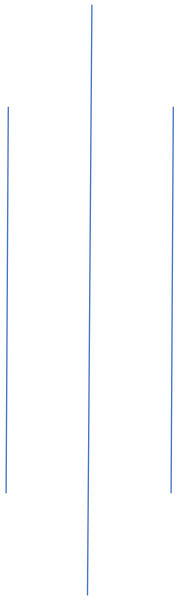
REPORT ON SALES DATA



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TASK 2:

SCRUB:

1. Show the complete process of uploading the file to the sql server.

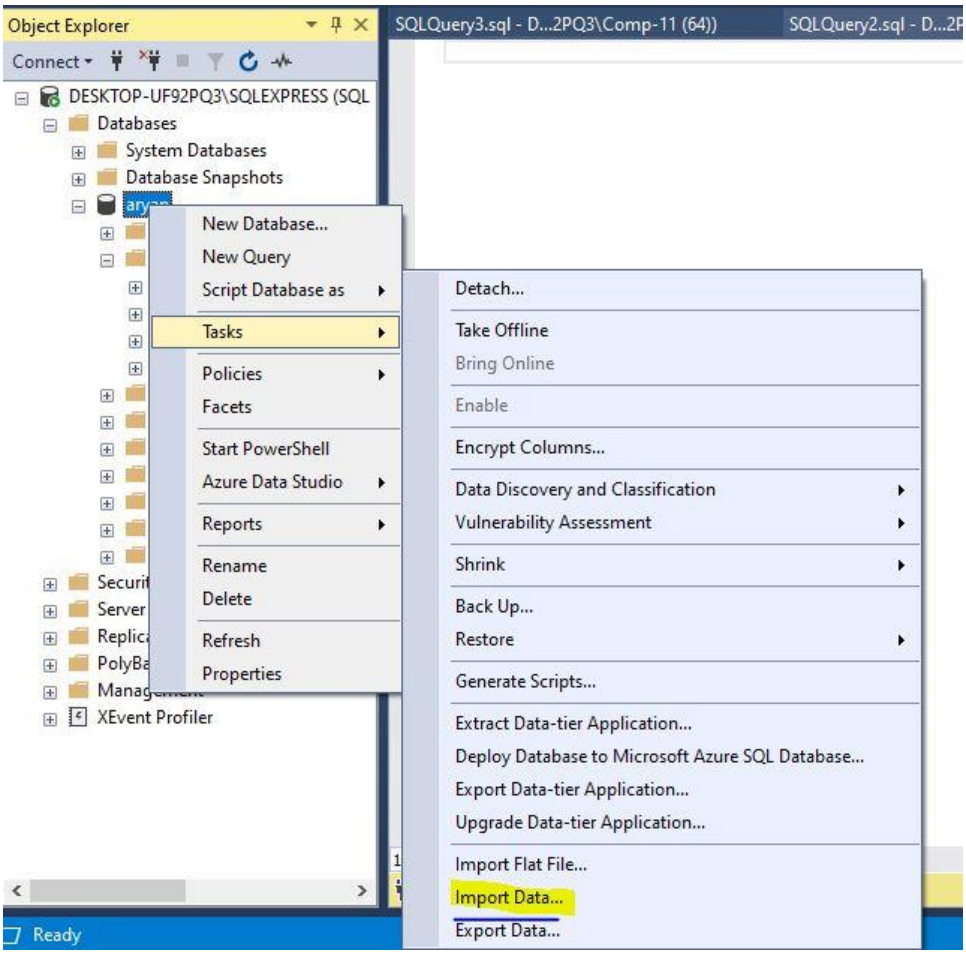


Figure 1 Process of uploading the file to the SQL server

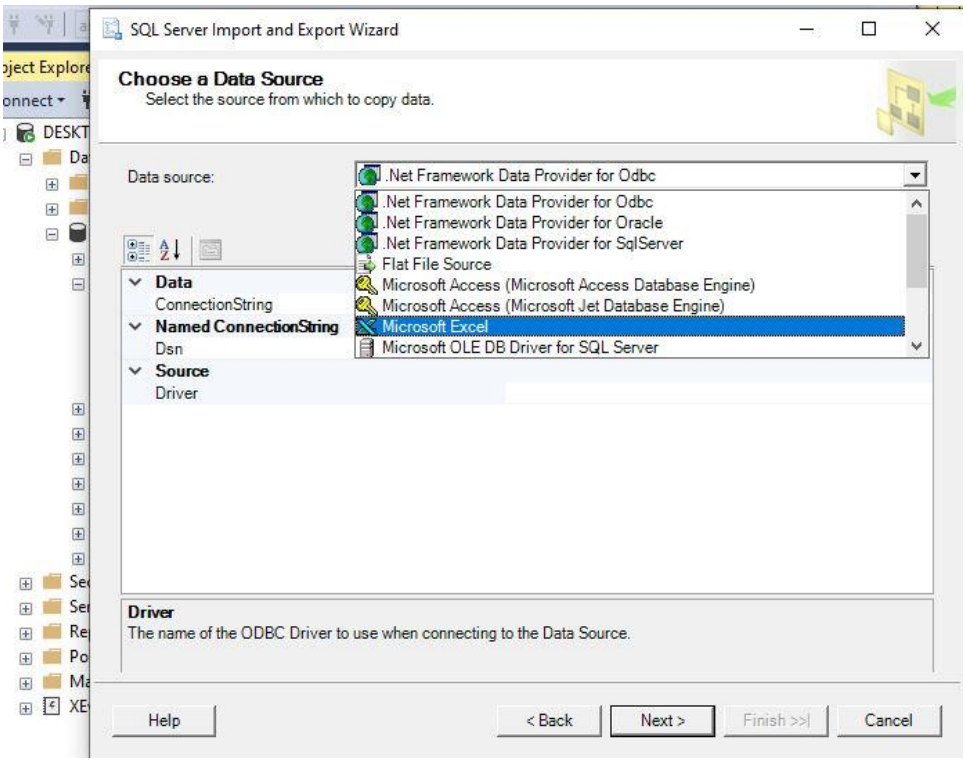


Figure 2. Process of uploading the file to the SQL server

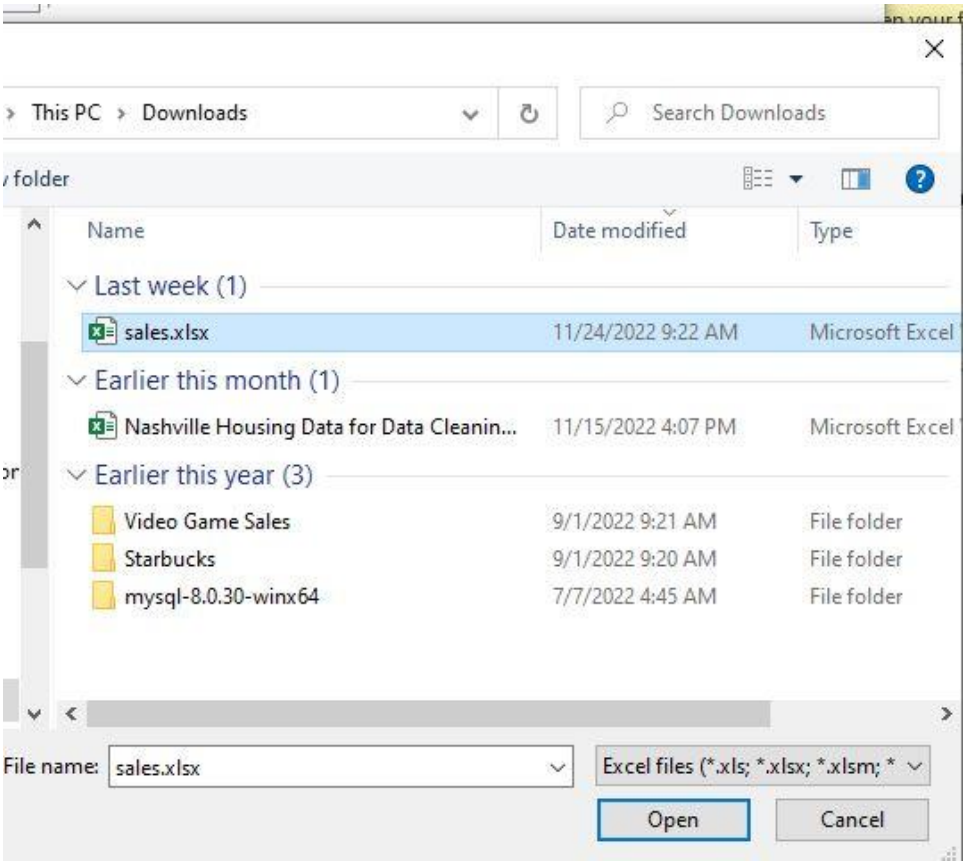


Figure 3Process of uploading the file to the SQL server

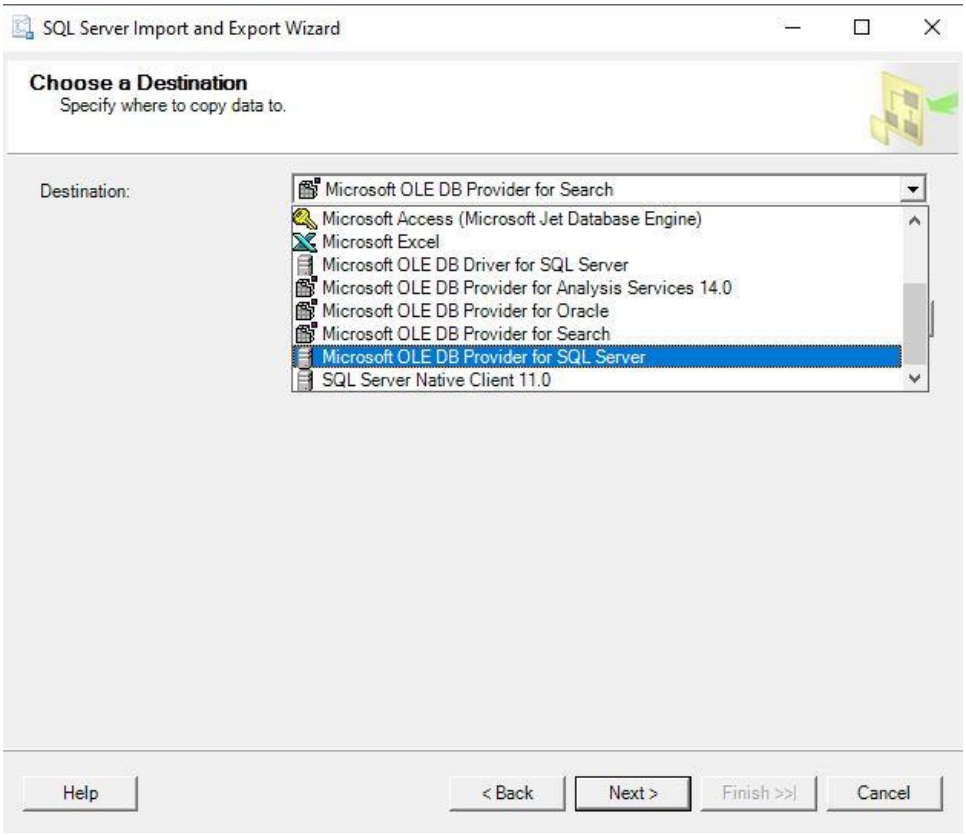


Figure 4Process of uploading the file to the SQL server

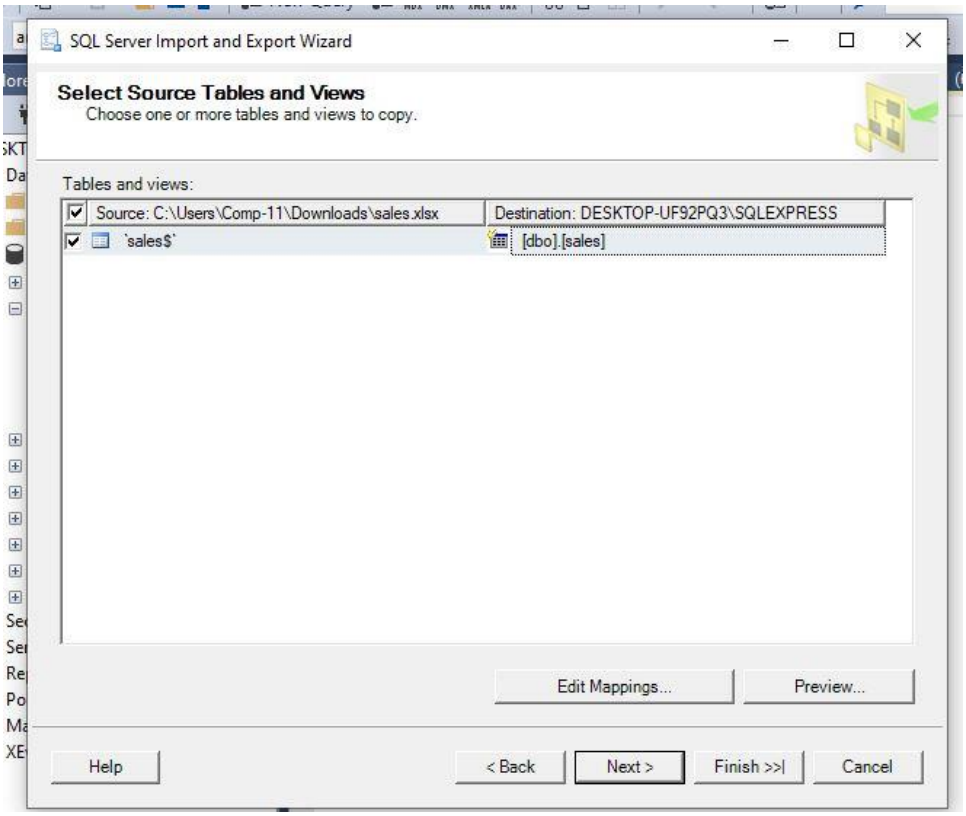


Figure 5. Process of uploading the file to the SQL server

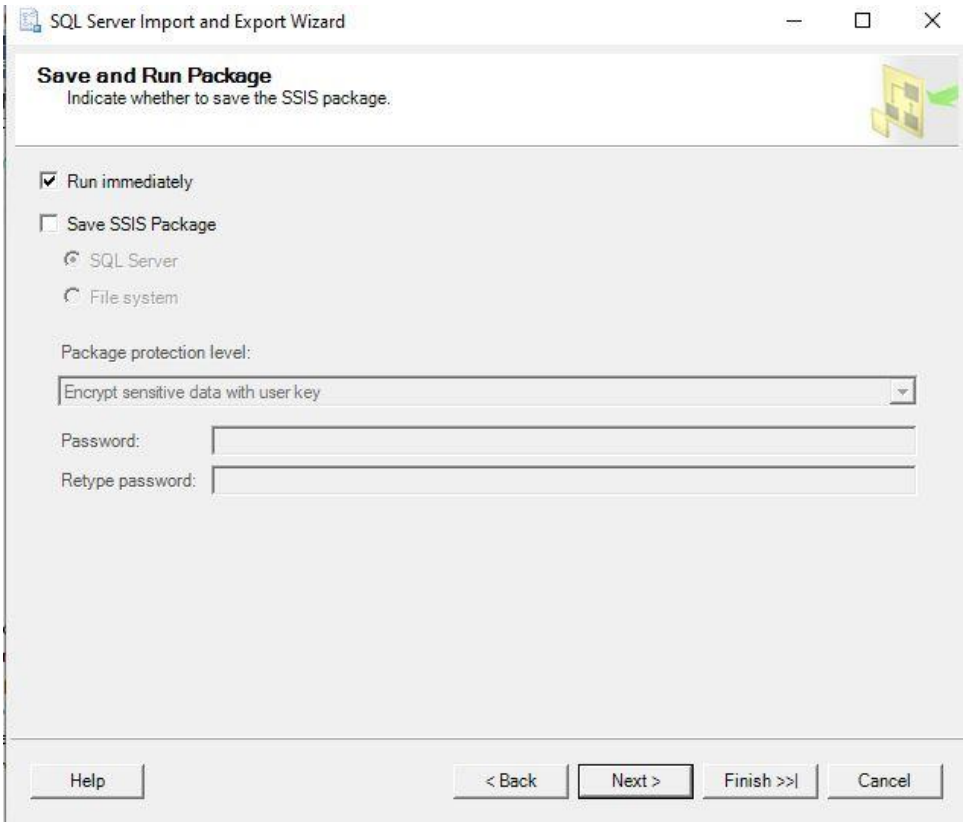


Figure 6 Process of uploading the file to the SQL server

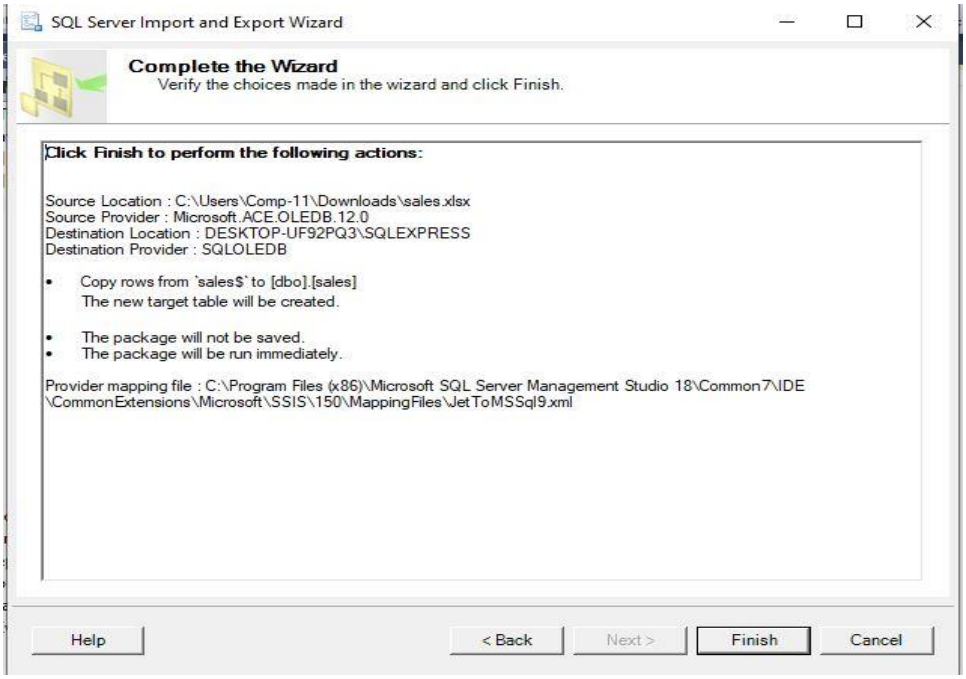


Figure 7. Process of uploading the file to the SQL server

2. Format the date into a useable format.

SQL:

```
--------------------------------------------------------------------
alter table sales
add saledateconverted date ;

update sales
set saledateconverted = convert(date,sales.date) ;

select sales.date  from SALES ;

alter table  sales
drop column date;
sp_rename 'sales.saledateconverted' , 'date','column' ;

--------------------------------------------------------------------
```

OUTPUT:

Results | Messages

	date
1	2010-09-01
2	2011-09-01
3	2010-10-01
4	2010-11-01
5	2010-09-01
6	2011-09-01
7	2010-05-01
8	2010-12-01
9	2010-05-01
10	2010-06-01
11	2010-06-01
12	2010-10-01
13	2010-02-01
14	2011-07-01
15	2010-09-01
16	2011-10-01
17	2010-06-01

3. Populate the state data using area code.

SQL:

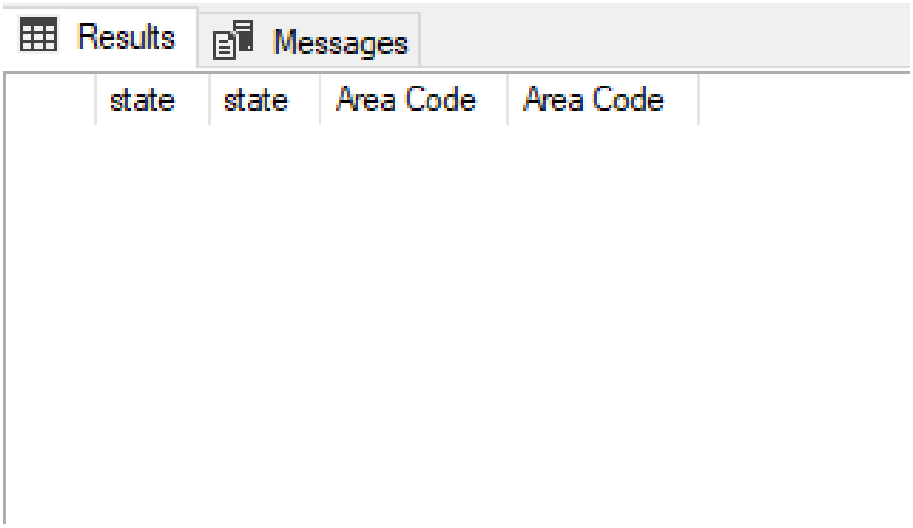
```
update
a
SET a.State =
CASE
WHEN a.state IS NULL THEN b.State
ELSE a. State
END
FROM
Sales AS a
INNER JOIN Sales AS b
ON a.[Area Code] = b.[Area Code]
WHERE a. State IS NULL;
```

Messages

```
(209 rows affected)

Completion time: 2022-12-01T18:49:53.2244548+05:45
```

OUTPUT:



4. Populate the product type using product id.

SQL:

```
select productid, [product type] from sales
where [product type] is null ;

update
```

Results | Messages

productid	product type
6	NULL
2	NULL
6	NULL
10	NULL
3	NULL

```
--------------------------------------------------------
select productid, [product type] from sales
where [product type] is null ;

update
a
SET a.[Product Type] =
CASE
WHEN a.[Product Type] IS NULL THEN b.[Product Type]
ELSE a. [Product Type]
END
FROM
Sales AS a
INNER JOIN Sales AS b
ON a.ProductId = b.ProductId
WHERE a. [Product Type] IS NULL;
```

Results | Messages

productid	product type

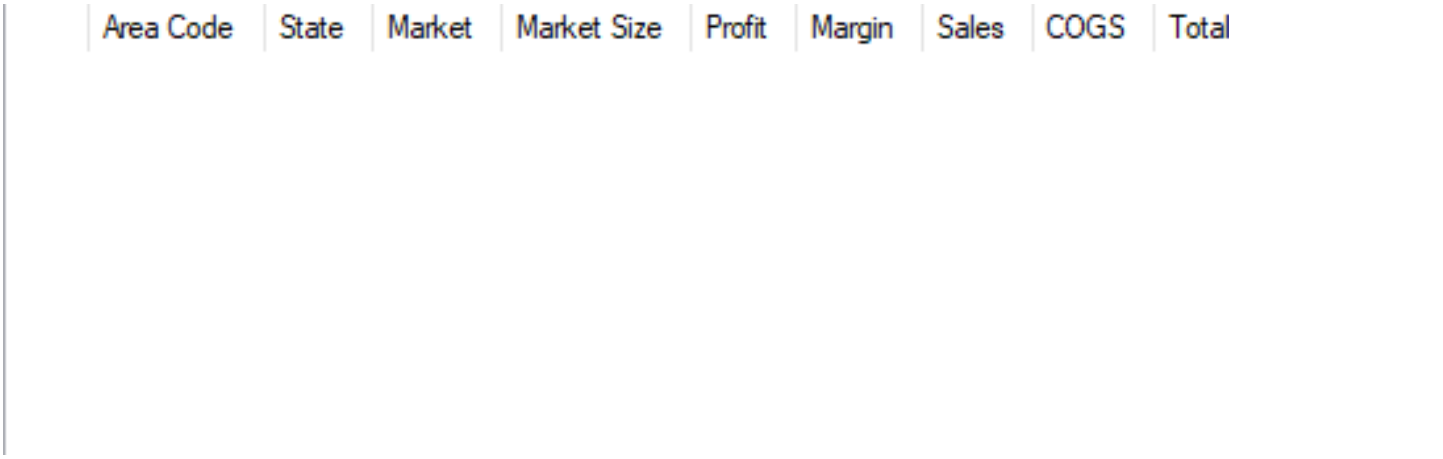
5. Remove Duplicates.

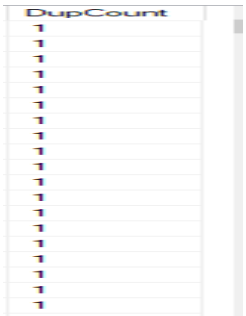
SQL:

```
With Duplicate_COUNT As (

Select [Area Code]
      ,[State],[Market],[Market Size],[Profit],[Margin],[Sales],[COGS],[Total Expenses],[Marketing]
      ,[Inventory],[Budget Profit],[Budget COGS],[Budget Margin],[Budget Sales],[ProductId],[Product Type]
      ,[Product],[Type],[date],
ROW_NUMBER() OVER (Partition by [Area Code]
      ,[State],[Market],[Market Size],[Profit],[Margin],[Sales],[COGS],[Total Expenses],[Marketing]
      ,[Inventory],[Budget Profit],[Budget COGS],[Budget Margin],[Budget Sales],[ProductId],[Product Type]
      ,[Product],[Type],[date] Order by [area code] ) As DupCount
From sales
)
Delete from Duplicate_COUNT where DupCount >1
```

OUTPUT:





6. Delete the market size and budget columns.

SQL:

```
ALTER TABLE Sales
DROP COLUMN [Market Size], [Budget Profit], [Budget COGS], [Budget Margin], [Budget Sales];

SELECT * FROM Sales;
```

OUTPUT:

Area Code	State	Market	Profit	Margin	Sales	COGS	Total Expenses	Marketing	Inventory	ProductId	Product Type	Product	Type	date
713	Texas	South	199	179	322	123	45	34	928	5	Espresso	Caffe Mocha	Regular	2011-09-01
713	Texas	South	32	79	138	59	47	19	411	8	Herbal Tea	Chamomile	Decaf	2010-11-01
714	California	West	-74	-13	109	122	61	39	2378	1	Coffee	Amaretto	Regular	2010-09-01
714	California	West	-142	-32	163	195	110	64	1952	3	Coffee	Decaf Irish Cream	Decaf	2010-05-01
714	California	West	36	201	345	144	165	131	874	5	Espresso	Caffe Mocha	Regular	2010-06-01
714	California	West	283	307	562	260	95	80	1319	9	Herbal Tea	Lemon	Decaf	2011-07-01
714	California	West	84	118	199	81	34	22	588	12	Tea	Earl Grey	Regular	2010-09-01
714	California	West	221	239	509	239	90	66	1755	4	Espresso	Caffe Latte	Regular	2011-10-01
715	Wisconsin	Central	22	80	145	65	58	24	403	1	Coffee	Amaretto	Regular	2010-12-01
715	Wisconsin	Central	24	70	135	57	54	21	313	1	Coffee	Amaretto	Regular	2011-04-01
715	Wisconsin	Central	17	132	227	95	115	86	554	2	Coffee	Columbian	Regular	2010-04-01
715	Wisconsin	Central	18	134	230	96	116	87	683	2	Coffee	Columbian	Regular	2010-10-01

Explore:

1. Compare the margin and profit to find out profit based on states.

SQL:

```
--Compare the margin and profit to find out profit based on states.

select distinct State, sum([Profit]) as [total_profit] , sum([margin]) as Margin
from sales
group by State ;

-------------------------------------------------------------------------------
```

OUTPUT:

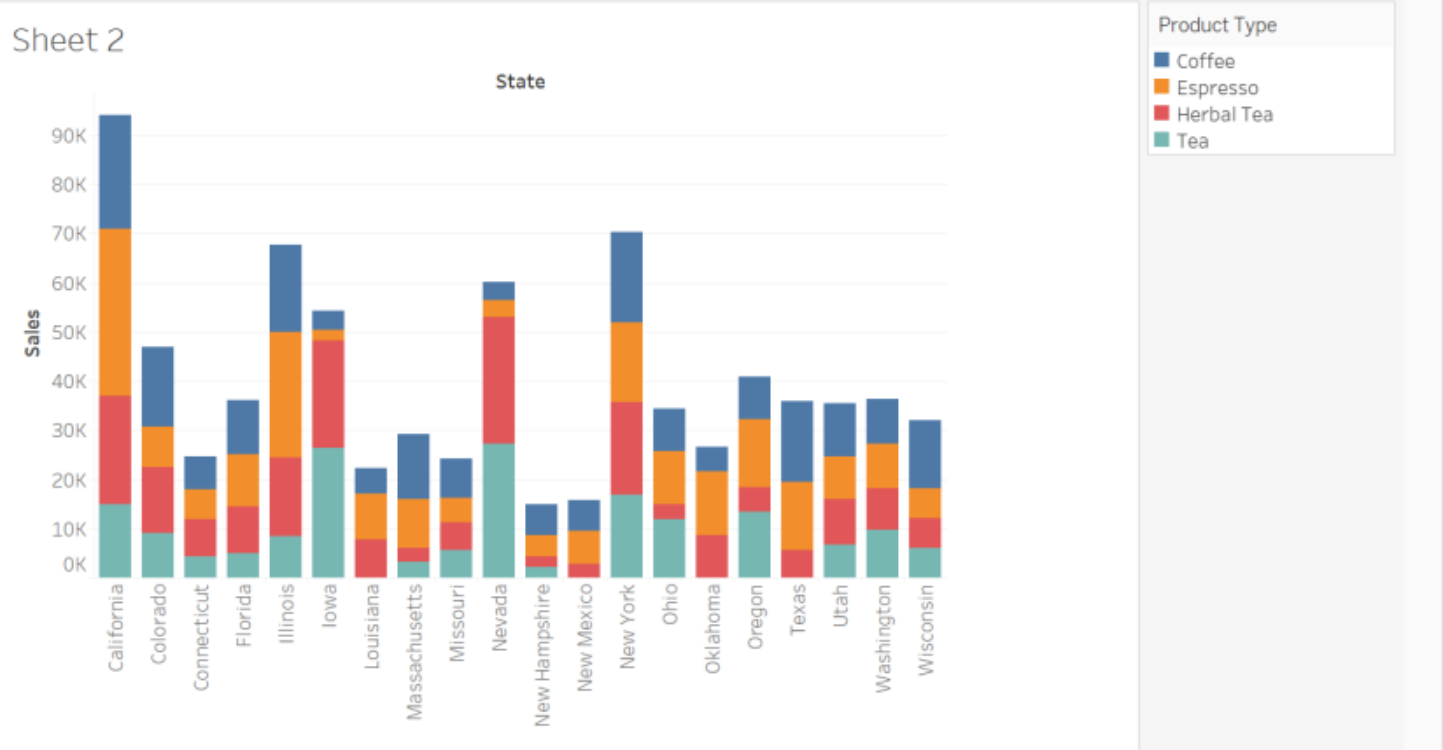
Results | Messages

	State	total_profit	Margin
1	Illinois	30821	38954
2	Oklahoma	8558	15648
3	Wisconsin	8702	18716
4	Massachusetts	16442	20248
5	Ohio	10773	19118
6	Oregon	12439	22690
7	Louisiana	7385	13299
8	New Hampshire	2748	8924
9	New York	20096	34232
10	California	31785	49402
11	Missouri	3601	12670
12	Florida	12310	21186
13	Washington	11405	22258
14	Connecticut	7621	14352
15	Iowa	22212	30078
16	Colorado	17743	26716
17	Texas	15766	20932
18	Utah	7751	18844
19	Nevada	10616	26858
20	New Mexico	799	7978

Interpret:

1. Use tools like tableau to visualize the given data into five different graphs and explain the data accordingly.

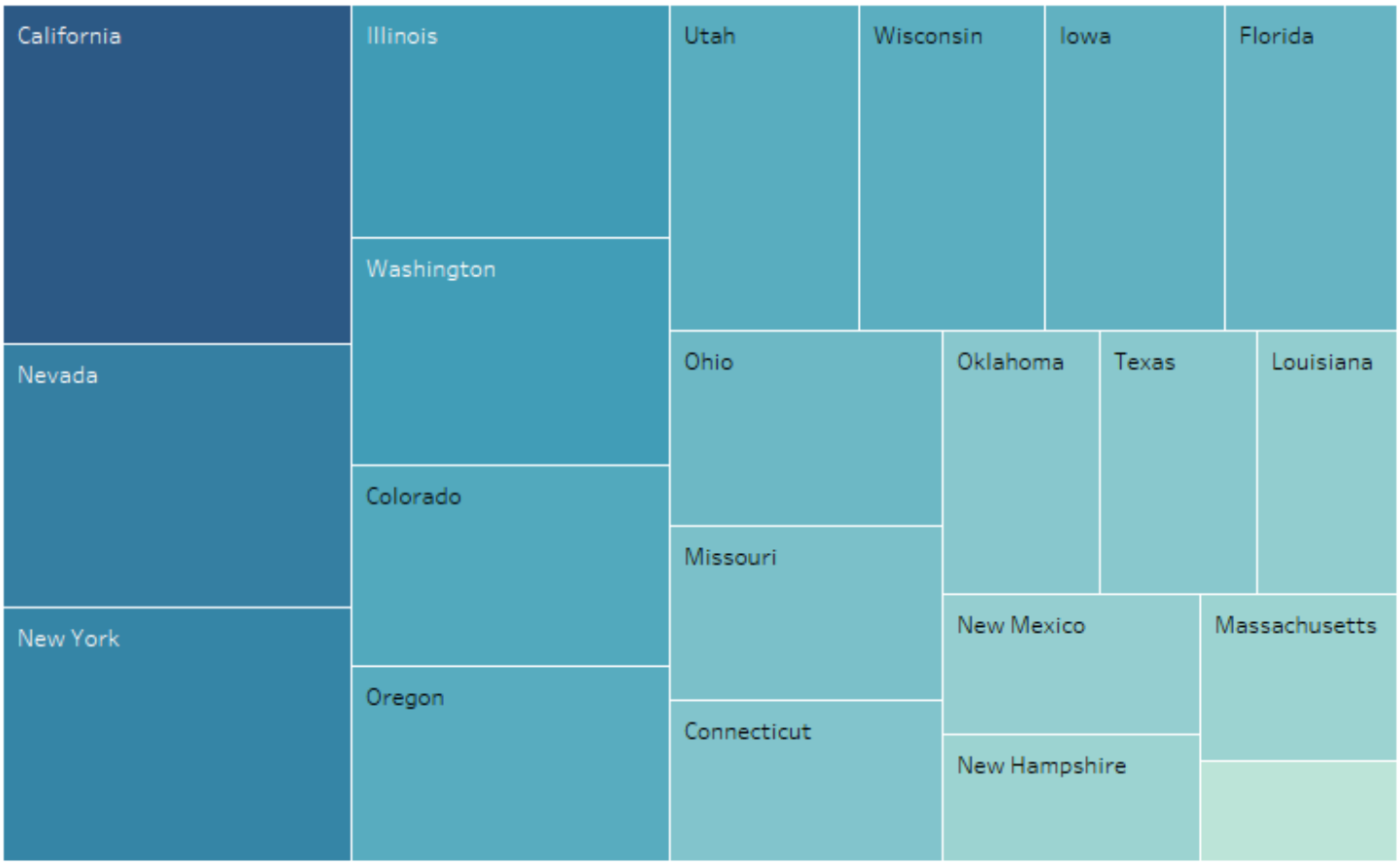
SHEET 1:



EXPLANATION:

From this bar graph we can conclude that we are getting most sales from “California” which is almost 300k sales and least sales from “New Hampshire” and “New Mexico “which is below 50k sales, where most selling products are coffee and Espresso. Overall, the most selling product is coffee as it is getting most sales in all states with highest sales of 72k.

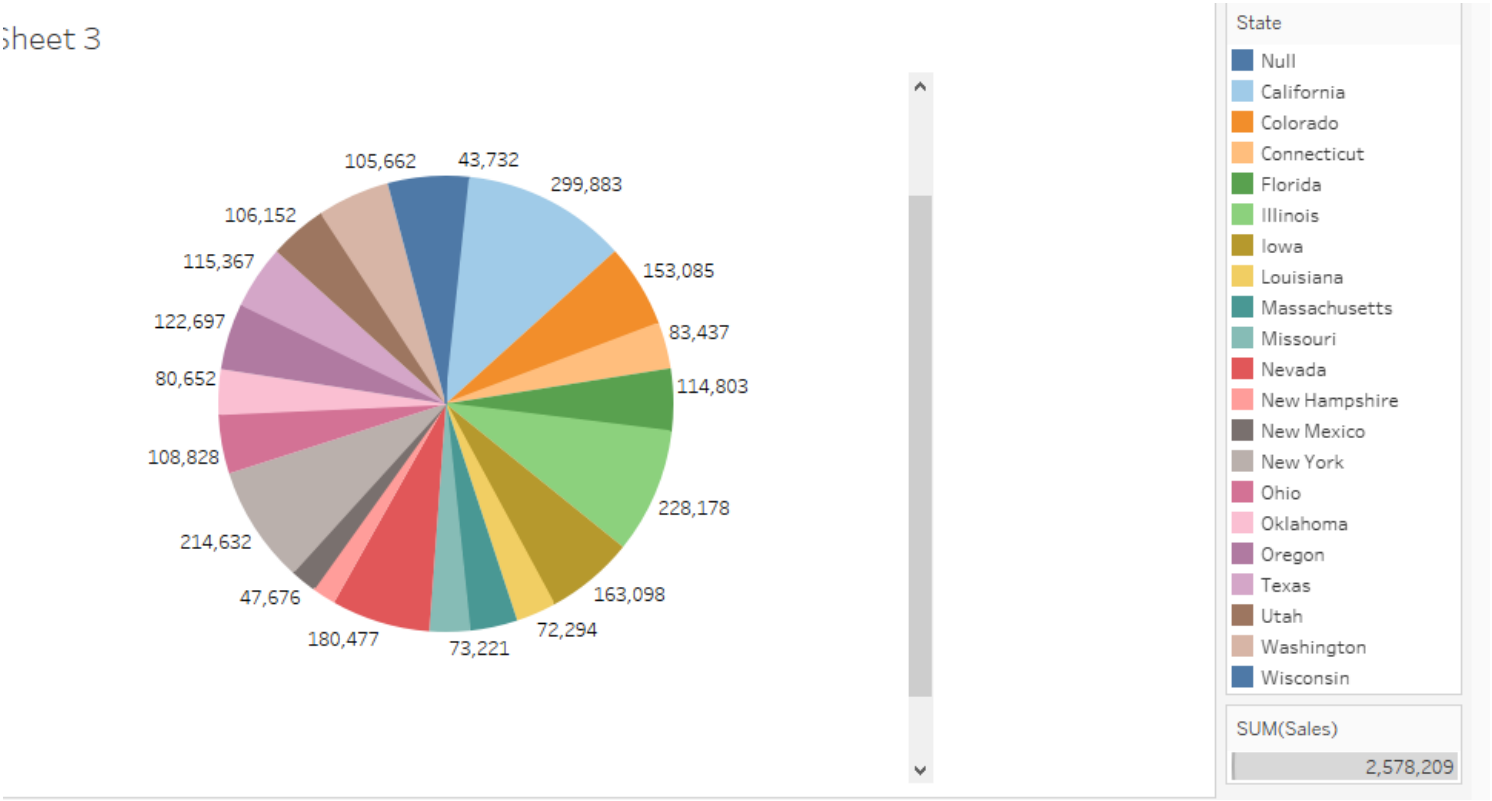
SHEET 2:



EXPLANATION:

This graph shows the data of state and the total expenses of each state. From this graph we can observe that the most expenses are from California and Nevada. We have least expenses in Massachusetts. The total expenses of all state are more than 721k.

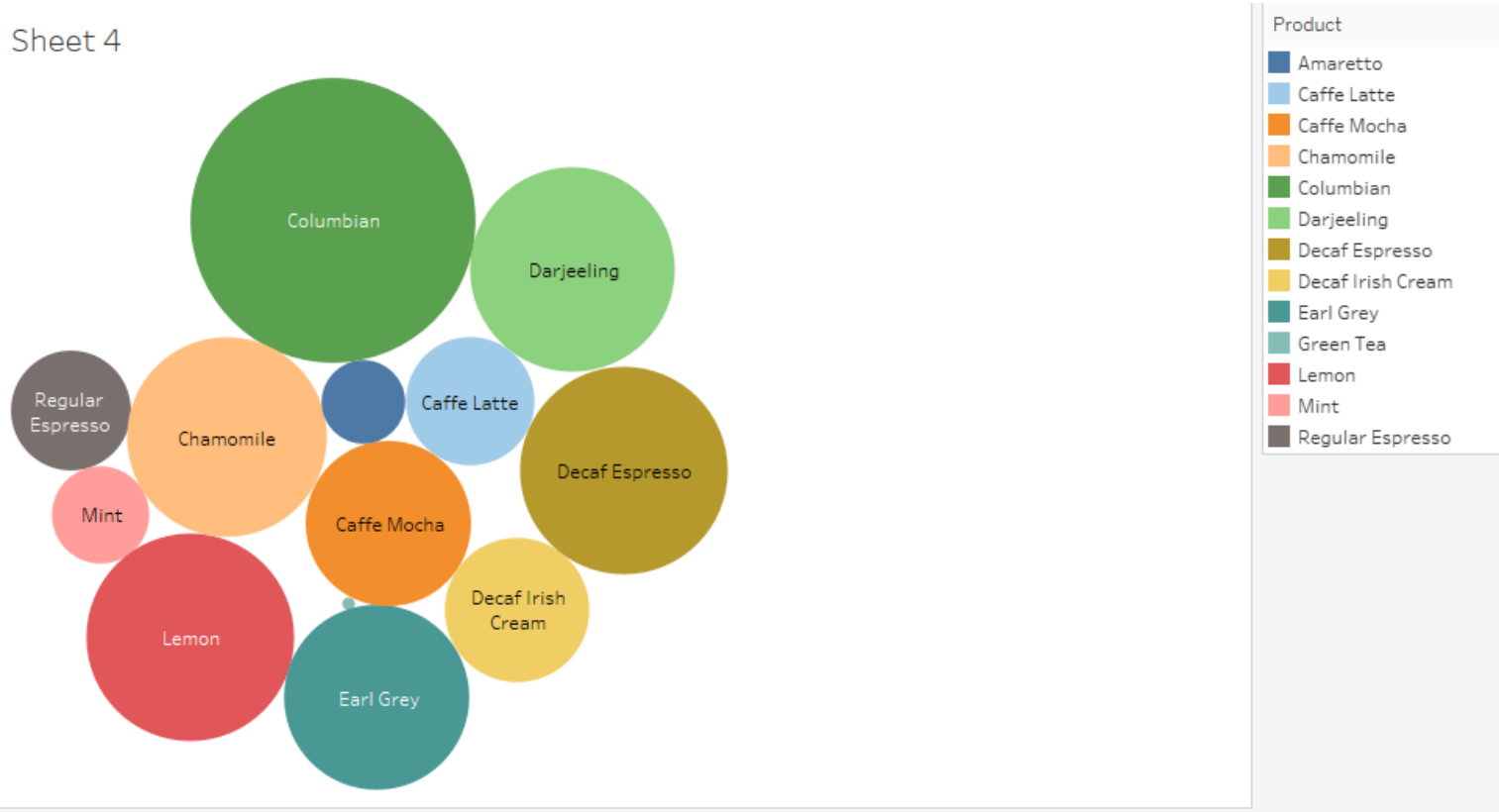
SHEET 3:



EXPLANATION:

This pie chart shows the data of state and their total sales. As we can see from the above pie chart, we are getting most sales from California and least sales from New Mexico and New York. The total sales of all state are 2,578,209. The average sale is more than 122k.

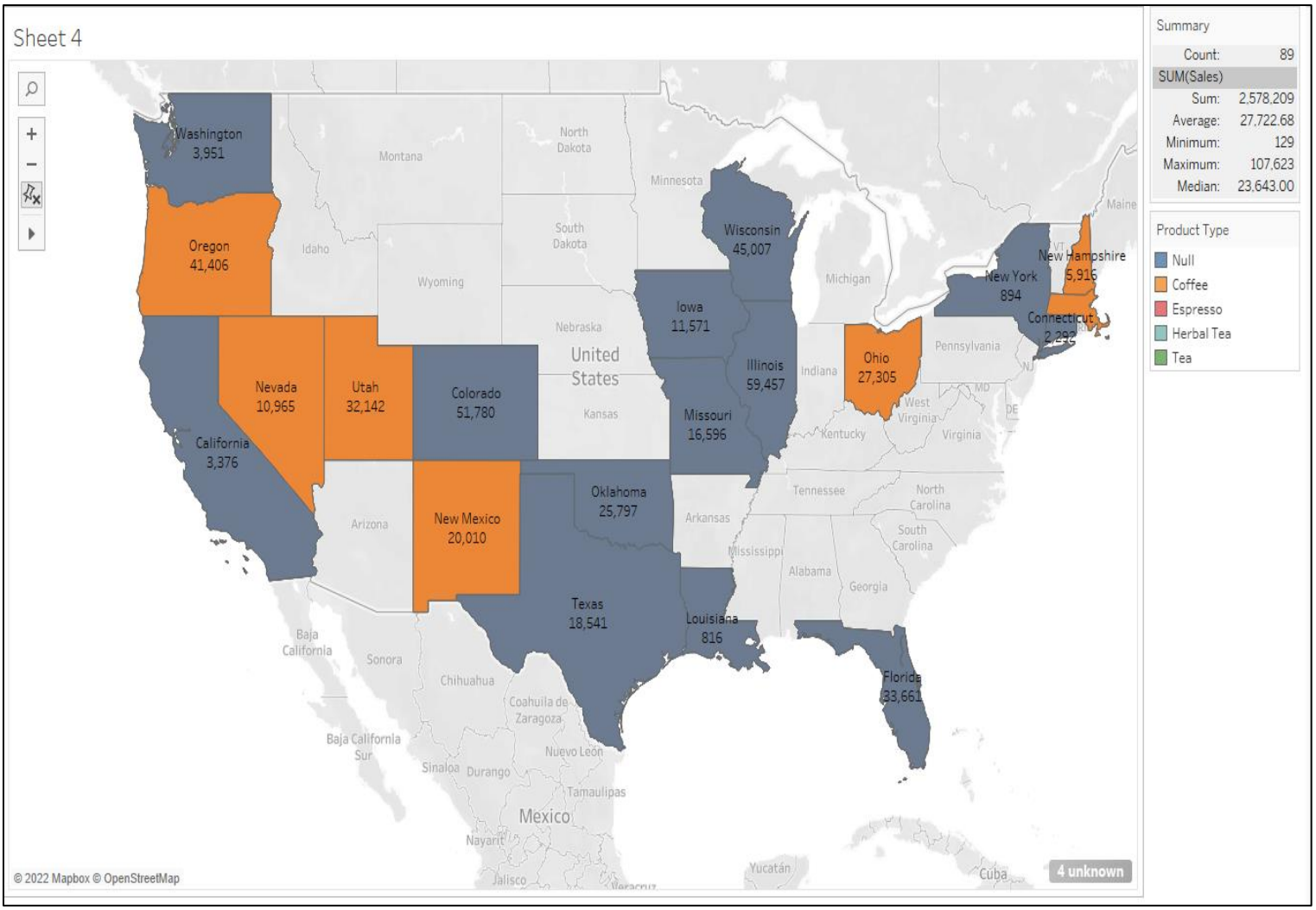
SHEET 4 :



EXPLANATION:

The above packed bubbles shows the data of the product and their sales. So from this graph can see that the most selling product is Columbian and decaf espresso with the average sales of 327k and 198k being the average sale of all product.

SHEET 5:



EXPLANATION:

The above map shows the data of the product type, sales and state. From this map we can see that the most selling product type is coffee and espresso where most sales have been done in Colorado with total sales of 51k.

2. Create a dashboard with all the sheets created.