

DA Assignment - 1

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The growth of supermarkets in most populated cities is increasing and market competitions are also high. The dataset is one of the historical sales of supermarket company which has recorded in 3 different branches for 3 months data. Predictive data analytics methods are easy to apply to this dataset.

Attribute information

Invoice id: Computer-generated sales slip invoice identification number

Branch: Branch of supercenter (3 branches are available identified by A, B and C).

City: Location of supercenters

Customer type: Type of customers, recorded by Members for customers using member cards and Normal for those without member cards.

Gender: Gender type of customer

Product line: General item categorization groups - Electronic accessories, Fashion accessories, Food and beverages, Health and beauty, Home and lifestyle, Sports and travel

Unit price: The price of each product in \$

Quantity: Number of products purchased by the customer

Tax: 5% tax fee for customers buying

Total: Total price including tax

Date: Date of purchase (Record available from January 2019 to March 2019)

Time: Purchase time (10 am to 9 pm)

Payment: Payment used by the customer for the purchase (3 methods are available – Cash, Credit card and Ewallet)

COGS: Cost of goods sold

Gross margin percentage: Gross margin percentage

Gross income: Gross income

Rating: Customer stratification rating on their overall shopping experience (On a scale of 1 to 10)

Dataset Link: [Dataset](#)

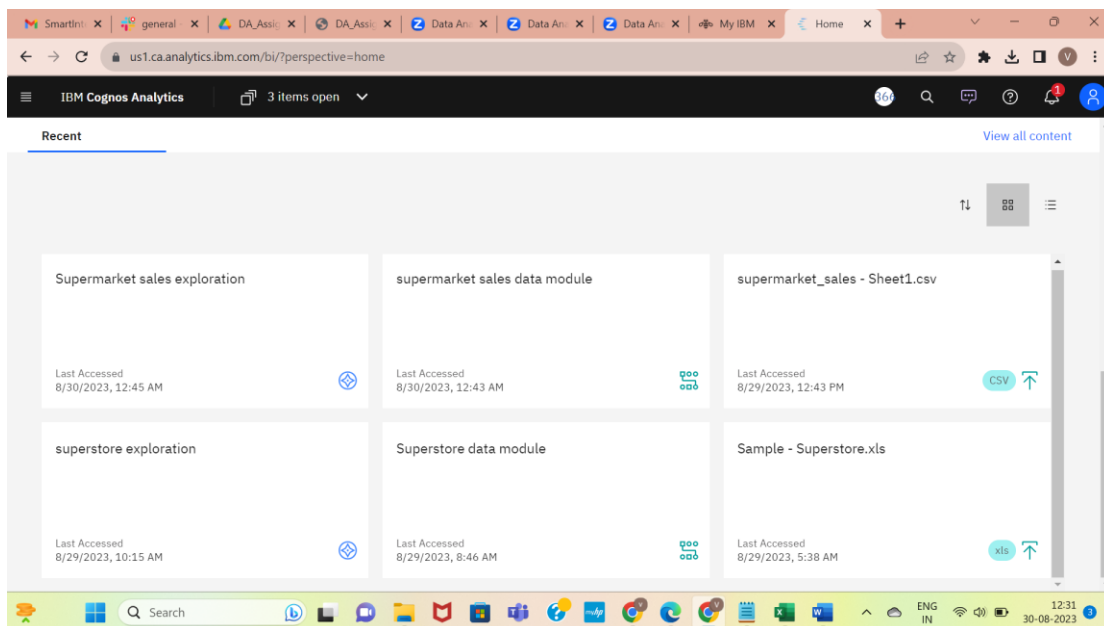
Challenge:

Upload the dataset to Cognos Analytics, delete the unnecessary columns, create a data module, explore and visualize the dataset

Steps :

Step 1 :

The Dataset is uploaded to cognos Analytics



Step 2:

The new Data module is created with the new columns as well.

I divided Date column into year,month,date,Day of the week.

I also added new column by using calculator named as Revenue.

Also, I formatted all the unformatted data and then saved into my content.

The screenshot displays the IBM Cognos Analytics interface for a data module named 'supermarket sales data module'. The interface is divided into a left sidebar for the 'Data module' and a main grid view.

Data module sidebar:

- Revenue
- # Row Id
- Invoice ID
- Branch
- City
- Customer type
- Gender
- Product line
- Unit price
- Quantity
- Tax 5%
- Total
- Date
- Year
- Month
- Day
- Day of the week
- Time

Grid view:

T1	Revenue	Row Id	Invoice ID	Branch	City	Customer type	Gender
	522.83	1	750-67-8428	A	Yangon	Member	Female
	76.40	2	226-31-3081	C	Naypyitaw	Normal	Female
	324.31	3	631-41-3108	A	Yangon	Normal	Male
	465.76	4	123-19-1176	A	Yangon	Member	Male
	604.17	5	373-73-7910	A	Yangon	Normal	Male
	597.73	6	699-14-3026	C	Naypyitaw	Normal	Male
	413.04	7	355-53-5943	A	Yangon	Member	Female
	735.60	8	315-22-5665	C	Naypyitaw	Normal	Female
	72.52	9	665-32-9167	A	Yangon	Member	Female
	164.52	10	692-92-5582	B	Mandalay	Member	Female
	57.92	11	351-62-0822	B	Mandalay	Member	Female
	102.04	12	529-56-3974	B	Mandalay	Member	Male
	234.75	13	365-64-0515	A	Yangon	Normal	Female

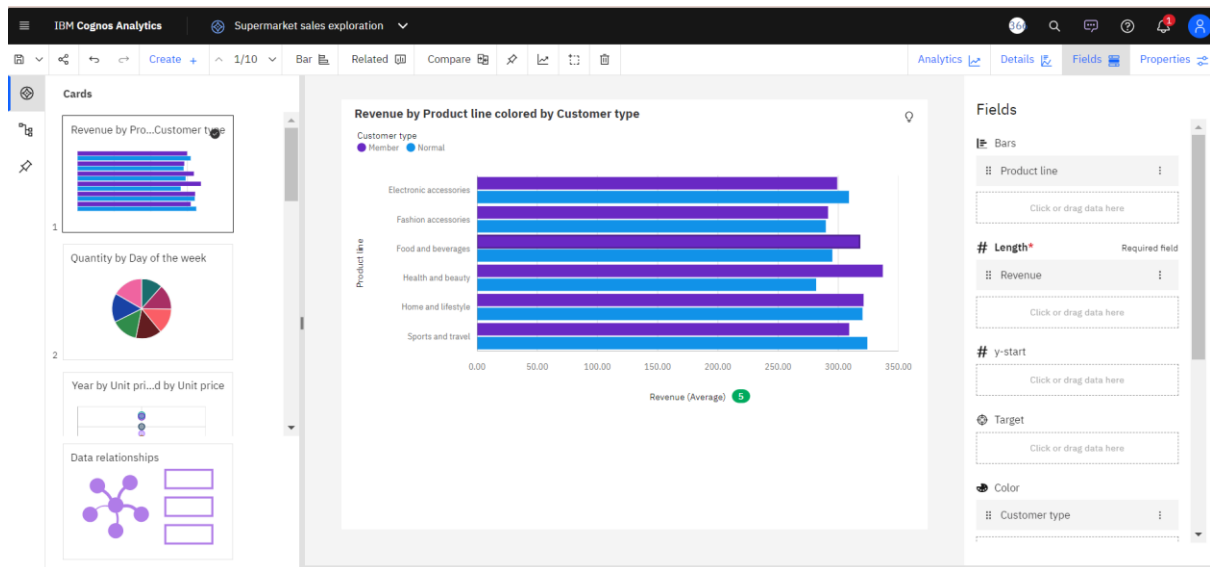
The bottom screenshot shows the same interface but with a different set of columns in the grid view:

T1	Customer type	Gender	Product line	Unit price	Quantity	Tax 5%	Total
	Member	Female	Health and beauty	74.69	7	26.14	548.97
	Normal	Female	Electronic accessories	15.28	5	3.82	80.22
	Normal	Male	Home and lifestyle	46.33	7	16.22	340.53
	Member	Male	Health and beauty	58.22	8	23.29	489.05
	Normal	Male	Sports and travel	86.31	7	30.21	634.38
	Normal	Male	Electronic accessories	85.39	7	29.89	627.62
	Member	Female	Electronic accessories	68.84	6	20.65	433.69
	Normal	Female	Home and lifestyle	73.56	10	36.78	772.38
	Member	Female	Health and beauty	36.26	2	3.63	76.15
	Member	Female	Food and beverages	54.84	3	8.23	172.75
	Member	Female	Fashion accessories	14.48	4	2.90	60.82
	Member	Male	Electronic accessories	25.51	4	5.10	107.14
	Normal	Female	Electronic accessories	46.95	5	11.74	246.49

Step 3 :

By using this data module I created visualizations :

1.Bar chart :



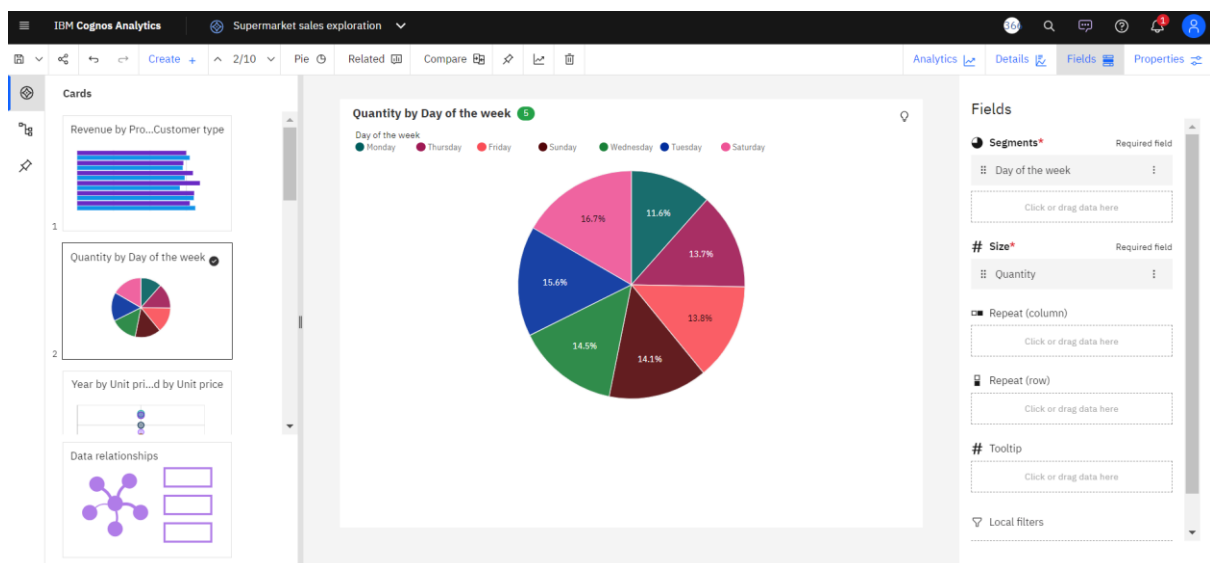
Bar Chart

Bar- Product line

Length- Revenue

Color- Customer type

2.Pie chart :

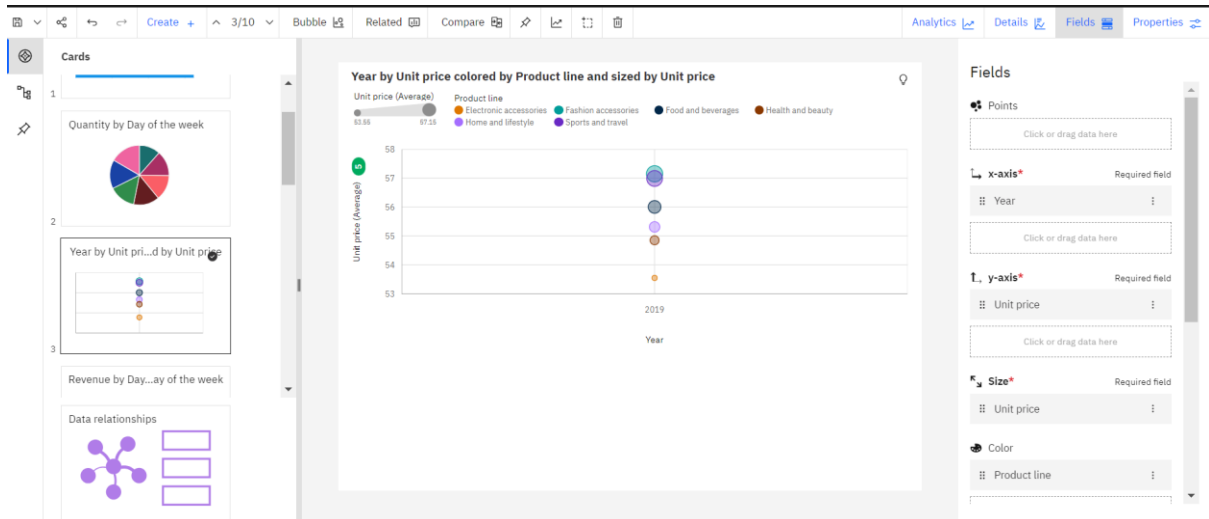


Pie chart

Segment- Day of Week

Size-Quantity

3.Bubble chart :



Bubble Chart

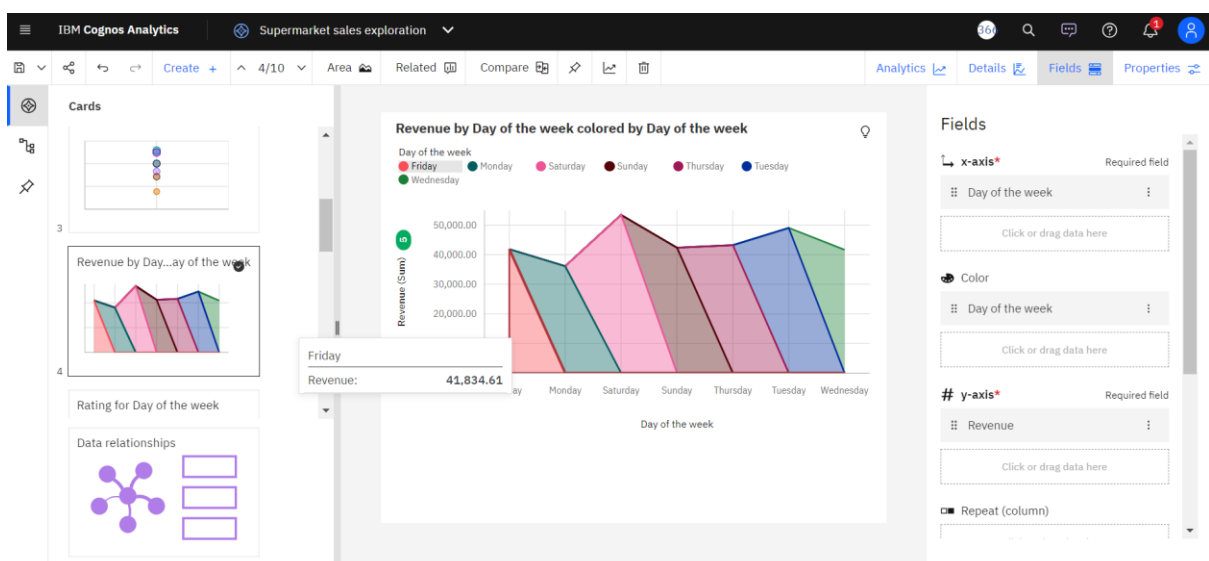
X Axis- Year

Y Axis – Unit price

Size- Unit price

Color- product line

4.AREA chart :



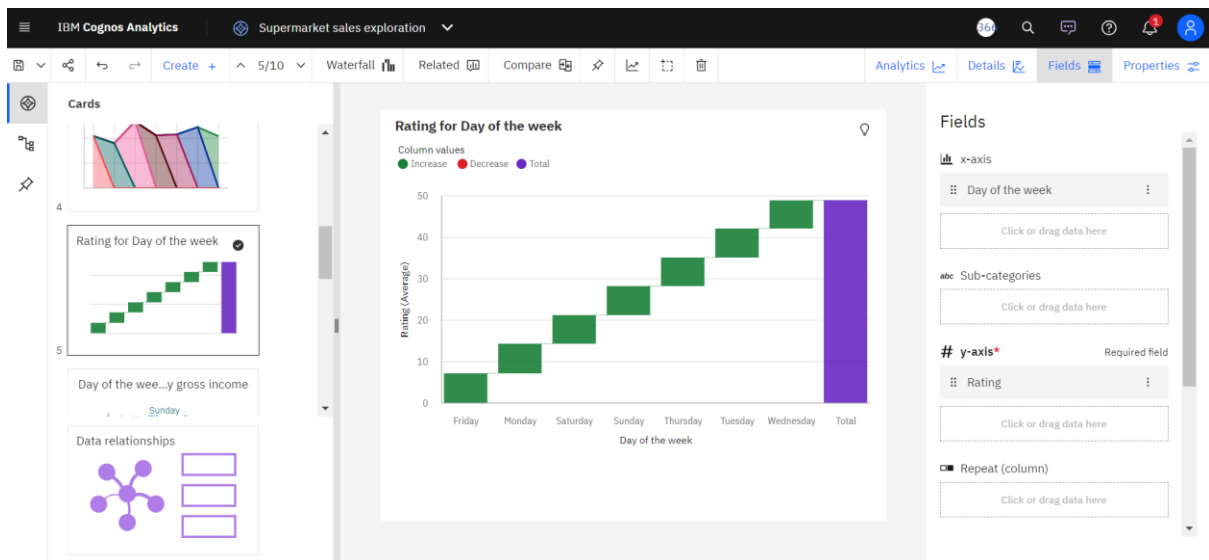
Area chart :

X axis- Day of week

Y axis- revenue

Color- Day of Week

5. Waterfall chart :

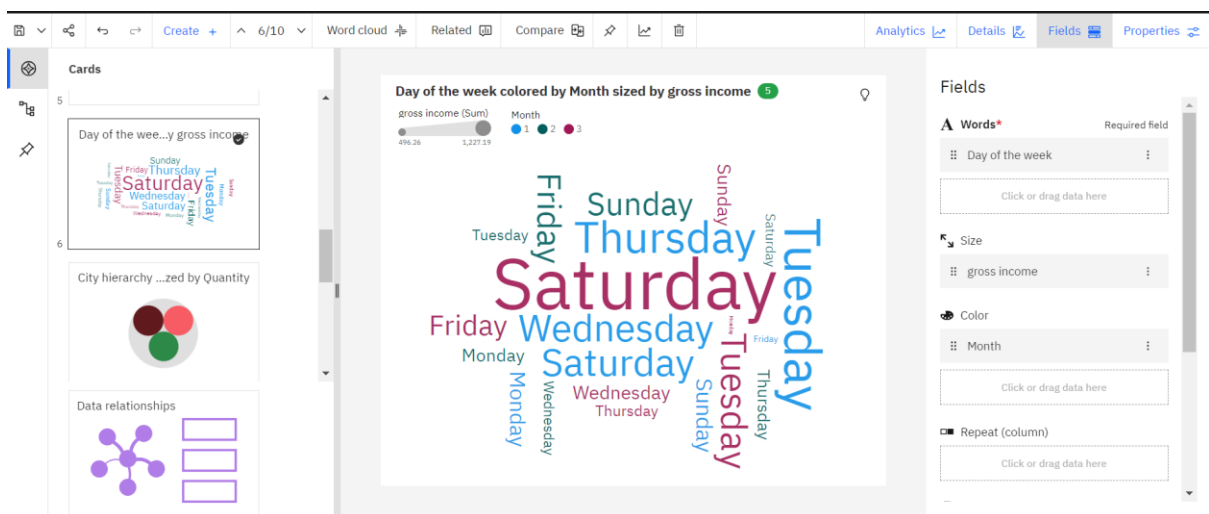


waterfall chart

x axis- Day of the week

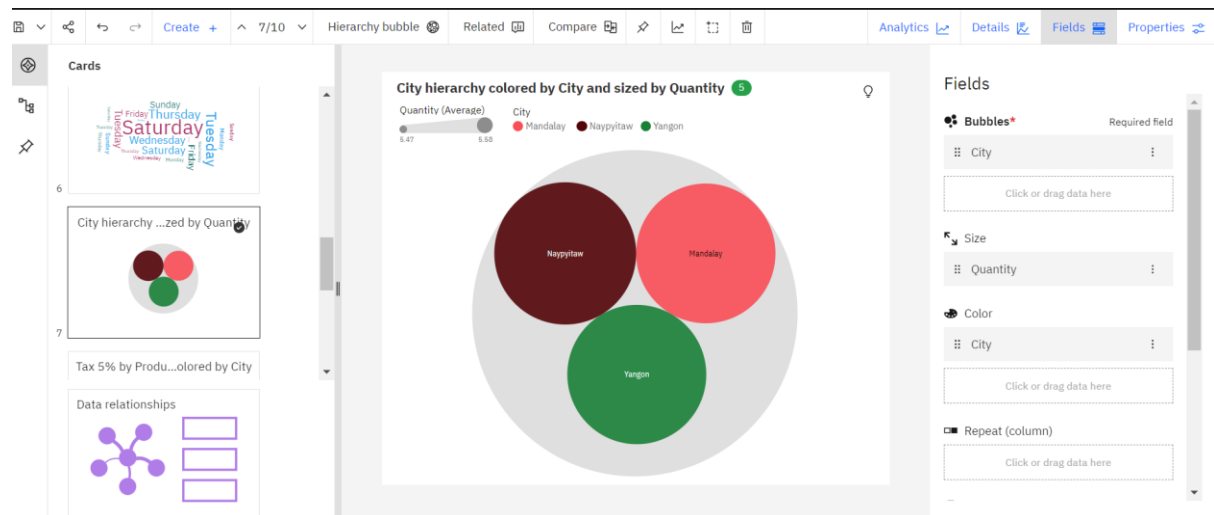
Y axis- Rating

6. Word cloud Chart :



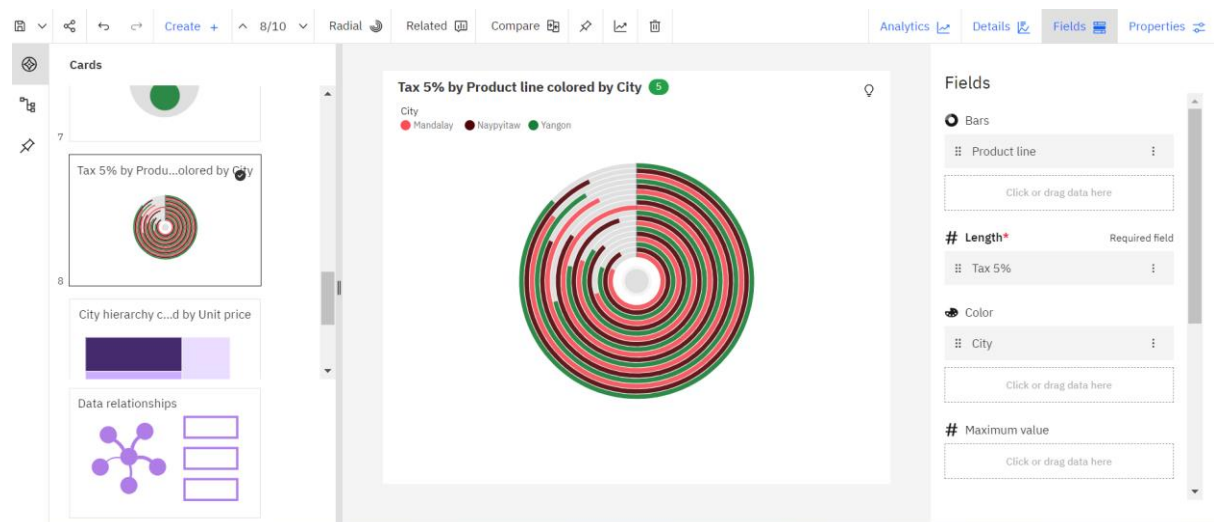
Word Cloud Chart
word- Day of the week
Size-Gross income
Color- Month

7.Hierarchical Bubble Chart :



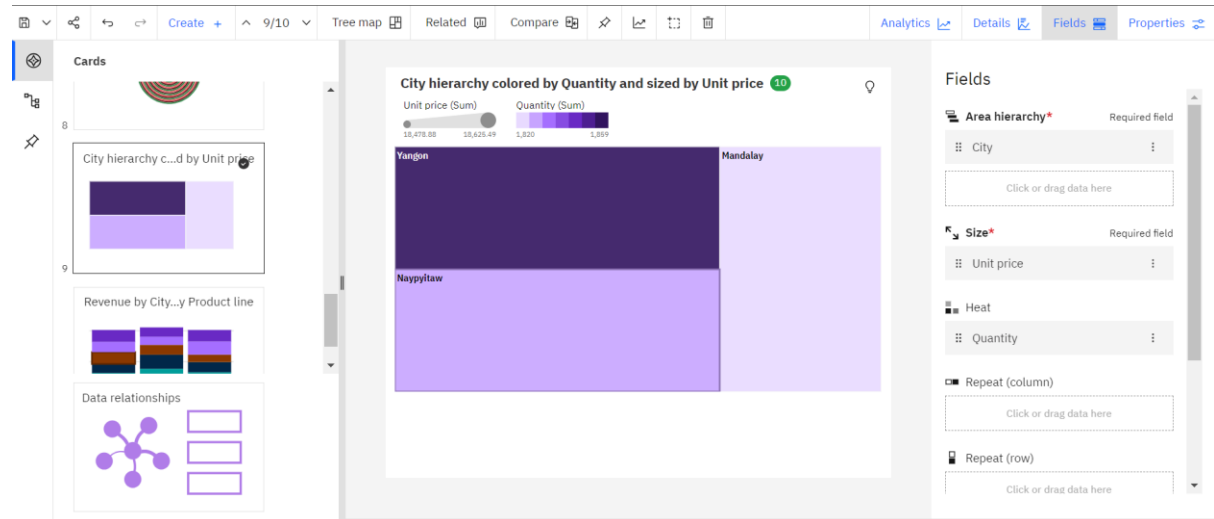
Hierarchical Bubble:
Bubbles- City
Size- Quantity
Color- City

8.Radial Chart :



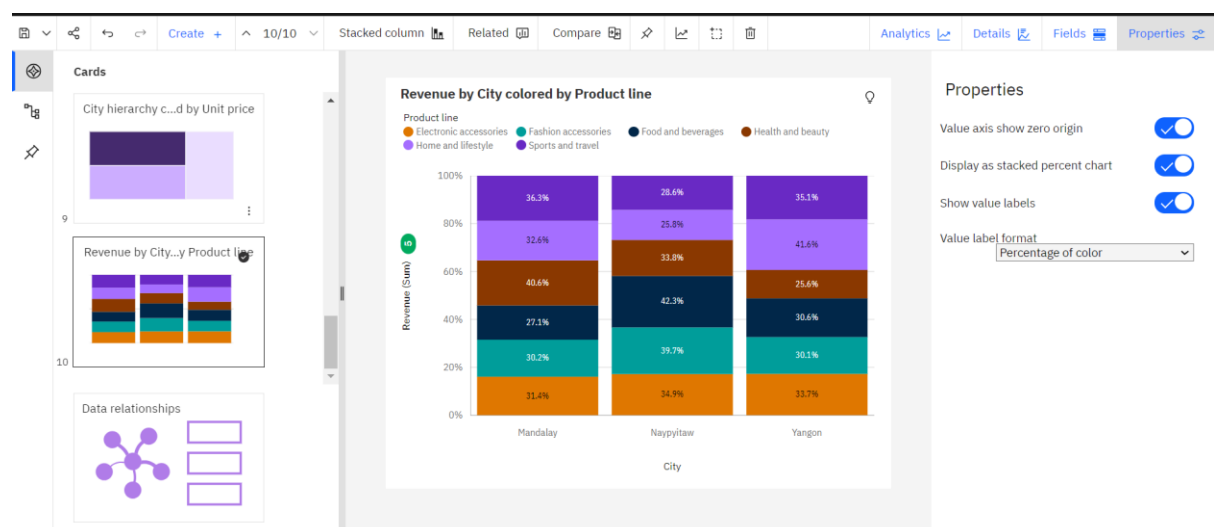
Radial Chart
Bar- Product Line
Length- Tax 5%
Color-City

9.Tree Map :



Tree Map
Area Hierarchy- City
Size- Unit price
Heat-Quantity

10.Stacked column chart :



Stacked column chart :

Bar- City

Length- Revenue

Color -Product Line

*****Thank You *****