacturing Price	Sale Price	Gross Sales	Discounts	Sales	COGS	Profit	Date	Profit or Loss	
▶	Government	United States of America	Paseo	Low	3450	10	350	1207500	48300	1159200	34500	1124700	41821	Profit	
	Small Business	Canada	Montana	Medium	3802.5	5	300	1140750	102668	1038083	19012.5	1019070	41730	Profit	
	Small Business	Canada	Velo	Medium	3793.5	120	300	1138050	102425	1035626	455220	580405.5	41821	Profit	
	Government	Germany	Velo	Low	2966	120	350	1038100	20762	1017338	355920	661418	41548	Profit	
	Government	Germany	Amarilla	Low	2966	260	350	1038100	20762	1017338	771160	246178	41548	Profit	
	Government	Germany	VTT	Low	2877	250	350	1006950	20139	986811	719250	267561	41913	Profit	
	Government	Germany	Velo	Low	2877	120	350	1006950	20139	986811	345240	641571	41913	Profit	
	Government	Canada	Germany	so	Low	2852	10	350	998200	19964	978236	28520	949716	41974	Profit
	Government	Canada	Carretera	Low	2852	3	350	998200	19964	978236	8556	969680	41974	Profit	
	Government	France	Amarilla	None	2750	260	350	962500	0	962500	715000	247500	41671	Profit	

## cleaned\_data 14 ×

## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
✓	1 22:22:49	select * from cleaned_data LIMIT 0, 1000	699 row(s) returned	0.016 sec / 0.000 sec
✓	2 22:24:52	select distinct country from cleaned_data LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
✓	3 22:26:39	select sum(units sold) as 'Total_Units_Sold' from cleaned_data...	1 row(s) returned	0.016 sec / 0.000 sec
✓	4 22:28:09	select distinct product from cleaned_data LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec
✓	5 22:29:23	select * from cleaned_data order by sales desc limit 10	10 row(s) returned	0.000 sec / 0.000 sec

## Object Info Session

Query Completed



Read Only





## Navigator

## SCHEMAS

Filter objects
attrition
capstone
Tables
cleaned_data
Columns
Segment
Country
Product
Discount Band
Units Sold
Manufacturing Price
Sale Price
Gross Sales
Discounts
Sales

## Administration

## Schemas

## Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:  
Discount Band text

## Attrition

## Health\_Care

## SQL File 4\*



Limit to 1000 rows



```
34
35
36
37
38      #7.Calculate total sales per country.
39  •   select country,sum(sales) as 'Total_Sales'
40   from cleaned_data
41   group by Country
42   order by 'Total_Sales' desc;
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

country	Total_Sales
Canada	24887660
Germany	23500948
France	24354182
Mexico	20949357
United States of America	25029834



Result Grid



Form Editor



Field Types



Query Stats

## Result 15 \*



## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
1	22:22:49	select * from cleaned_data LIMIT 0, 1000	699 row(s) returned	0.016 sec / 0.000 sec
2	22:24:52	select distinct country from cleaned_data LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
3	22:26:39	select sum(units sold) as 'Total_Units_Sold' from cleaned_data...	1 row(s) returned	0.016 sec / 0.000 sec
4	22:28:09	select distinct product from cleaned_data LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec
5	22:29:23	select * from cleaned_data order by sales desc limit 10	10 row(s) returned	0.000 sec / 0.000 sec
6	22:30:13	select country,sum(sales) as 'Total_Sales' from cleaned_data gr...	5 row(s) returned	0.000 sec / 0.000 sec

## Object Info Session

Query Completed

MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help

Navigator

SCHEMAS

Filter objects

attrition

capstone

Tables

cleaned\_data

Columns

Segment

Country

Product

Discount Band

Units Sold

Manufacturing Price

Sale Price

Gross Sales

Discounts

Sales

Administration Schemas

Information

Column: **Discount Band**

Collation: utf8mb4\_0900\_ai\_ci

Definition:

Discount Band text

Attrition Health\_Care SQL File 4\* ×

44

45 #8.Find the average units sold per segment.

46 • select segment,round(avg(`units sold`),0) as Avg\_Units\_Sold

47 from cleaned\_data

48 group by Segment

49 order by Avg\_Units\_Sold;

50

51

52

Result Grid | Filter Rows: Export: Wrap Cell Content: Result Grid Form Editor Field Types Query Stats

segment	Avg_Units_Sold
Small Business	1531
Government	1569
Channel Partners	1625
Enterprise	1686
Midmarket	1722

Result 16 ×

Output

Action Output

#	Time	Action	Message	Duration / Fetch
2	22:24:52	select distinct country from cleaned_data LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
3	22:26:39	select sum('units sold') as 'Total_Units_Sold' from cleaned_da...	1 row(s) returned	0.016 sec / 0.000 sec
4	22:28:09	select distinct product from cleaned_data LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec
5	22:29:23	select * from cleaned_data order by sales desc limit 10	10 row(s) returned	0.000 sec / 0.000 sec
6	22:30:13	select country,sum(sales) as 'Total_Sales' from cleaned_data ...	5 row(s) returned	0.000 sec / 0.000 sec
7	22:31:30	select segment,round(avg('units sold'),0) as Avg_Units_Sold f...	5 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Query Completed



## Navigator

## SCHEMAS

attrition
capstone
Tables
cleaned_data
Columns
Segment
Country
Product
Discount Band
Units Sold
Manufacturing Price
Sale Price
Gross Sales
Discounts
Sales

## Administration Schemas

## Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

## Definition:

Discount Band text

## Attrition Health\_Care SQL File 4\*

```
50
51  #9.Get the sum of gross sales for each product.
52 •  select Product,sum(`Gross Sales`) as 'Total_Gross_Sales'
53  from cleaned_data
54  group by Product;
55
56
57
58
59
```

Result Grid | Filter Rows: Export: Wrap Cell Content:

Product	Total_Gross_Sales
Carretera	14937522
Montana	16549835
Paseo	35607259
Velo	19826769
VTT	21968534
Amarilla	19037282



## Result 17 ×

Read Only

## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
3	22:26:39	select sum('units sold') as 'Total_Units_Sold' from cleaned_da...	1 row(s) returned	0.016 sec / 0.000 sec
4	22:28:09	select distinct product from cleaned_data LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec
5	22:29:23	select * from cleaned_data order by sales desc limit 10	10 row(s) returned	0.000 sec / 0.000 sec
6	22:30:13	select country,sum(sales) as 'Total_Sales'from cleaned_data ...	5 row(s) returned	0.000 sec / 0.000 sec
7	22:31:30	select segment,round(avg('units sold'),0) as Avg_Units_Sold f...	5 row(s) returned	0.000 sec / 0.000 sec
8	22:32:44	select Product,sum('Gross Sales') as 'Total_Gross_Sales'from...	6 row(s) returned	0.000 sec / 0.000 sec

## Object Info Session

Query Completed





Attrition Health\_Care SQL File 4\*

## Schemas

Filter objects

- ▶ attrition
- ▼ capstone
  - Tables
    - cleaned\_data
      - Columns
        - Segment
        - Country
        - Product
        - Discount Band
        - Units Sold
        - Manufacturing Price
        - Sale Price
        - Gross Sales
        - Discounts
        - Sales

Administration

Schemas

## Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:

Discount Band text

```
56
57
58      #10. Show the maximum and minimum sale price of each product.
59 •   select product,max(`sale price`) as max_price,min(`sale price`) as min_price
60     from cleaned_data group by product;
61
62
63
64
65
```

Result Grid | Filter Rows: Export: Wrap Cell Content: □

	product	max_price	min_price
▶	Carretera	350	7
	Montana	350	7
	Paseo	350	7
	Velo	350	7
	VTT	350	7
	Amarilla	350	7



Result Grid



Form Editor



Field Types



Query Stats

Result 18 ×

Read Only

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
4	22:28:09	select distinct product from cleaned_data LIMIT 0, 1000	6 row(s) returned	0.000 sec / 0.000 sec
5	22:29:23	select * from cleaned_data order by sales desc limit 10	10 row(s) returned	0.000 sec / 0.000 sec
6	22:30:13	select country,sum(sales) as 'Total_Sales'from cleaned_data ...	5 row(s) returned	0.000 sec / 0.000 sec
7	22:31:30	select segment,round(avg('units sold'),0) as Avg_Units_Sold f...	5 row(s) returned	0.000 sec / 0.000 sec
8	22:32:44	select Product,sum('Gross Sales') as 'Total_Gross_Sales'from...	6 row(s) returned	0.000 sec / 0.000 sec
9	22:33:35	select product,max(`sale price`) as max_price,min(`sale price` ...	6 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Query Completed



## MySQL Workbench

Local instance MySQL80 ×

File Edit View Query Database Server Tools Scripting Help



Navigator Attrition Health\_Care SQL File 4\* ×

## SCHEMAS

Filter objects	
▶	attrition
▼	capstone
▶	Tables
▼	cleaned_data
▼	Columns
◆	Segment
◆	Country
◆	Product
◆	Discount Band
◆	Units Sold
◆	Manufacturing Price
◆	Sale Price
◆	Gross Sales
◆	Discounts
◆	Sales

Administration

Schemas

Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:

Discount Band text

```
61
62
63      #11.Count how many transactions (rows) each segment has.
64 •  select segment,count(Sales) as Total_Transction
65     from cleaned_data
66     group by segments;
67
68
69
70
```

segment	Total_Transction
Government	300
Midmarket	100
Channel Partners	99
Enterprise	100
Small Business	100



Result Grid

Form Editor

Field Types

Query Stats

Result 19 × Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
5	22:29:23	select * from cleaned_data order by sales desc limit 10	10 row(s) returned	0.000 sec / 0.000 sec
6	22:30:13	select country,sum(sales) as 'Total_Sales'from cleaned_data ...	5 row(s) returned	0.000 sec / 0.000 sec
7	22:31:30	select segment,round(avg('units sold'),0) as Avg_Units_Sold f...	5 row(s) returned	0.000 sec / 0.000 sec
8	22:32:44	select Product,sum('Gross Sales') as 'Total_Gross_Sales'from...	6 row(s) returned	0.000 sec / 0.000 sec
9	22:33:35	select product,max('sale price') as max_price,min('sale price') ...	6 row(s) returned	0.000 sec / 0.000 sec
10	22:34:30	select segment,count(Sales) as Total_Transction from cleane...	5 row(s) returned	0.015 sec / 0.000 sec

Object Info Session

Query Completed



Attrition Health\_Care

SQL File 4\*

Limit to 1000 rows

## Navigator

## SCHEMAS

Filter objects

- ▶ attrition
- ▼ capstone
  - ▶ Tables
    - cleaned\_data
    - Columns
      - Segment
      - Country
      - Product
      - Discount Band
      - Units Sold
      - Manufacturing Price
      - Sale Price
      - Gross Sales
      - Discounts
      - Sales

Administration

Schemas

Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:  
Discount Band text

```

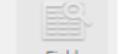
67
68
69  #12. Find all records where sales are greater than 50,000.
70 • select*
71   from cleaned_data
72   where sales>50000;
73
74
75
76

```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	Segment	Country	Product	Discount Band	Units Sold	Manufacturing Price	Sale Price	Gross Sales	Discounts	Sales	COGS	Profit	Date	Profit or Loss
▶	Government	Germany	Carretera	None	1513	3	350	529550	0	529550	4539	525011	41974	Profit
	Enterprise	Canada	Montana	None	2665.5	5	125	333188	0	333188	13327.5	319860	41821	Profit
	Small Business	Mexico	Montana	None	958	5	300	287400	0	287400	4790	282610	41852	Profit
	Government	Germany	Paseo	None	1006	10	350	352100	0	352100	10060	342040	41791	Profit
	Small Business	Mexico	Paseo	None	788	10	300	236400	0	236400	7880	228520	41518	Profit
	Government	Canada	Paseo	None	1725	10	350	603750	0	603750	17250	586500	41579	Profit
	Government	Germany	Paseo	None	1513	10	350	529550	0	529550	15130	514420	41974	Profit
	Enterprise	France	Velo	None	1804	120	125	225500	0	225500	216480	9020	41671	Profit
	Government	Germany	Velo	None	1006	120	350	352100	0	352100	120720	231380	41791	Profit
	Enterprise	United States of America	Velo	None	2821	120	125	352625	0	352625	338520	14105	41852	Profit
	Small Business	Canada	VTT	None	2001	250	300	600300	0	600300	500250	100050	41671	Profit
	Government	France	VTT	None	1527	250	350	534450	0	534450	381750	152700	41518	Profit
	Small Business	France	VTT	None	2151	250	300	645300	0	645300	537750	107550	41883	Profit

cleaned\_data 20



Read Only

Output

Action Output

#	Time	Action	Message	Duration / Fetch
6	22:30:13	select country,sum(sales) as 'Total_Sales' from cleaned_data ...	5 row(s) returned	0.000 sec / 0.000 sec
7	22:31:30	select segment,round(avg('units sold'),0) as Avg_Units_Sold f...	5 row(s) returned	0.000 sec / 0.000 sec
8	22:32:44	select Product,sum('Gross Sales') as 'Total_Gross_Sales' from...	6 row(s) returned	0.000 sec / 0.000 sec
9	22:33:35	select product,max('sale price') as max_price,min('sale price'...	6 row(s) returned	0.000 sec / 0.000 sec
10	22:34:30	select segment,count(Sales) as Total_Transction from cleane...	5 row(s) returned	0.015 sec / 0.000 sec
11	22:35:11	select* from cleaned_data where sales>50000 LIMIT 0, 1000	311 row(s) returned	0.000 sec / 0.000 sec

Object Info

Session

Query Completed



## Navigator

## SCHEMAS

- Filter objects
- attrition
  - capstone**
    - Tables
    - cleaned\_data
      - Columns
      - Segment
      - Country
      - Product
      - Discount Band
      - Units Sold
      - Manufacturing Price
      - Sale Price
      - Gross Sales
      - Discounts
      - Sales

## Administration

## Information

**Column:** Discount Band**Collation:** utf8mb4\_0900\_ai\_ci**Definition:**  
Discount Band text

## Attrition Health\_Care SQL File 4\*

```

80  #14. Show details of transactions where discount is not zero.
81 • select *
82   from cleaned_data
83   where Discounts>0;
84
85
86
87
88

```

Result Grid | Filter Rows: Export: Wrap Cell Content: 

	Segment	Country	Product	Discount Band	Units Sold	Manufacturing Price	Sale Price	Gross Sales	Discounts	Sales	COGS	Profit	Date	Profit or Loss
▶	Government	France	Paseo	Low	3945	10	7	27615	276	27339	39450	-12111.15	41640	Loss
	Midmarket	France	Paseo	Low	2296	10	15	34440	344	34096	22960	11135.6	41671	Profit
	Government	France	Paseo	Low	1030	10	7	7210	72	7138	10300	-3162.1	41760	Loss
	Government	France	Velo	Low	639	120	7	4473	45	4428	76680	-72251.73	41944	Loss
	Government	Canada	VTT	Low	1326	250	7	9282	93	9189	331500	-322310.82	41699	Loss
	Channel Partners	United States of America	Carretera	Low	1858	3	12	22296	223	22073	5574	16499.04	41671	Profit
	Government	Mexico	Carretera	Low	1210	3	350	423500	4235	419265	3630	415635	41699	Profit
	Government	United States of America	Carretera	Low	2529	3	7	17703	177	17526	7587	9938.97	41821	Profit
	Channel Partners	Canada	Carretera	Low	1445	3	12	17340	173	17167	4335	12831.6	41883	Profit
	Enterprise	United States of America	Carretera	Low	330	3	125	41250	413	40838	990	39847.5	41518	Profit
	Channel Partners	France	Carretera	Low	2671	3	12	32052	321	31731	8013	23718.48	41883	Profit
	Channel Partners	Germany	Carretera	Low	766	3	12	9192	92	9100	2298	6802.08	41548	Profit
	Small Business	Mexico	Carretera	Low	494	3	300	148200	1482	146718	1482	145236	41548	Profit

cleaned\_data 22 \*



Form Editor

Field Types

Query Stats

Read Only

## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
✓ 8	22:32:44	select Product,sum('Gross Sales') as 'Total_Gross_Sales' from...	6 row(s) returned	0.000 sec / 0.000 sec
✓ 9	22:33:35	select product,max('sale price') as max_price,min('sale price') ...	6 row(s) returned	0.000 sec / 0.000 sec
✓ 10	22:34:30	select segment,count(Sales) as Total_Transction from cleane...	5 row(s) returned	0.015 sec / 0.000 sec
✓ 11	22:35:11	select* from cleaned_data where sales>50000 LIMIT 0, 1000	311 row(s) returned	0.000 sec / 0.000 sec
✓ 12	22:35:48	select country,sales from cleaned_data where country In('Ger...')	279 row(s) returned	0.000 sec / 0.000 sec
✓ 13	22:36:26	select *from cleaned_data where Discounts>0 LIMIT 0, 1000	645 row(s) returned	0.000 sec / 0.000 sec

## Object Info Session

Query Completed



## Navigator

## SCHEMAS

- Filter objects
- attrition
  - capstone
    - Tables
      - cleaned\_data
        - Columns
          - Segment
          - Country
          - Product
          - Discount Band
          - Units Sold
          - Manufacturing Price
          - Sale Price
          - Gross Sales
          - Discounts
          - Sales

## Administration

## Schemas

## Information

**Column:** Discount Band**Collation:** utf8mb4\_0900\_ai\_ci**Definition:**

Discount Band text

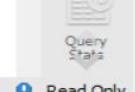
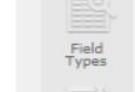
## Attrition Health\_Care SQL File 4\*

```
86  #15. List all products sold in the "Government" segment.  
87  • select Product  
88  from cleaned_data  
89  where Segment='Government';  
90  
91  
92  
93  
94  
n.e
```

**Result Grid** | Filter Rows: Export: Wrap Cell Content: 

Product
Carretera
Carretera
Carretera
Montana
Montana
Paseo
Velo
Velo

cleaned\_data 23 x



Read Only

## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
✓ 9	22:33:35	select product,max('sale price') as max_price,min('sale price') ...	6 row(s) returned	0.000 sec / 0.000 sec
✓ 10	22:34:30	select segment,count(Sales) as Total_Transction from cleane...	5 row(s) returned	0.015 sec / 0.000 sec
✓ 11	22:35:11	select * from cleaned_data where sales>50000 LIMIT 0, 1000	311 row(s) returned	0.000 sec / 0.000 sec
✓ 12	22:35:48	select country,sales from cleaned_data where country In(Ger...	279 row(s) returned	0.000 sec / 0.000 sec
✓ 13	22:36:26	select * from cleaned_data where Discounts>0 LIMIT 0, 1000	645 row(s) returned	0.000 sec / 0.000 sec
✓ 14	22:38:42	select Product from cleaned_data where Segment='Governm...	300 row(s) returned	0.016 sec / 0.000 sec

## Object Info Session

Query Completed



## Navigator

## SCHEMAS

Filter objects

- ▶ attrition
- ▼ capstone
  - Tables
    - cleaned\_data
      - Columns
        - ◆ Segment
        - ◆ Country
        - ◆ Product
        - ◆ Discount Band
        - ◆ Units Sold
        - ◆ Manufacturing Price
        - ◆ Sale Price
        - ◆ Gross Sales
        - ◆ Discounts
        - ◆ Sales

## Administration

## Schemas

## Information

Column: **Discount Band**

Collation: utf8mb4\_0900\_ai\_ci

Definition:  
Discount Band text

## Attrition Health\_Care SQL File 4\*

```

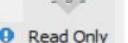
92  #16. Find sales where COGS > 20,000.
93 • select *
94   from cleaned_data
95   where COGS>20000;
96
97
98
99
100
101

```

Result Grid | Filter Rows: Export: Wrap Cell Content:

	Segment	Country	Product	Discount Band	Units Sold	Manufacturing Price	Sale Price	Gross Sales	Discounts	Sales	COGS	Profit	Date	Profit or Loss
▶	Channel Partners	Ca Canada	Paseo	None	2518	10	12	30216	0	30216	25180	5036	41791	Profit
	Midmarket	Mexico	Paseo	None	2472	10	15	37080	0	37080	24720	12360	41883	Profit
	Midmarket	Canada	Paseo	None	2152	10	15	32280	0	32280	21520	10760	41609	Profit
	Government	Mexico	Velo	None	1493	120	7	10451	0	10451	179160	-168709	41640	Loss
	Enterprise	France	Velo	None	1804	120	125	225500	0	225500	216480	9020	41671	Profit
	Channel Partners	Germany	Velo	None	2161	120	12	25932	0	25932	259320	-233388	41699	Loss
	Government	Germany	Velo	None	1006	120	350	352100	0	352100	120720	231380	41791	Profit
	Channel Partners	Germany	Velo	None	1545	120	12	18540	0	18540	185400	-166860	41791	Loss
	Enterprise	United States of America	Velo	None	2821	120	125	352625	0	352625	338520	14105	41852	Profit
	Enterprise	Canada	Velo	None	345	120	125	43125	0	43125	41400	1725	41548	Profit
	Small Business	Canada	VTT	None	2001	250	300	600300	0	600300	500250	100050	41671	Profit
	Channel Partners	Germany	VTT	None	2838	250	12	34056	0	34056	709500	-675444	41730	Loss
	Midmarket	France	VTT	None	2178	250	15	32670	0	32670	544500	-511830	41791	Loss

cleaned\_data 24 ×



## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
✓ 10	22:34:30	select segment,count(Sales) as Total_Transction from cleane...	5 row(s) returned	0.015 sec / 0.000 sec
✓ 11	22:35:11	select* from cleaned_data where sales>50000 LIMIT 0, 1000	311 row(s) returned	0.000 sec / 0.000 sec
✓ 12	22:35:48	select country,sales from cleaned_data where country In('Ger...	279 row(s) returned	0.000 sec / 0.000 sec
✓ 13	22:36:26	select *from cleaned_data where Discounts>0 LIMIT 0, 1000	645 row(s) returned	0.000 sec / 0.000 sec
✓ 14	22:38:42	select Product from cleaned_data where Segment='Governm...	300 row(s) returned	0.016 sec / 0.000 sec
✓ 15	22:39:35	select *from cleaned_data where COGS>20000 LIMIT 0, 1000	384 row(s) returned	0.016 sec / 0.000 sec

## Object Info Session

Query Completed



## Navigator

## SCHEMAS

Filter objects
attrition
capstone
Tables
cleaned_data
Columns
Segment
Country
Product
Discount Band
Units Sold
Manufacturing Price
Sale Price
Gross Sales
Discounts
Sales

## Administration

## Schemas

## Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:  
Discount Band text

## Attrition Health\_Care SQL File 4\*

```
98 •  select country,round(sum(profit),0) as Total_Profit
99   from cleaned_data
100  group by Country
101  order by Total_Profit desc;
102
103
104
105
106
107
```

country	Total_Profit
Germany	3264015
Mexico	2976080
Canada	2035760
United States of America	1961259
France	1825989

## Result Grid

## Form Editor

## Field Types

## Query Stats

## Result 25 ×

Read Only

## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
✓ 11	22:35:11	select * from cleaned_data where sales>50000 LIMIT 0, 1000	311 row(s) returned	0.000 sec / 0.000 sec
✓ 12	22:35:48	select country,sales from cleaned_data where country In(Ger...	279 row(s) returned	0.000 sec / 0.000 sec
✓ 13	22:36:26	select *from cleaned_data where Discounts>0 LIMIT 0, 1000	645 row(s) returned	0.000 sec / 0.000 sec
✓ 14	22:38:42	select Product from cleaned_data where Segment='Governm...	300 row(s) returned	0.016 sec / 0.000 sec
✓ 15	22:39:35	select *from cleaned_data where COGS>20000 LIMIT 0, 1000	384 row(s) returned	0.016 sec / 0.000 sec
✓ 16	22:40:22	select country,round(sum(profit),0) as Total_Profit from cleane...	5 row(s) returned	0.015 sec / 0.000 sec

## Object Info Session

Query Completed



## Navigator

## SCHEMAS

Filter objects

- ▶ attrition
- ▼ capstone
  - ▶ Tables
    - ▶ cleaned\_data
      - Columns
        - ◆ Segment
        - ◆ Country
        - ◆ Product
        - ◆ Discount Band
        - ◆ Units Sold
        - ◆ Manufacturing Price
        - ◆ Sale Price
        - ◆ Gross Sales
        - ◆ Discounts
        - ◆ Sales

## Administration

## Schemas

## Information

## Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

## Definition:

Discount Band text

## Attrition Health\_Care SQL File 4\*

Limit to 1000 rows

```
102
103
104      #18. Find the product with the highest total profit.
105 •  select product,sum(profit) as max_profit
106      from cleaned_data
107      group by Product
108      order by max_profit desc
109      limit 1;
110
111
```

Result Grid | Filter Rows:  Export: Wrap Cell Content: Fetch rows:

	product	max_profit
▶	Paseo	29628014.95000001



## Result 26

Read Only

## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
12	22:35:48	select country,sales from cleaned_data where country In(Ger...	279 row(s) returned	0.000 sec / 0.000 sec
13	22:36:26	select *from cleaned_data where Discounts>0 LIMIT 0, 1000	645 row(s) returned	0.000 sec / 0.000 sec
14	22:38:42	select Product from cleaned_data where Segment='Governm...	300 row(s) returned	0.016 sec / 0.000 sec
15	22:39:35	select *from cleaned_data where COGS>20000 LIMIT 0, 1000	384 row(s) returned	0.016 sec / 0.000 sec
16	22:40:22	select country,round(sum(profit),0) as Total_Profit from cleane...	5 row(s) returned	0.015 sec / 0.000 sec
17	22:41:01	select product,sum(profit) as max_profit from cleaned_data gr...	1 row(s) returned	0.000 sec / 0.000 sec

## Object Info Session

Query Completed



## Navigator

## SCHEMAS

Filter objects	
▶	attrition
▼	capstone
▶	Tables
▼	cleaned_data
▼	Columns
◆	Segment
◆	Country
◆	Product
◆	Discount Band
◆	Units Sold
◆	Manufacturing Price
◆	Sale Price
◆	Gross Sales
◆	Discounts
◆	Sales

## Administration

## Schemas

## Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:  
Discount Band text

## Attrition Health\_Care SQL File 4\*

```
111
112      #19. Show average sales per product in each segment.
113 •   select segment,product,avg(sales) as avg_sales
114     from cleaned_data
115   group by Segment,product;
116
117
118
119
120
```

segment	product	avg_sales
Government	Carretera	168915.2222
Midmarket	Carretera	28108.7500
Midmarket	Montana	24186.5833
Channel Partners	Montana	21820.3333
Government	Montana	132117.6190
Enterprise	Montana	217903.7500
Small Business	Montana	444995.9333
Government	Paseo	169116.3182
Midmarket	Paseo	25214.6944
Channel Partners	Paseo	18004.4800
Small Business	Paseo	442261.9231
Government	Velo	169857.0652
Enterprise	Velo	170535.2381
Channel Partners	Velo	13066.0714

Result 27 ×



Result Grid



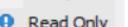
Form Editor



Field Types



Query Stats



Read Only

## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
✓	13 22:36:26	select * from cleaned_data where Discounts>0 LIMIT 0, 1000	645 row(s) returned	0.000 sec / 0.000 sec
✓	14 22:38:42	select Product from cleaned_data where Segment='Governm...	300 row(s) returned	0.016 sec / 0.000 sec
✓	15 22:39:35	select * from cleaned_data where COGS>20000 LIMIT 0, 1000	384 row(s) returned	0.016 sec / 0.000 sec
✓	16 22:40:22	select country,sum(profit),0 as Total_Profit from cleane...	5 row(s) returned	0.015 sec / 0.000 sec
✓	17 22:41:01	select product,sum(profit) as max_profit from cleaned_da...	1 row(s) returned	0.000 sec / 0.000 sec
✓	18 22:42:56	select segment,product,avg(sales) as avg_sales from cleane...	30 row(s) returned	0.016 sec / 0.000 sec

## Object Info Session

Query Completed



## Navigator

## SCHEMAS

Filter objects

- ▶ attrition
- ▼ capstone
  - ▶ Tables
    - cleaned\_data
      - ▶ Columns
        - ◆ Segment
        - ◆ Country
        - ◆ Product
        - ◆ Discount Band
        - ◆ Units Sold
        - ◆ Manufacturing Price
        - ◆ Sale Price
        - ◆ Gross Sales
        - ◆ Discounts
        - ◆ Sales

## Administration

## Schemas

## Information

Column: **Discount Band**

Collation: utf8mb4\_0900\_ai\_ci

Definition:

Discount Band text

## Attrition Health\_Care

## SQL File 4\* ×

```
118 •  SELECT Country,SUM(`Gross Sales`) AS Total_Gross_Sales,  
119    RANK() OVER (ORDER BY SUM(`Gross Sales`) DESC) AS Sales_Rank  
120   FROM Cleaned_Data  
121   GROUP BY Country  
122   ORDER BY Sales_Rank;  
123  
124  
125  
126  
127
```

Result Grid | Filter Rows: Export: Wrap Cell Content: □

	Country	Total_Gross_Sales	Sales_Rank
▶	United States of America	27269360	1
	Canada	26932165	2
	France	26081677	3
	Germany	24917064	4
	Mexico	22726935	5



Result Grid



## Result 28 ×

Read Only

## Output

## Action Output

#	Time	Action	Message	Duration / Fetch
✓	14 22:38:42	select Product from cleaned_data where Segment='Governm...	300 row(s) returned	0.016 sec / 0.000 sec
✓	15 22:39:35	select * from cleaned_data where COGS>20000 LIMIT 0, 1000	384 row(s) returned	0.016 sec / 0.000 sec
✓	16 22:40:22	select country,round(sum(profit),0) as Total_Profit from cleane...	5 row(s) returned	0.015 sec / 0.000 sec
✓	17 22:41:01	select product,sum(profit) as max_profit from cleaned_data gr...	1 row(s) returned	0.000 sec / 0.000 sec
✓	18 22:42:56	select segment,product,avg(sales) as avg_sales from cleaned_d...	30 row(s) returned	0.016 sec / 0.000 sec
✓	19 22:43:53	SELECT Country,SUM(`Gross Sales`) AS Total_Gross_Sales, ...	5 row(s) returned	0.000 sec / 0.000 sec

## Object Info Session

Query Completed



Attrition Health\_Care SQL File 4\* ×

```
142 #21. Find the top 3 countries with the highest units sold.  
143 • select country,sum(`units sold`) as Total_units_sold  
144 from cleaned_data  
145 group by country  
146 order by Total_units_Sold desc  
147 limit 3;  
148  
149  
150  
151
```

Result Grid | Filter Rows: Export: Wrap Cell Content: Fetch rows:

	country	Total_units_sold
▶	Canada	247428.5
▶	France	240931
▶	United States of America	232627.5



Administration

Schemas

Information

Column: Discount Band

Collation: utf8mb4\_0900\_ai\_ci

Definition:

Discount Band text



Read Only

Result 29 ×

Output:

Action Output

#	Time	Action	Message	Duration / Fetch
✓ 15	22:39:35	select *from cleaned_data where COGS>20000 LIMIT 0, 1000	384 row(s) returned	0.016 sec / 0.000 sec
✓ 16	22:40:22	select country,round(sum(profit),0) as Total_Profit from cleane...	5 row(s) returned	0.015 sec / 0.000 sec
✓ 17	22:41:01	select product,sum(profit) as max_profit from cleaned_data gr...	1 row(s) returned	0.000 sec / 0.000 sec
✓ 18	22:42:56	select segment,product,avg(sales) as avg_sales from cleaned_d...	30 row(s) returned	0.016 sec / 0.000 sec
✓ 19	22:43:53	SELECT Country,SUM('Gross Sales') AS Total_Gross_Sales, ...	5 row(s) returned	0.000 sec / 0.000 sec
✓ 20	22:44:22	select country,sum(`units sold`) as Total_units_sold from clean...	3 row(s) returned	0.000 sec / 0.000 sec

Object Info Session

Query Completed

# IMPORT THE DATA FROM THE SQL DATABASE INTO POWER BI, VERIFY IF THE DATA IS PROPERLY IMPORTED OR NOT.

Untitled - Power Query Editor

Home Transform Add Column View Tools Help

Close & Apply New Source Recent Sources Enter Data Data source settings Manage Parameters Refresh Preview Properties Advanced Editor Choose Columns Remove Columns Keep Rows Remove Rows Split Column Group By Data Type: Text Use First Row as Headers Merge Queries Append Queries Combine Files Combine Text Analytics Vision Azure Machine Learning AI Insights

Close New Query Close & Apply Data source settings Manage Parameters Refresh Preview Properties Advanced Editor Choose Columns Remove Columns Keep Rows Remove Rows Split Column Group By Data Type: Text Use First Row as Headers Merge Queries Append Queries Combine Files Combine Text Analytics Vision Azure Machine Learning AI Insights

Queries [1] Cleaned\_Data

	A <sub>C</sub> Segment	A <sub>B</sub> Country	A <sub>B</sub> Product	A <sub>C</sub> Discount Band	1.2 Units Sold	1 <sub>2</sub> Manufacturing Price	1 <sub>2</sub> Sale Price
1	Government	Canada	Carretera	None		1618.5	3
2	Government	Germany	Carretera	None		1321	3
3	Midmarket	France	Carretera	None		2178	3
4	Midmarket	Germany	Carretera	None		888	3
5	Midmarket	Mexico	Carretera	None		2470	3
6	Government	Germany	Carretera	None		1513	3
7	Midmarket	Germany	Montana	None		921	5
8	Channel Partners	Canada	Montana	None		2518	5
9	Government	France	Montana	None		1899	5
10	Channel Partners	Germany	Montana	None		1545	5
11	Midmarket	Mexico	Montana	None		2470	5
12	Enterprise	Canada	Montana	None		2665.5	5
13	Small Business	Mexico	Montana	None		958	5
14	Government	Germany	Montana	None		2146	5
15	Enterprise	Canada	Montana	None		345	5
16	Midmarket	United States of America	Montana	None		615	5
17	Government	Canada	Paseo	None		292	10
18	Midmarket	Mexico	Paseo	None		974	10
19	Channel Partners	Canada	Paseo	None		2518	10
20	Government	Germany	Paseo	None		1006	10
21	Channel Partners	Germany	Paseo	None		367	10
22	Government	Mexico	Paseo	None		883	10
23	Midmarket	France	Paseo	None		549	10
24	Small Business	Mexico	Paseo	None		788	10
25	Midmarket	Mexico	Paseo	None		2472	10
26	Government	United States of America	Paseo	None		1143	10
27	Government	Canada	Paseo	None		1725	10
28	Channel Partners	United States of America	Paseo	None		912	10
29	Midmarket	Canada	Paseo	None		2152	10

14 COLUMNS, 700 ROWS Column profiling based on top 1000 rows

PREVIEW DOWNLOADED AT 08:49 PM

Query Settings

Properties Name Cleaned\_Data All Properties

Applied Steps Source Navigation Promoted Headers Changed Type



# PERFORM DATA CLEANING AND OTHER POSSIBLE OPERATIONS ON DATA USING QUERY EDITOR, CREATE MEASURES IF NECESSARY AND USE THEM TO VISUALIZE THE DATA AND MAKE AN INTERACTIVE VISUALIZATION.

Capstone\_Dashboard • Last saved: Yesterday at 11:46 PM

File Home Help Table tools

Name: Cleaned\_Data

Manage relationships New Quick measure New measure column New table Mark as date table Calculations Calendars

Segment Country Product Discount Band Units Sold Manufacturing Price Sale Price Gross Sales Discounts Sales COGS Profit Date Profit or Loss

Government	Germany	Carretera	None	1513	3	350	529550	0	529550	4539	525011	Monday, 1 December, 2014	Profit
Government	Germany	Paseo	None	1006	10	350	352100	0	352100	10060	342040	Sunday, 1 June, 2014	Profit
Government	Canada	Paseo	None	1725	10	350	603750	0	603750	17250	586500	Friday, 1 November, 2013	Profit
Government	Germany	Paseo	None	1513	10	350	529550	0	529550	15130	514420	Monday, 1 December, 2014	Profit
Government	Germany	Velo	None	1006	120	350	352100	0	352100	120720	231380	Sunday, 1 June, 2014	Profit
Government	France	VTT	None	1527	250	350	534450	0	534450	381750	152700	Sunday, 1 September, 2013	Profit
Government	France	Amarilla	None	2750	260	350	962500	0	962500	715000	247500	Saturday, 1 February, 2014	Profit
Government	Mexico	Carretera	Low	1210	3	350	423500	4235	419265	3630	415635	Saturday, 1 March, 2014	Profit
Government	Mexico	Carretera	Low	1397	3	350	488950	4889.5	484060.5	4191	479869.5	Wednesday, 1 October, 2014	Profit
Government	France	Carretera	Low	2155	3	350	754250	7542.5	746707.5	6465	740242.5	Monday, 1 December, 2014	Profit
Government	France	Paseo	Low	2155	10	350	754250	7542.5	746707.5	21550	725157.5	Monday, 1 December, 2014	Profit
Government	Canada	VTT	Low	943.5	250	350	330225	33022.5	326922.75	235875	91047.75	Tuesday, 1 April, 2014	Profit
Government	Mexico	VTT	Low	1397	250	350	488950	4889.5	484060.5	349250	34810.5	Wednesday, 1 October, 2014	Profit
Government	Canada	Carretera	Low	2852	3	350	998200	19964	978236	8556	969680	Monday, 1 December, 2014	Profit
Government	Canada	Paseo	Low	2852	10	350	998200	19964	978236	28520	949716	Monday, 1 December, 2014	Profit
Government	Germany	Velo	Low	2966	120	350	1038100	20762	1017338	355920	661418	Tuesday, 1 October, 2013	Profit
Government	Germany	Velo	Low	2877	120	350	1006950	20139	986811	345240	641571	Wednesday, 1 October, 2014	Profit
Government	Germany	VTT	Low	2877	250	350	1006950	20139	986811	719250	267561	Wednesday, 1 October, 2014	Profit
Government	United States of America	VTT	Low	266	250	350	93100	1862	91238	66500	24738	Sunday, 1 December, 2013	Profit
Government	Mexico	VTT	Low	1940	250	350	679000	13580	665420	485000	180420	Sunday, 1 December, 2013	Profit
Government	Germany	Amarilla	Low	2966	260	350	1038100	20762	1017338	771160	246178	Tuesday, 1 October, 2013	Profit
Government	Germany	Montana	Low	1797	5	350	628950	18868.5	610081.5	8985	601096.5	Sunday, 1 September, 2013	Profit
Government	Mexico	VTT	Low	1642	250	350	574700	17241	557459	410500	146959	Friday, 1 August, 2014	Profit
Government	United States of America	Carretera	Low	274	3	350	95900	3836	92064	822	91242	Monday, 1 December, 2014	Profit
Government	United States of America	Paseo	Low	3450	10	350	1207500	48300	1159200	34500	1124700	Tuesday, 1 July, 2014	Profit
Government	United States of America	Paseo	Low	274	10	350	95900	3836	92064	2740	89324	Monday, 1 December, 2014	Profit
Government	France	Velo	Low	2177	120	350	761950	30478	731472	261240	470232	Wednesday, 1 October, 2014	Profit
Government	United States of America	VTT	Low	349	250	350	122150	4886	117264	87250	30014	Sunday, 1 September, 2013	Profit
Government	France	VTT	Low	2177	250	350	761950	30478	731472	544250	187222	Wednesday, 1 October, 2014	Profit
Government	Mexico	Amarilla	Low	1865	260	350	652750	26110	626640	484900	141740	Saturday, 1 February, 2014	Profit
Government	Germany	Amarilla	Low	1907	260	350	667450	26698	640752	495820	144932	Monday, 1 September, 2014	Profit
Government	Canada	Amarilla	Low	1778	260	350	622300	24892	597408	462280	135128	Sunday, 1 December, 2013	Profit

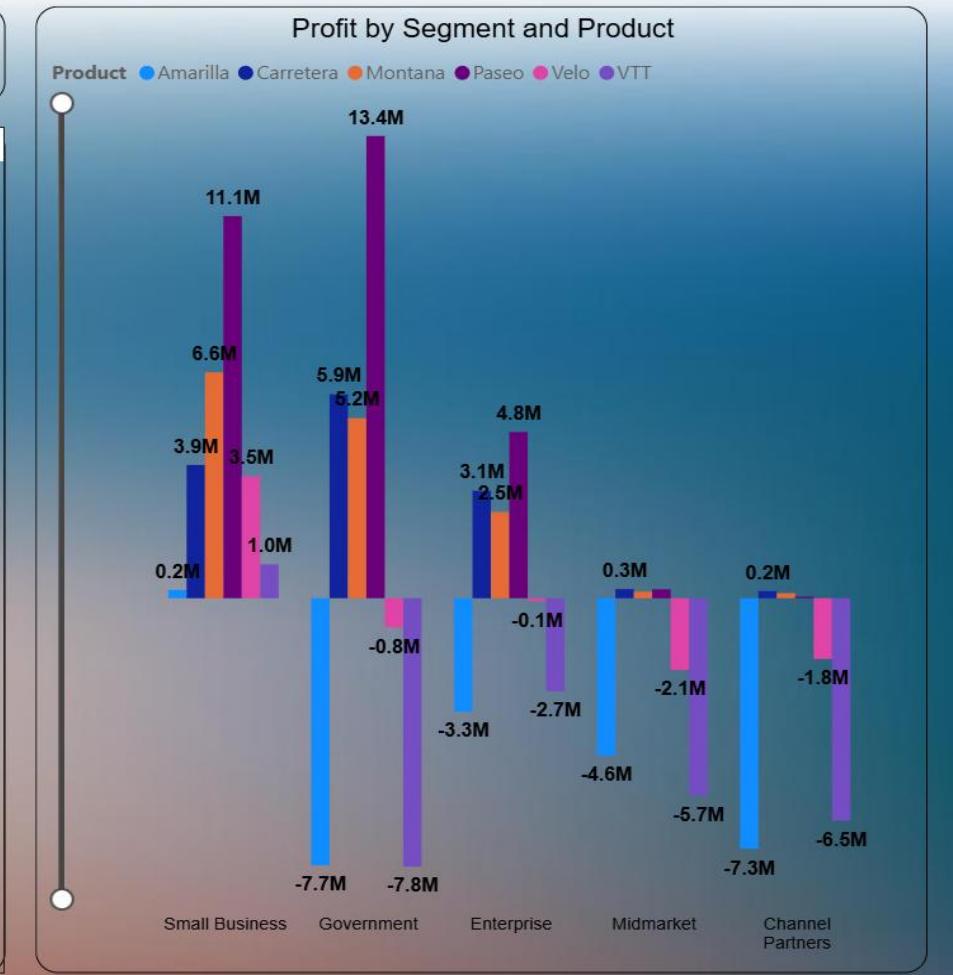
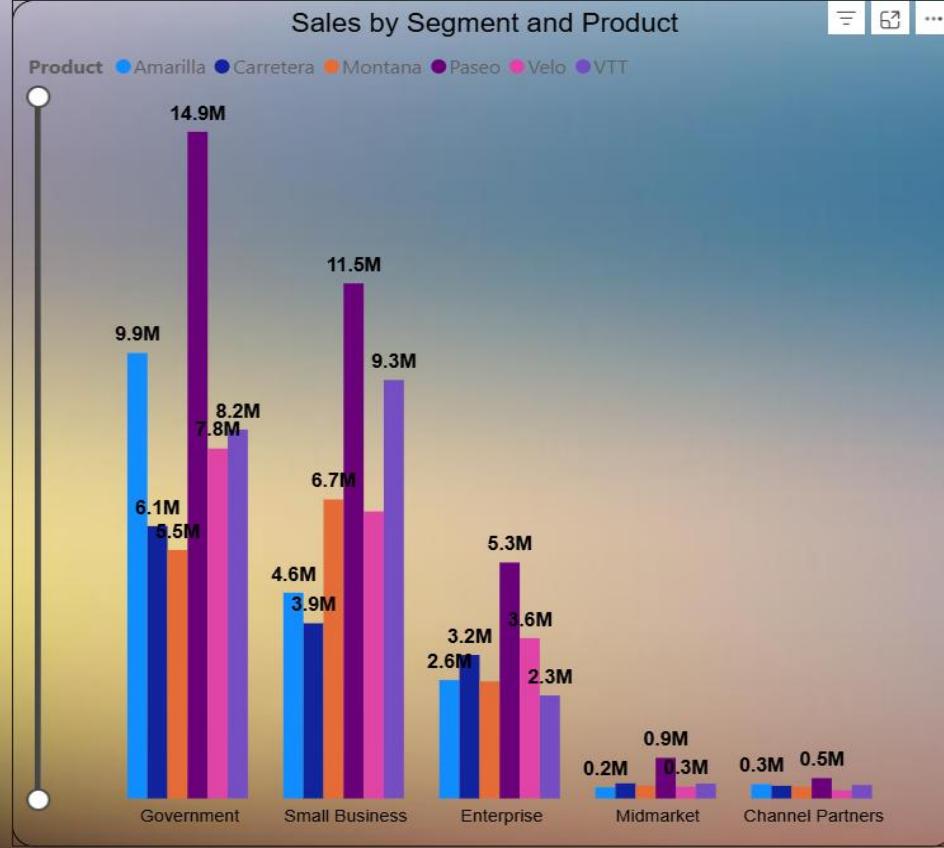
Table: Cleaned\_Data (700 rows)

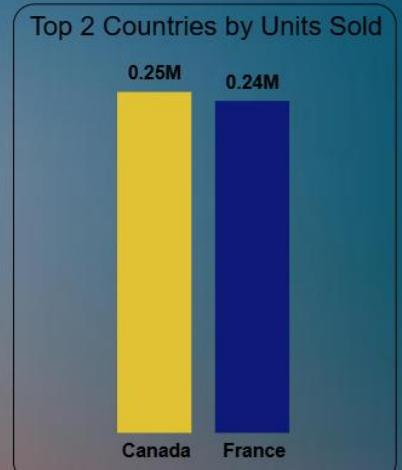
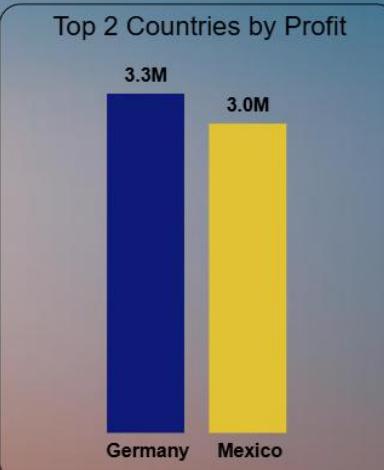
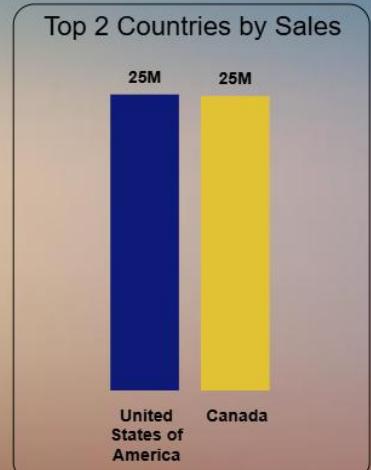
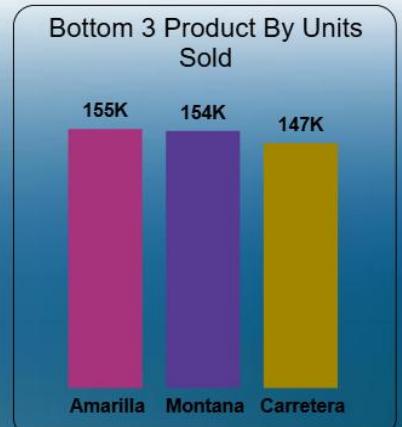
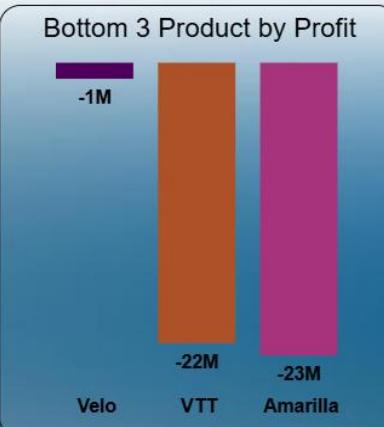
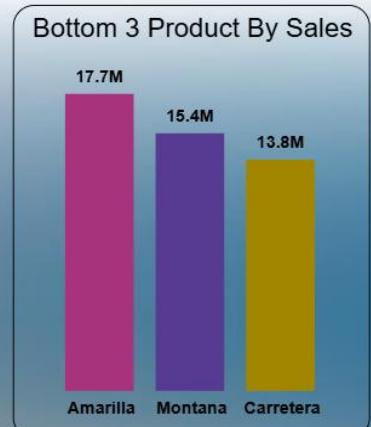
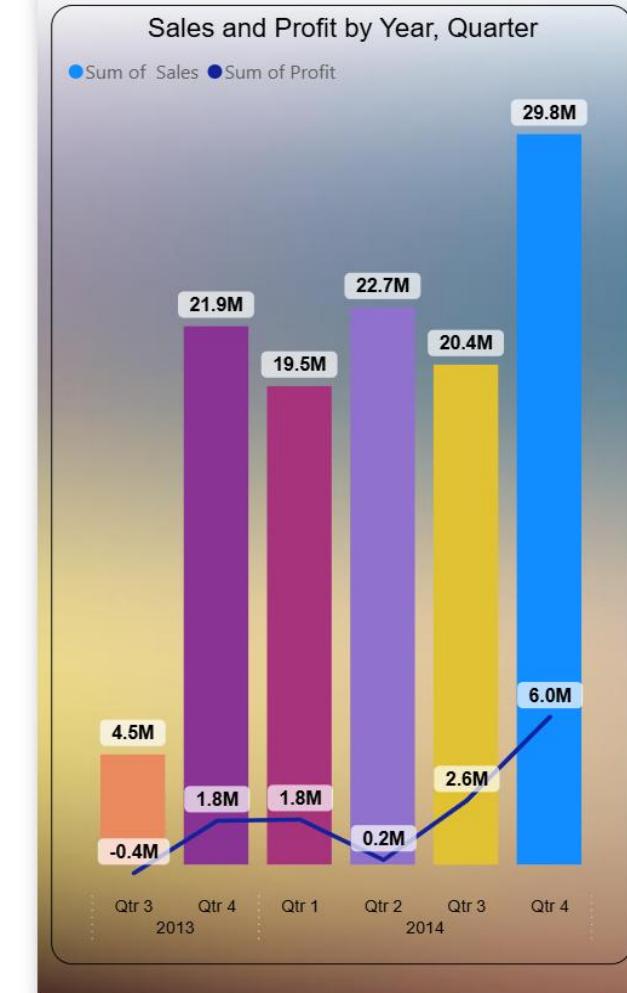


# CREATE A VISUALLY PLEASING DASHBOARD REPORT BY FOLLOWING THE RULES OF MAKING THE DASHBOARD.



## Financial Performance Dashboard





# DERIVE CONCLUSION AND INFERENCES FROM THE DASHBOARD.

- **Executive snapshot**
- **Scale:** 1.13M units → **\$118.73M sales** → **\$12.06M profit** ( $\approx 10.2\%$  margin;  $\approx \$105$  revenue &  $\$10.7$  profit per unit).
- **Momentum:** 2014 vs 2013 — **Sales +249%** (26.4M → 92.3M), **Profit +644%** (1.43M → 10.64M). Margin nearly **doubled** (5.4% → 11.5%).
- **Where money is made:** **Germany (3.3M)** and **Mexico (3.0M)** are the top profit countries, **not** the top revenue ones. Margin pressure likely in USA/Canada.
- **What's hurting:** Two products—**Amarilla (-23M)** and **VTT (-22M)**—erase a massive chunk of profit **despite strong sales**.
- **Growth & seasonality**
- Best quarter: **Q4-2014** with **\$29.8M sales** and **\$6.0M profit**—a clear peak.
- Weakest quarter: **Q3-2013** with a **loss of ~\$0.4M**.
- Watch **Q2-2014**: strong sales (**\$22.7M**) but almost **no profit** ( $\sim \$0.2M$ ) → likely heavy discounting/promo or cost spike.



# DERIVE CONCLUSION AND INFERENCE FROM THE DASHBOARD.

- **Geography**
- **Revenue is balanced** across the top 5: **USA (25.0M), Canada (24.9M), France (24.4M), Germany (23.5M), Mexico (21.0M)**.
- **Profit leaders: Germany and Mexico**; yet **sales leaders** are **USA & Canada**.  
→ NA mix/discounts seem unfavorable vs EU/LatAm.
- **Units sold leaders: Canada (~250K) and France (~240K)** → high volume, but not top profit; margins may be thin.
- **Segment profitability (big lever)**
- **Small Business is the engine: +26M profit**.
- **Government +8M, Enterprise +4M** (healthy).
- **Midmarket (-12M) and Channel Partners (-15M) are deeply loss-making**.  
→ If you simply brought these two to **break-even**, total profit would jump from **~12M to ~39M** (order-of-magnitude impact).



# DERIVE CONCLUSION AND INFERENCES FROM THE DASHBOARD.

- **Segment profitability (big lever)**
- **Small Business** is the engine: +26M profit.
- **Government +8M, Enterprise +4M** (healthy).
- **Midmarket (-12M) and Channel Partners (-15M)** are deeply loss-making.  
→ If you simply brought these two to **break-even**, total profit would jump from ~12M to ~39M (order-of-magnitude impact).
- **Product performance & discounting**
- **Top seller: Paseo \$33M** ( $\approx 28\%$  of revenue). Then **VTT \$21M, Velo/Amarilla \$18M** each, **Montana \$15M, Carretera \$14M**.
- **But:** Bottom by profit are **Amarilla (-23M), VTT (-22M), Velo (-1M)** → high-selling SKUs destroying value.
- **Discount signal:** Highest average discounts are **Velo (14.5K), Amarilla (13.7K), VTT (13.4K)**; the lowest is **Carretera (12.1K)**. The three **heaviest-discounted products are the least profitable**, implying over-discounting or wrong pricing/costing.
- **Within segments**, product profitability **swings wildly** (e.g., a product shows +11.1M in one segment but large negatives in others).  
→ Product x may be great for **Government/Small Business** but toxic in **Midmarket/Channel Partners**. Optimize product-segment fit.



# DERIVE CONCLUSION AND INFERENCES FROM THE DASHBOARD.

- **Unit economics & mix**
- **2014 accounts for ~76% of units (861K/1.13M).** Growth is volume-led **and** margin-accretive — a good sign.
- **Bottom-3 by units: Amarilla (155K), Montana (154K), Carretera (147K)**—but “low units” doesn’t equal “bad”: **Carretera likely earns better margins** (lowest discount, not in the loss list).
- **Likely root causes (what the visuals suggest)**
- **Over-discounting on specific SKUs** (Amarilla, VTT, Velo), especially in **Midmarket** and **Channel Partners**.
- **Country mix issues**—**USA/Canada** drive volume but carry **lower margins** vs **Germany/Mexico** (pricing, freight, or product mix).
- **Segment misfit**—selling the wrong SKUs in **Midmarket/Channel Partners**

