Coffee Data Analysis Report

OBJECTIVE

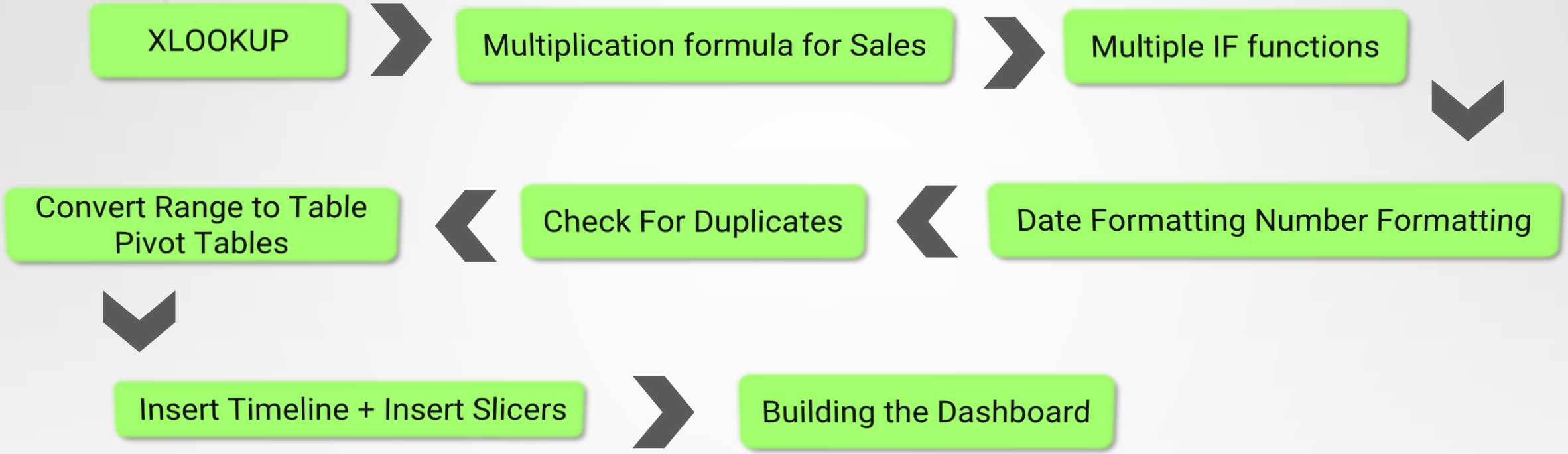
- The objective of the Coffee Sales project is to develop a comprehensive dashboard that provides real-time insights and analysis of our coffee product sales performance.
- This dashboard aims to empower our sales and marketing teams with actionable data-driven information to make informed decisions, optimize sales strategies, identify trends, and capitalize on opportunities within the coffee market. By aggregating and presenting key sales metrics, customer preferences, and market trends in an easily digestible format, this dashboard intends to enhance our ability to monitor, evaluate, and enhance our coffee sales efforts effectively.

DATASET INFO

- The Coffee data analysis dataset includes a range of attributes. Some of the key attributes included in the dataset are:
- • Order ID
- • Order Date
- • Customer ID
- • Product ID
- • Quantity
- • Customer Name

PROCESS

In summary these are the steps I have done in MICROSOFT EXCEL:



ARCHITECTURE

Dataset

Exploratory Data Analysis (EDA)

Data Preprocessing

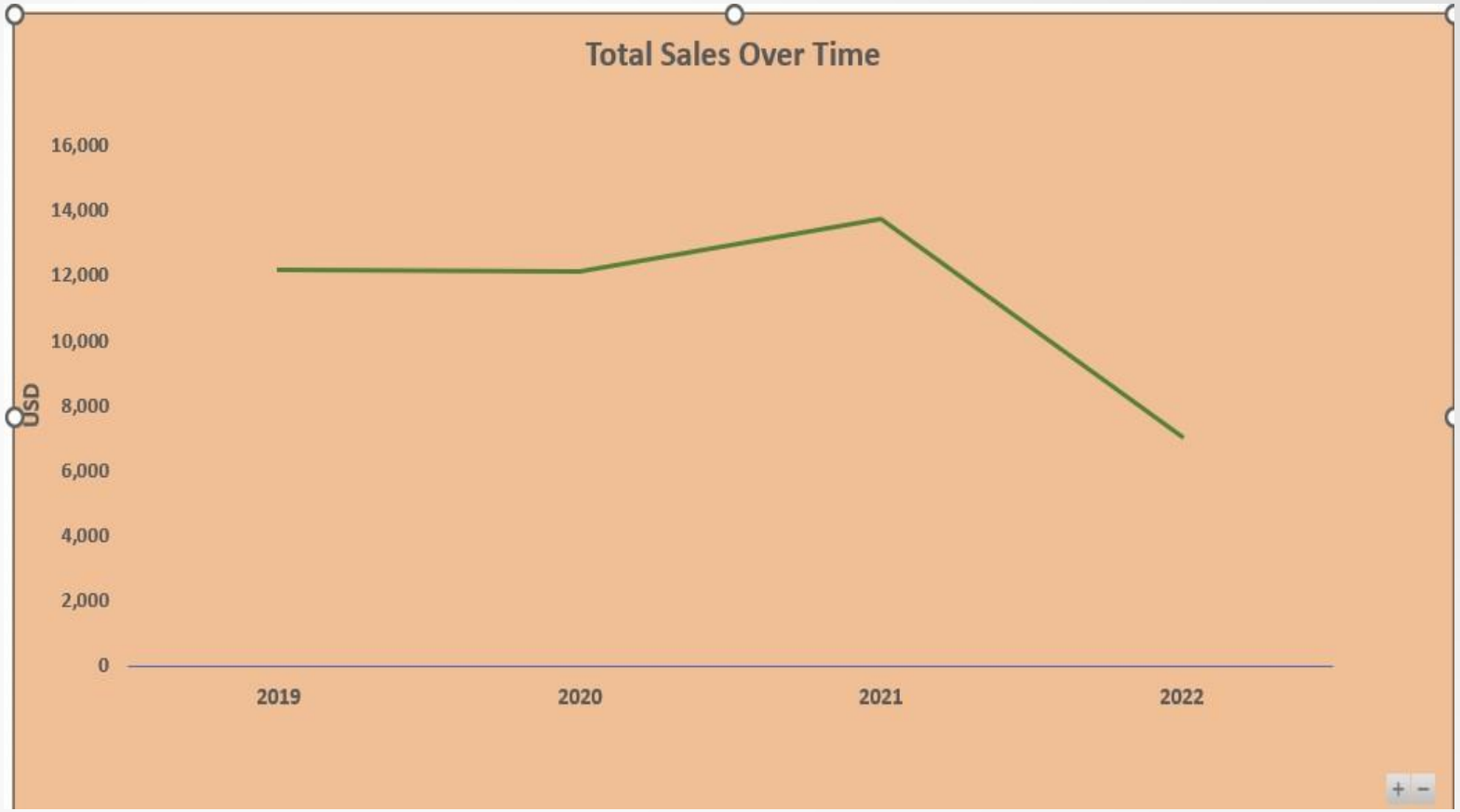
Dashboard

APPROACH

- THE TOOL USED IN THIS PROJECT IS MICROSOFT EXCEL.
- THE DATA WAS DOWNLOADED VIA THE LINK PROVIDED.
- AFTER UPLOADING THE DATA IN MICROSOFT EXCEL, THE COLUMNS AND DETAILS ABOUT THE DATA WAS EXPLORED.
- ALSO CREATED SLICER AND TIMELINE WITHIN THE DASHBOARD.

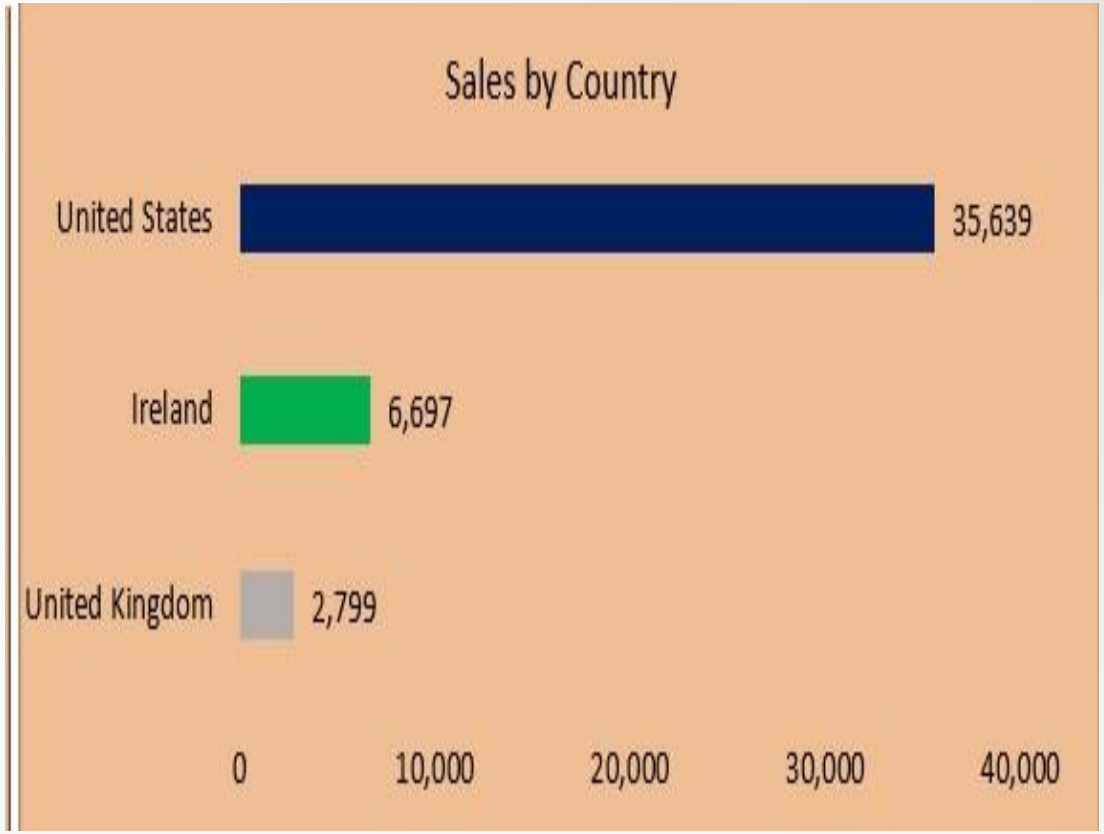
KEY FINDING 1 :

- This graph shows that sales increased by 3.7% between 2020 and 2021.The sales have decreased 14.9% over time after 2021.



KEY FINDING 2 :

According to this graph, out of these three nations, the United States has the greatest sales with 35,639, followed by Ireland with 6,697, and the United Kingdom has the lowest sales with 2,799.



KEY FINDINGS 3 : QUARTER BY QUARTER FROM 2019 TO 2022

This graph shows that :-

- The total sales for the year 2019, the second quarter had the highest sale (28.42%) and the first quarter had the lowest sale (23.28%).
- The total sales for the year 2020, the fourth quarter had the highest sale (27.86%) and the third quarter had the lowest sale (19.17%).
- The total sales for the year 2021, the fourth quarter had the highest sale (30.25%) and the second quarter had the lowest sale (20.18%).
- The total sales for the year 2022, the first quarter had the highest sale (42.16%) and the third quarter (July, Aug) had the lowest sale (16.29%)

KEY FINDINGS 4 : DIFFERENCES IN SALES FROM QUARTER TO QUARTER AND YEAR TO YEAR

Coffee type Name	2019	2020	2021	2022
Arabica		**14.69%**	**38.24%**	**-50.80%**
Qtr1		39.08%	53.50%	-23.87%
Qtr2		65.50%	46.51%	8.97%
Qtr3		-32.53%	44.12%	-57.64%
Qtr4		12.11%	16.06%	#NULL!
Excelsa		**5.23%**	**-0.34%**	**-51.40%**
Qtr1		-2.34%	13.70%	-39.39%
Qtr2		-13.59%	-64.54%	-35.63%
Qtr3		-2.09%	113.76%	-43.64%
Qtr4		54.74%	31.01%	#NULL!
Liberica		**-22.90%**	**13.58%**	**-33.84%**
Qtr1		-22.53%	-3.29%	44.32%
Qtr2		-34.76%	14.81%	-38.69%
Qtr3		-49.06%	-52.76%	-62.17%
Qtr4		17.08%	100.48%	#NULL!
Robusta		**3.84%**	**0.54%**	**-29.33%**
Qtr1		99.70%	17.32%	42.52%
Qtr2		-26.56%	-22.01%	47.55%
Qtr3		-0.39%	-7.58%	-75.27%
Qtr4		-31.69%	26.36%	#NULL!

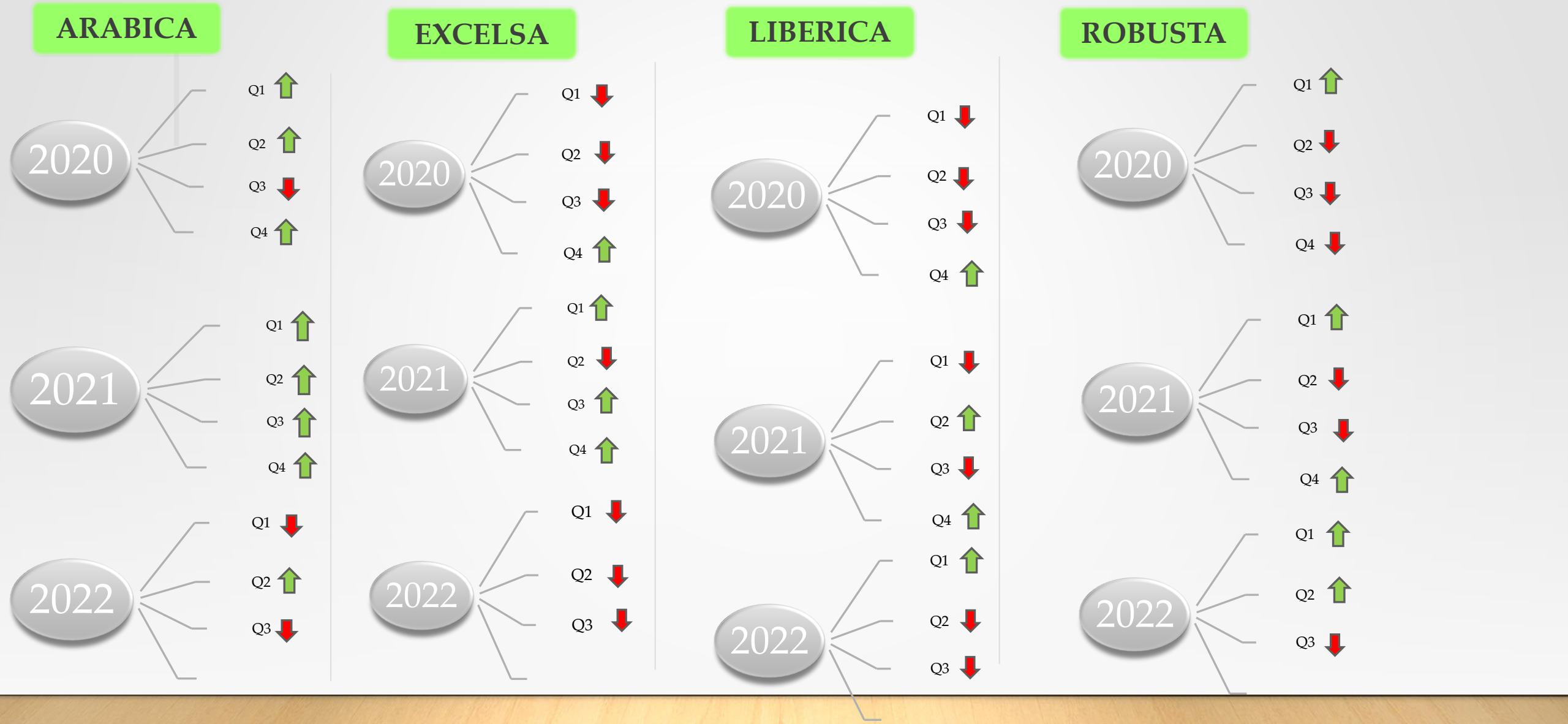
KEY FINDINGS 4 : DIFFERENCES IN SALES FROM QUARTER TO QUARTER AND YEAR TO YEAR

Insights :

Year to year sales For different types of coffee :

- Following 2019, sales of arabica coffee climbed in 2020 by 14.69%, followed by 38.24% in 2021, but they also fell by 50.80% in 2022.
- Following 2019, Excelsa coffee sales increased by 5.23% in 2020, then declined by 0.34% in 2021, followed by a dramatic drop of 51.40% in 2022.
- Following 2019, Liberica coffee sales dip by 22.90% in 2020, then rise by 13.58% in 2021, followed by 33.84% in 2022.
- Following 2019, sales of Robusta coffee climbed in 2020 by 03.84%, followed by 0.54% in 2021, but they also fell by 29.33% in 2022.

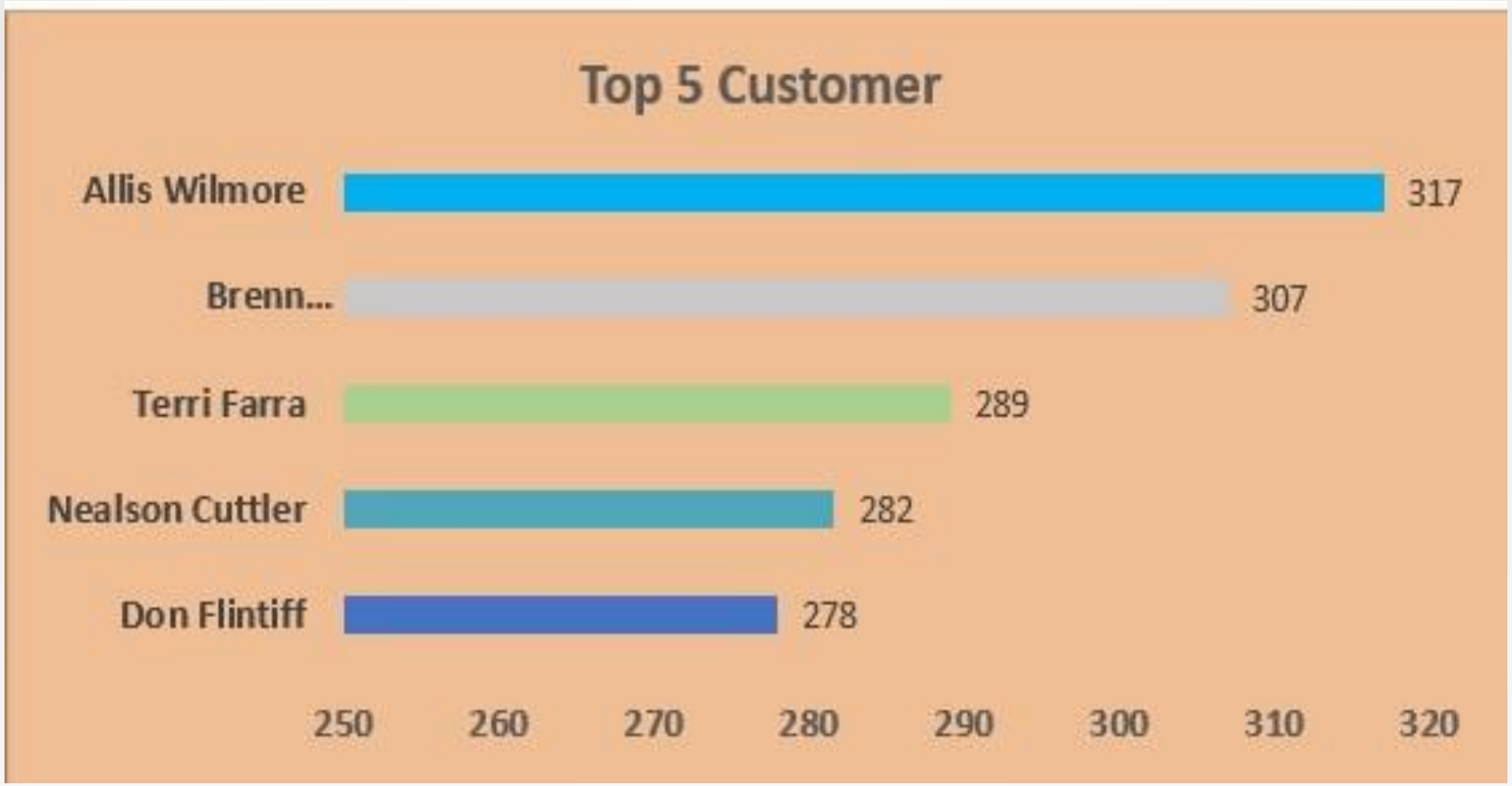
KEY FINDINGS 4 : SALES GROWTH BY QUARTER WISE FOR DIFFERENT TYPES OF COFFEE



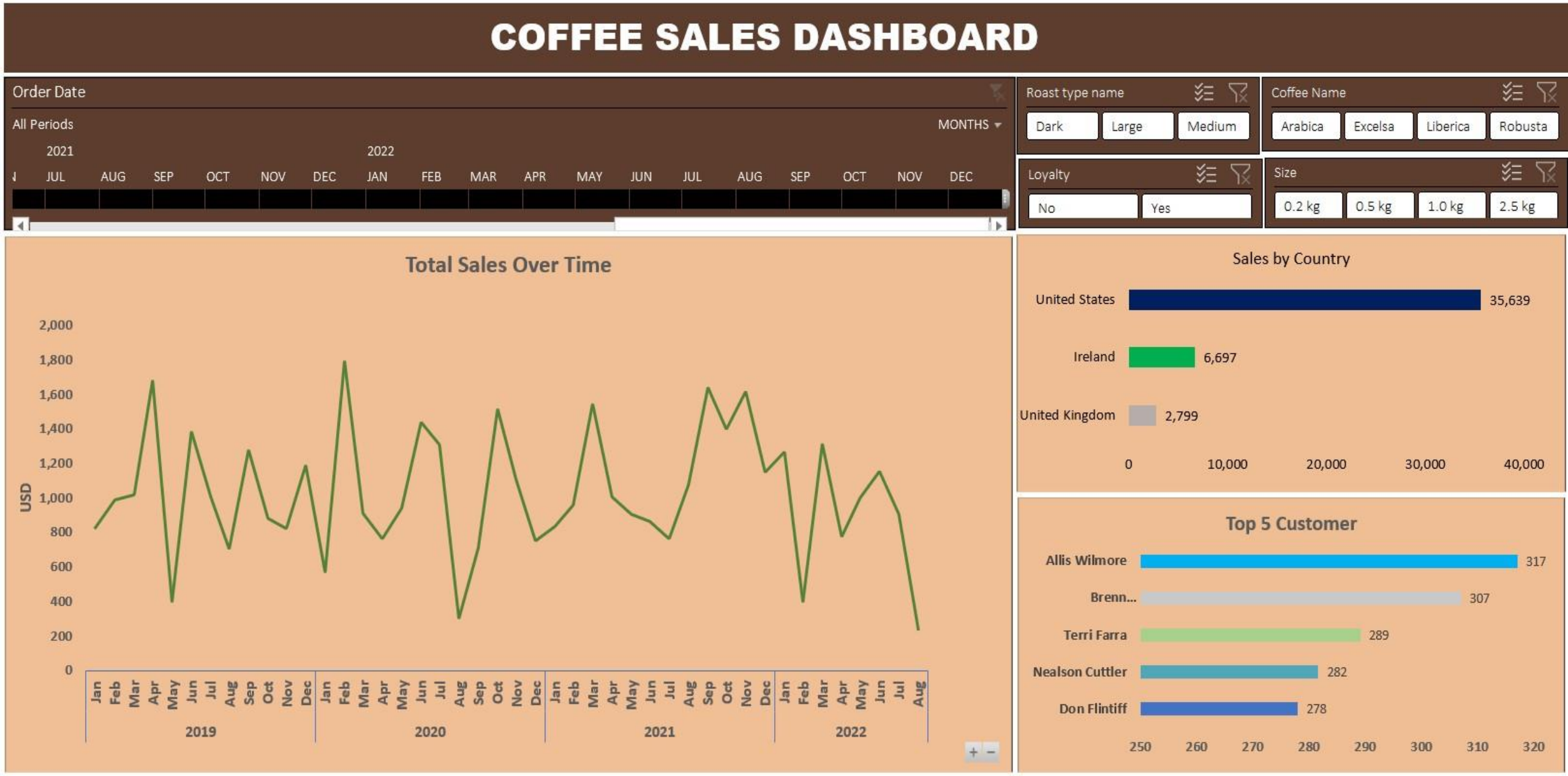
KEY FINDINGS 5 :

Sales by Size(KG) with Roast type name	2019	2020	2021	2022
0.2 kg		**22.31%**	**41.02%**	**-37.21%**
Dark		65.55%	82.56%	-24.63%
Large		32.68%	57.33%	-16.29%
Medium		-15.55%	-1.28%	-64.94%
0.5 kg		**6.88%**	**24.57%**	**-36.74%**
Dark		13.43%	54.50%	-33.81%
Large		14.95%	23.73%	-21.92%
Medium		-4.90%	4.75%	-52.09%
1.0 kg		**-12.91%**	**41.66%**	**-46.96%**
Dark		-36.09%	41.61%	-62.43%
Large		-8.06%	-8.36%	-32.52%
Medium		-0.17%	114.67%	-54.81%
2.5 kg		**0.11%**	**-5.61%**	**-41.89%**
Dark		94.89%	68.73%	-8.66%
Large		-41.55%	-33.65%	-64.74%
Medium		7.87%	-7.82%	-24.44%

KEY FINDING 6 :



DASHBOARD


COFFEE SALES DASHBOARD
Order Date
All Periods
MONTHS
2021
2022
JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Roast type name
Dark
Large
Medium
Coffee Name
Arabica
Excelsa
Liberica
Robusta
Loyalty
No
Yes
Size
0.2 kg
0.5 kg
1.0 kg
2.5 kg
Total Sales Over Time
USD
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
2019
2020
2021
2022
Sales by Country
United States 35,639
Ireland 6,697
United Kingdom 2,799
0 10,000 20,000 30,000 40,000
Top 5 Customer
Allis Wilmore 317
Brenn... 307
Terri Farra 289
Nealson Cuttler 282
Don Flintiff 278
250 260 270 280 290 300 310 320

Q & A

Q1) what is the size of your data ?

- the size of the data in terms of kb 495, with 16000 rows and 16 columns.

Q2) what are the data type ?

- the data was the combination of numerical and categorical values.

Q3) where did you get the data ?

- https://bit.ly/3rYyj1o - Data with Mo

Q4) what techniques were you using for data pre-processing?

- Removing unwanted attribute
- cleaning data and imputing if null values are present.
- Converting categorical data into numeric values.
- Scaling the data.