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BRANCH:CSE-DA

SUBJECT **:** Data Analytics with IBM cognos Analytics

CAMPUS **:** Vellore Institute of Technology(Andhra Pradesh)

DA Assignment - 3

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
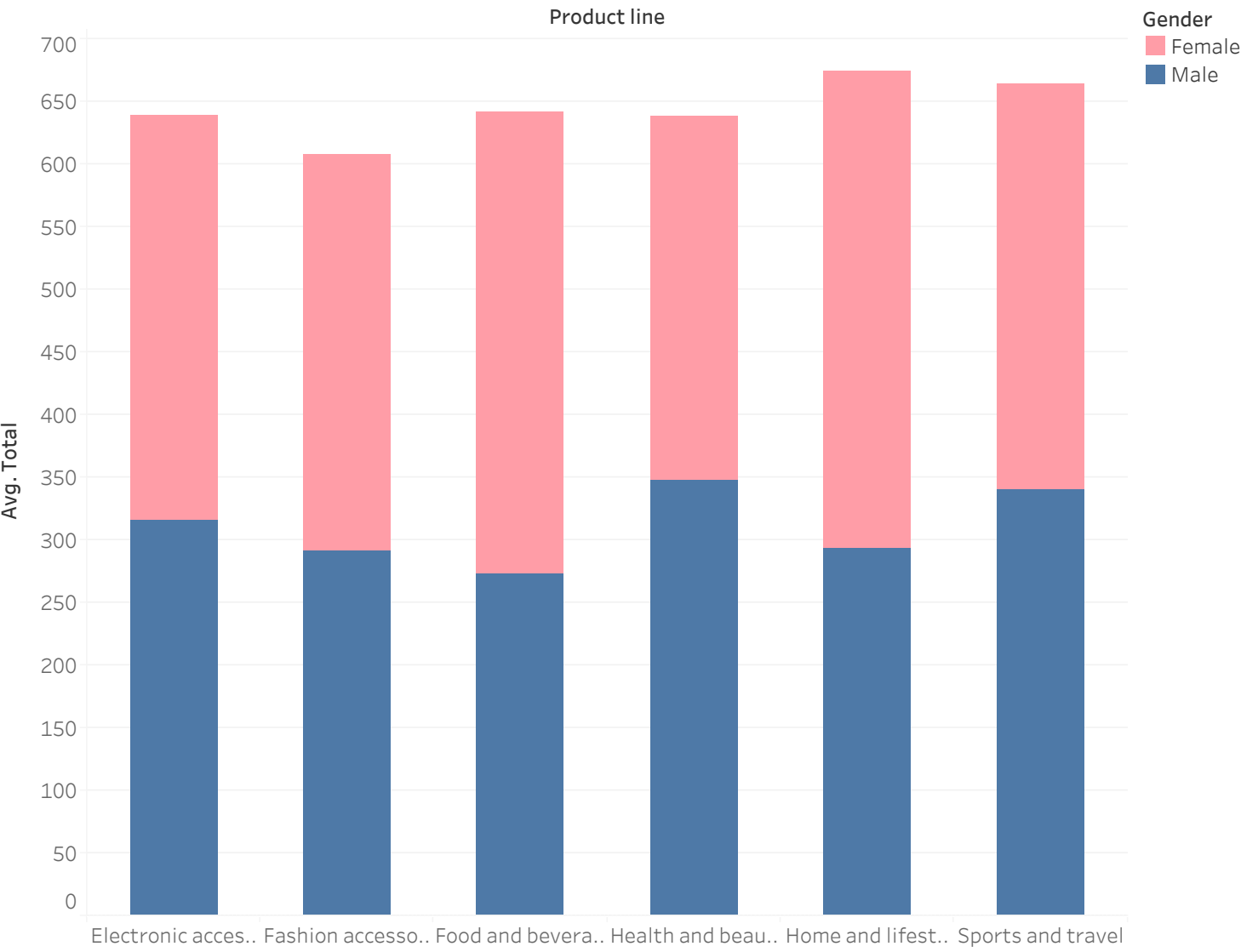
Gross margin percentage: Gross margin percentage

Gross income: Gross income

Rating: Customer stratification rating on their overall shopping experience (On a scale of 1 to 10) Dataset Link: [Dataset](#)
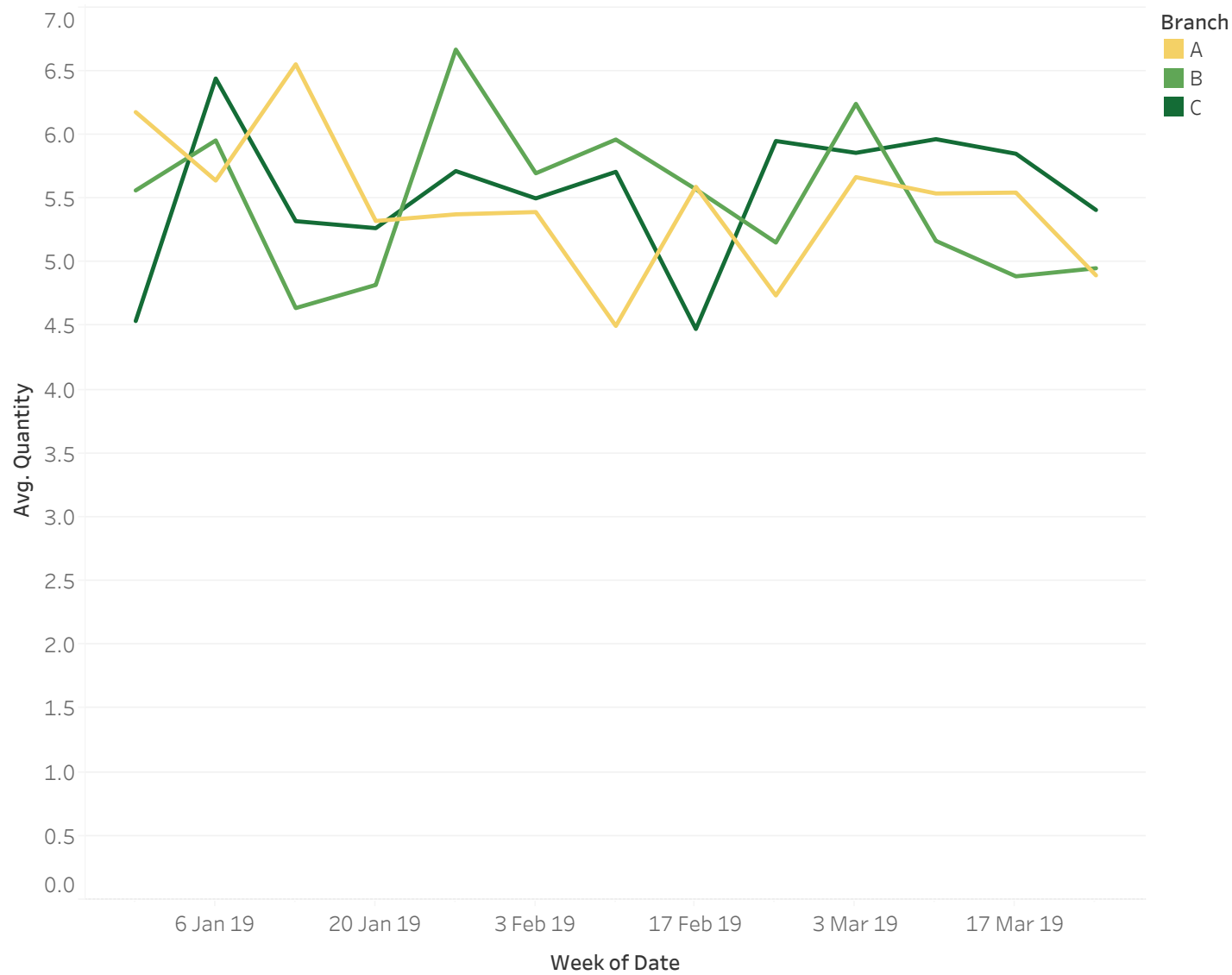
Challenge:

Upload the dataset to Mysql and integrate with Tableau , delete the unnecessary columns,, explore and visualize the dataset using Tableau
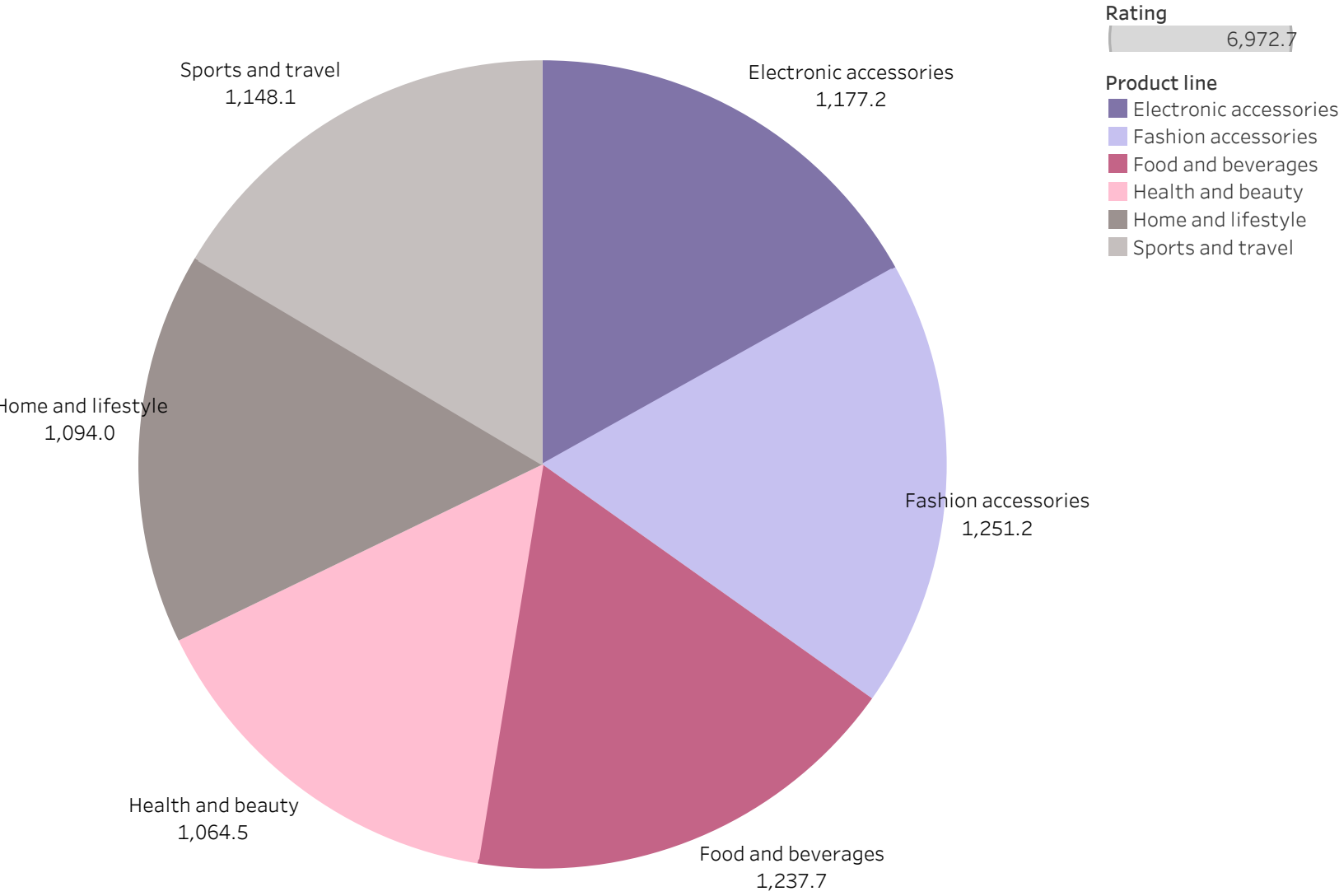
Bar Chart

Average of Total for each Product line. Color shows details about Gender. The data is filtered on Date Month, which keeps January, February and March.

Line Chart

The trend of average of Quantity for Date Week. Color shows details about Branch.

Pie Chart

Rating

6,972.7

Product line
- Electronic accessories
- Fashion accessories
- Food and beverages
- Health and beauty
- Home and lifestyle
- Sports and travel

Sports and travel
1,148.1

Electronic accessories
1,177.2

Home and lifestyle
1,094.0

Fashion accessories
1,251.2

Health and beauty
1,064.5
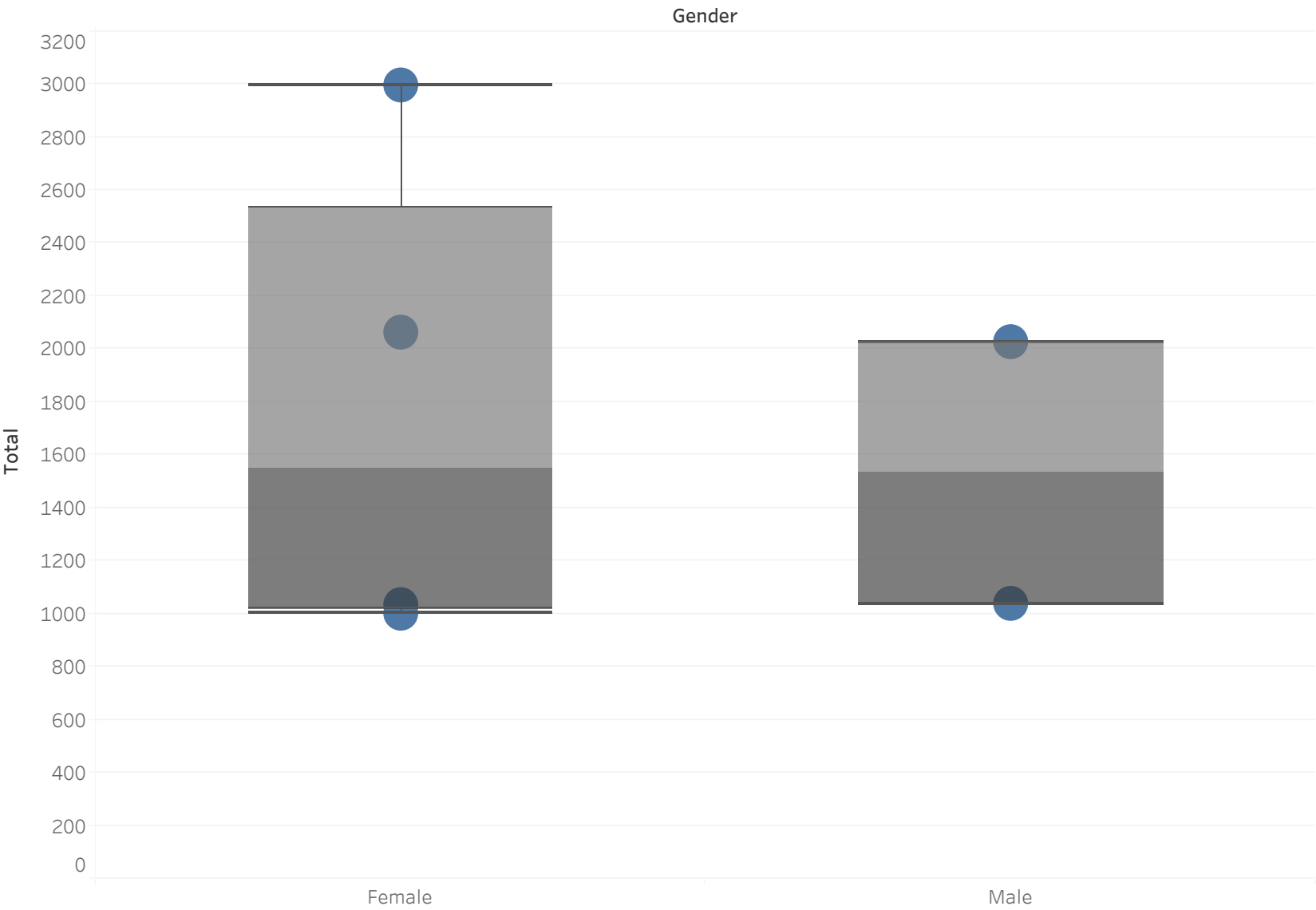
Food and beverages
1,237.7

Product line and sum of Rating. Color shows details about Product line. Size shows sum of Rating. The marks are labeled by Product line and sum of Rating.

Tree Map

Cash	Ewallet		Credit card	Cash
	Credit card			
Ewallet	Cash		Ewallet	
	Credit card			
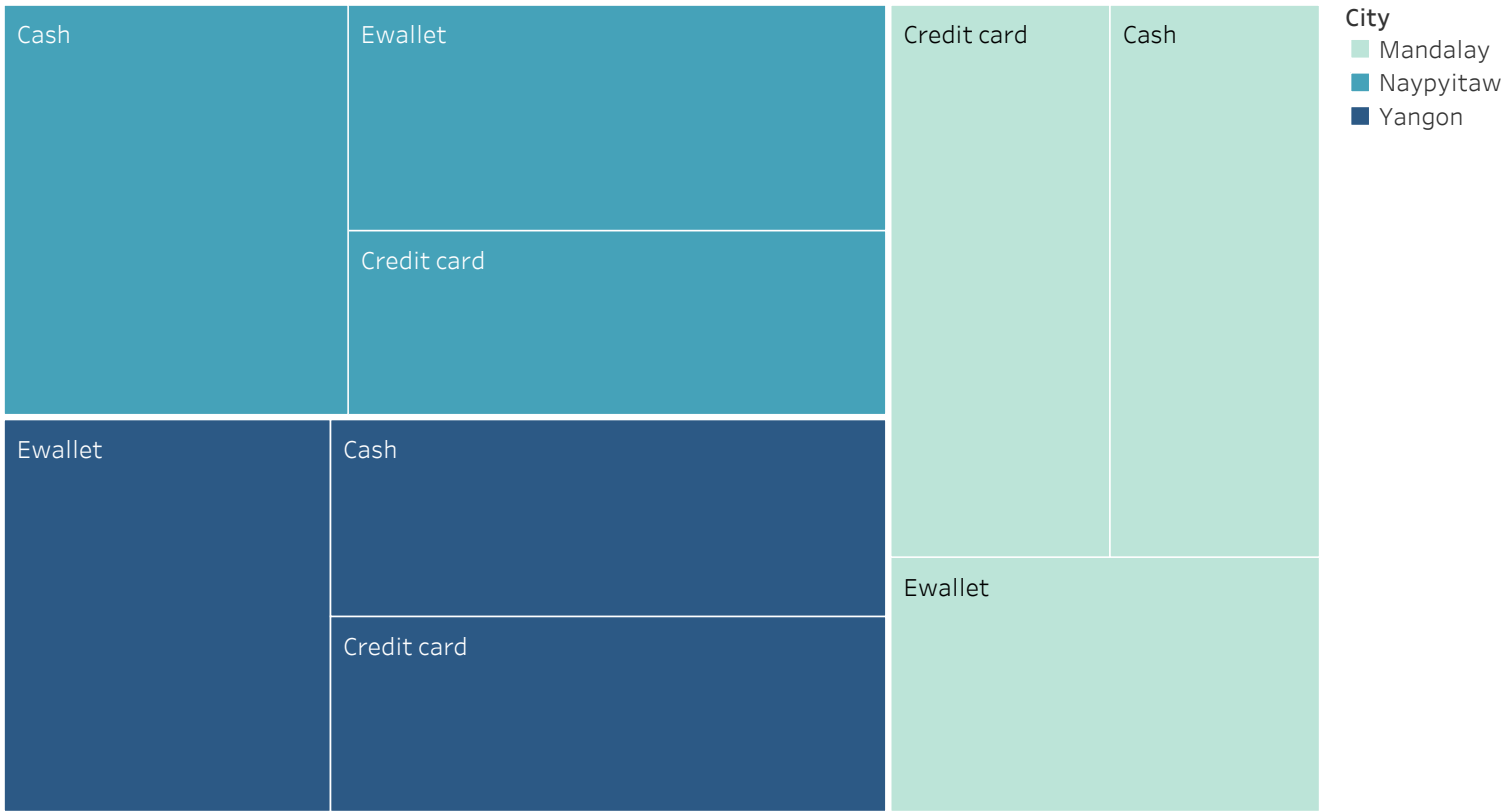
Payment. Color shows details about City. Size shows sum of Cogs. The marks are labeled by Payment.
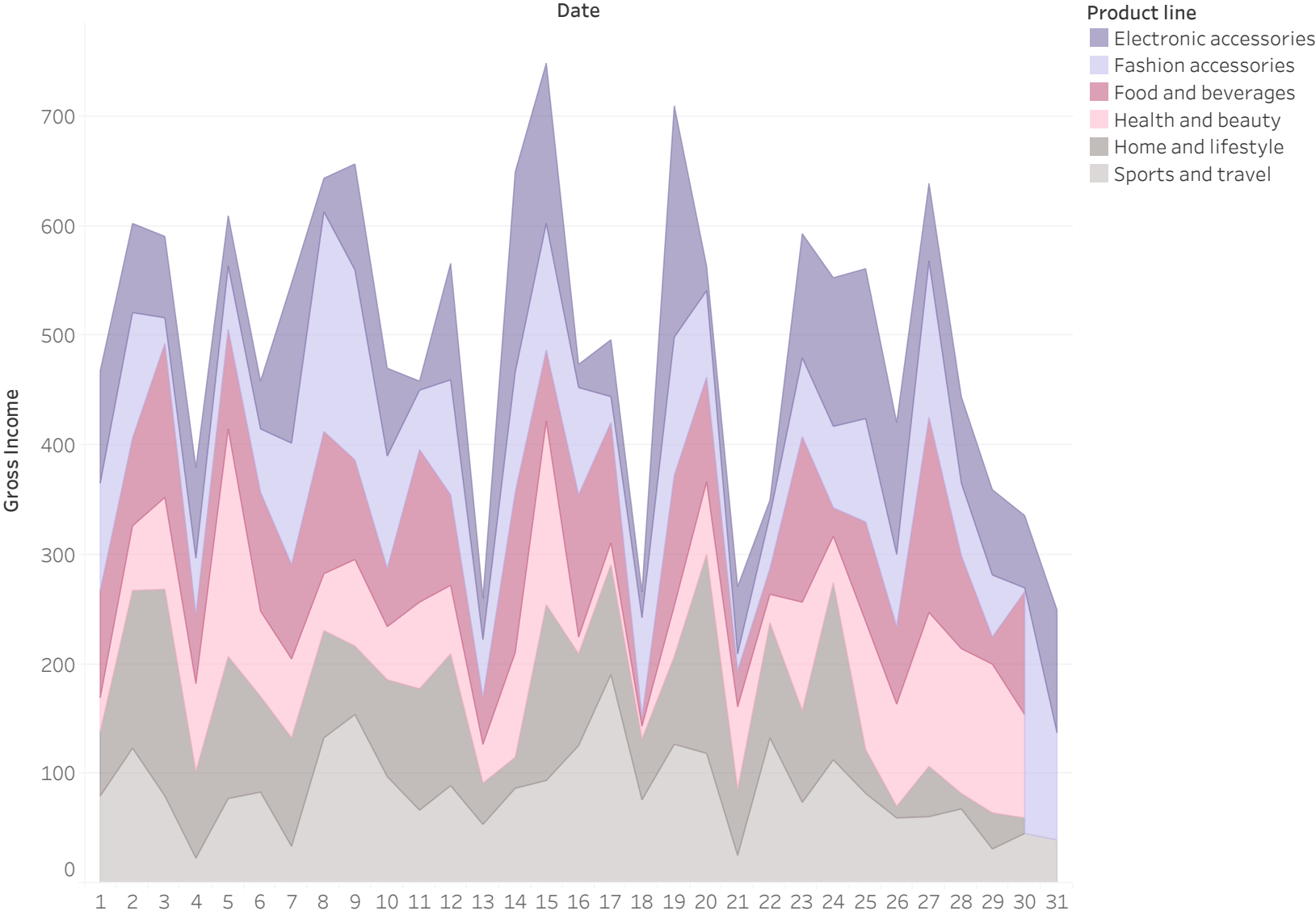
City
- Mandalay
- Naypyitaw
- Yangon

Box Plot

Sum of Total for each Gender. Details are shown for Product line. The data is filtered on Invoice ID, which has multiple members selected.
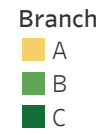
Scatter plot
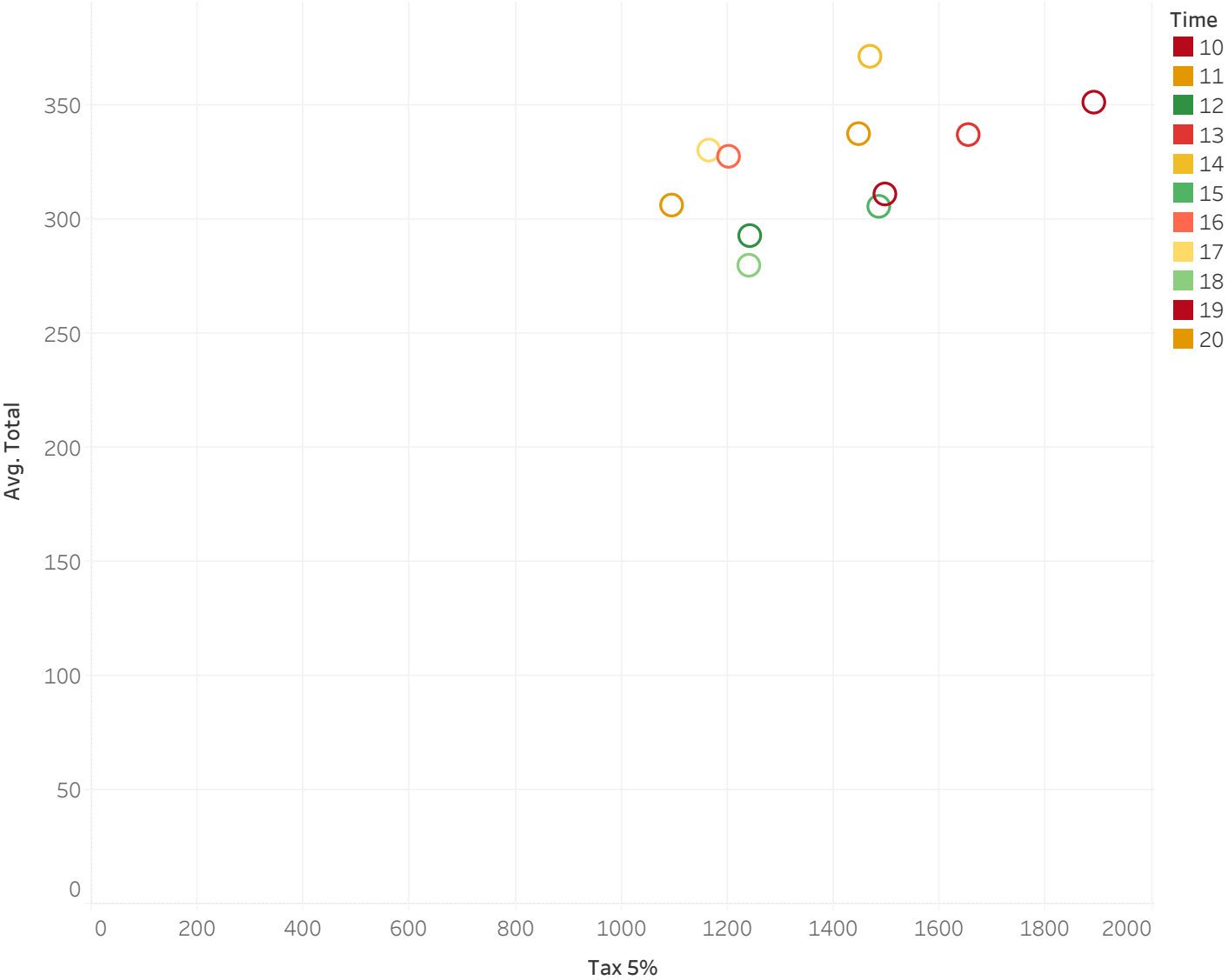
Sum of Tax 5% vs. average of Total. Color shows details about Time. The data is filtered on City, which excludes Null.

Area Chart

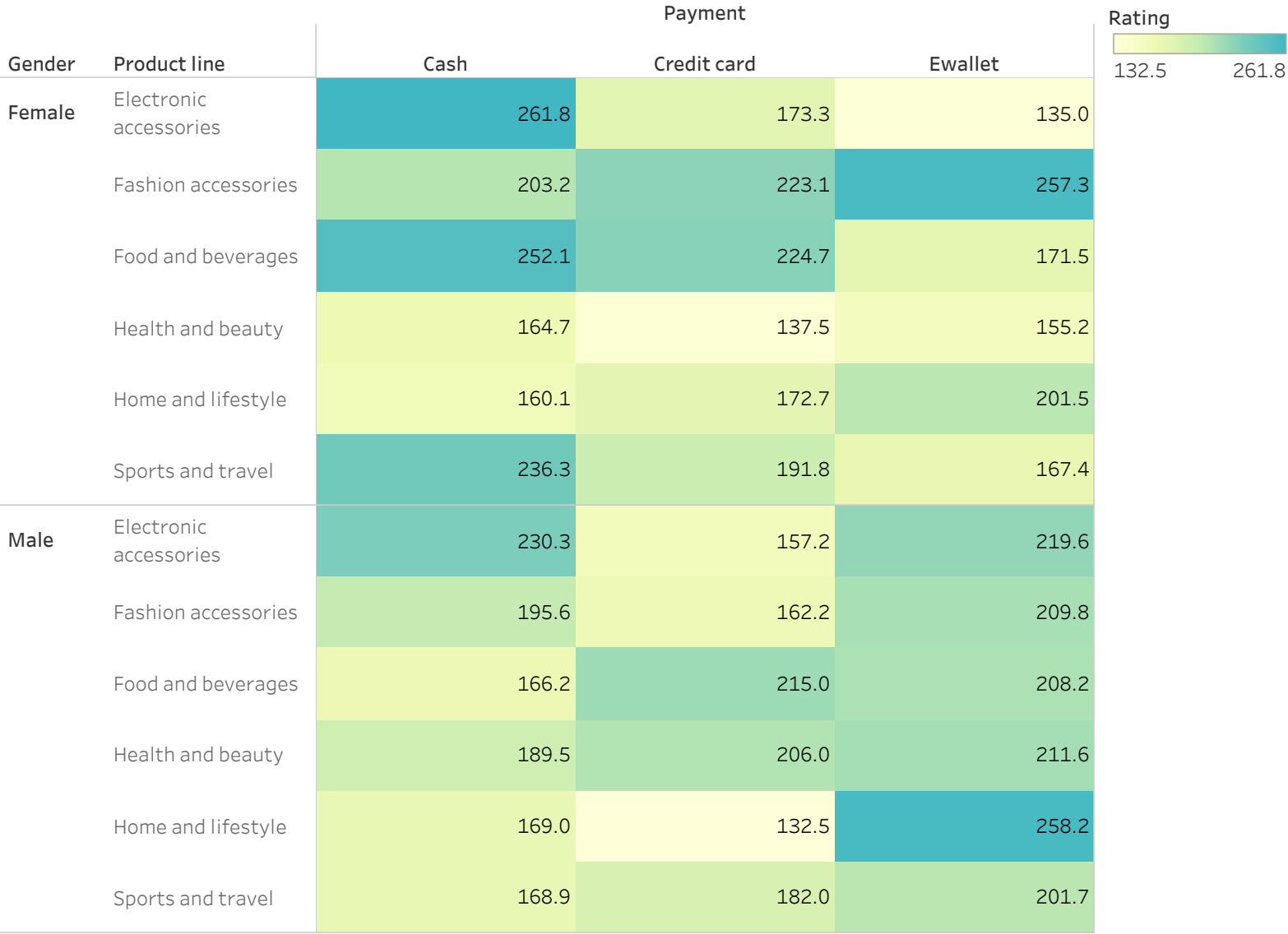Sum of Gross Income for each Date Day. Color shows details about Product line.

Bubble Chart

Branch, Payment and Product line. Color shows details about Branch. Size shows sum of Total. The marks are labeled by Branch, Payment and Product line.
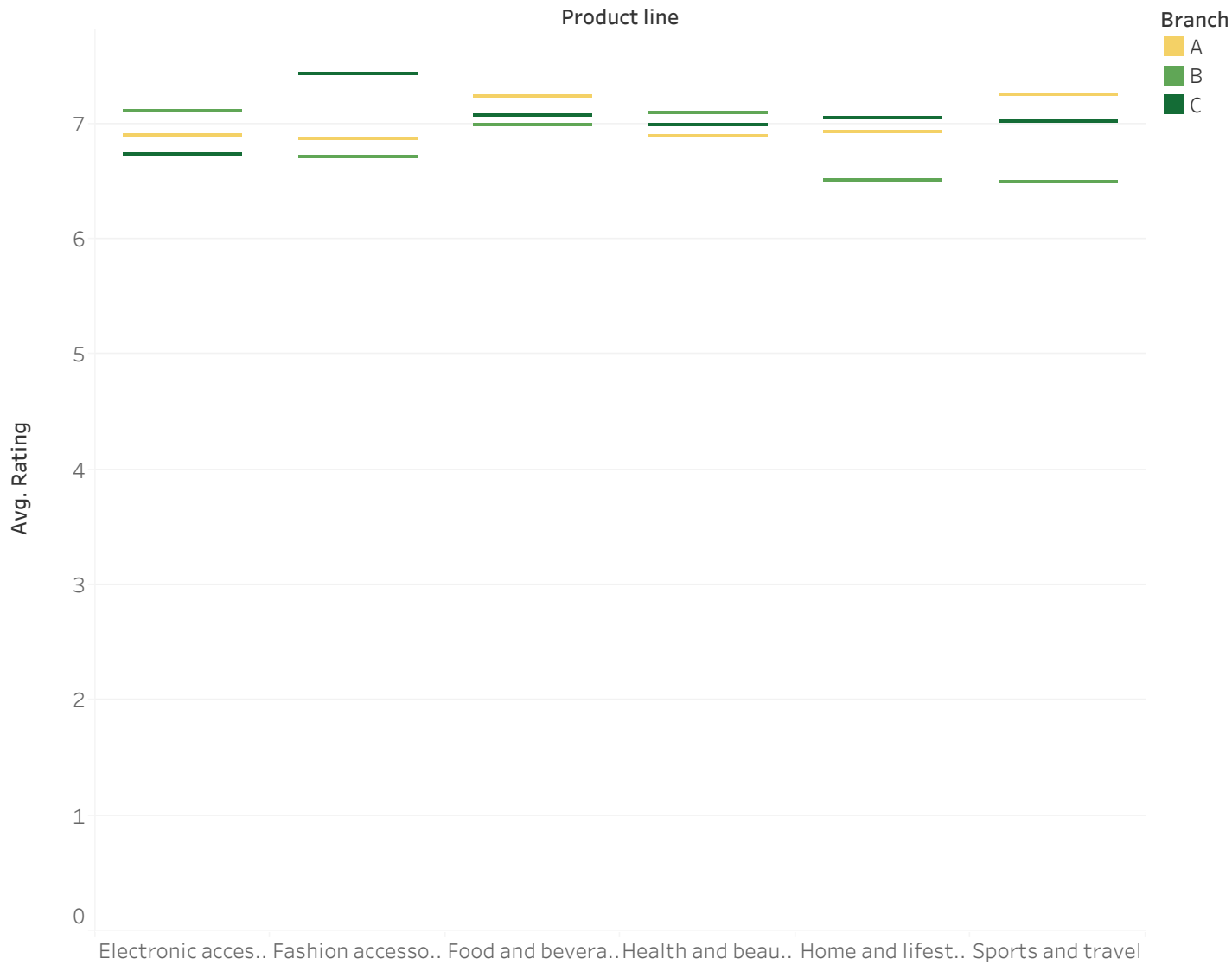
Heat Map

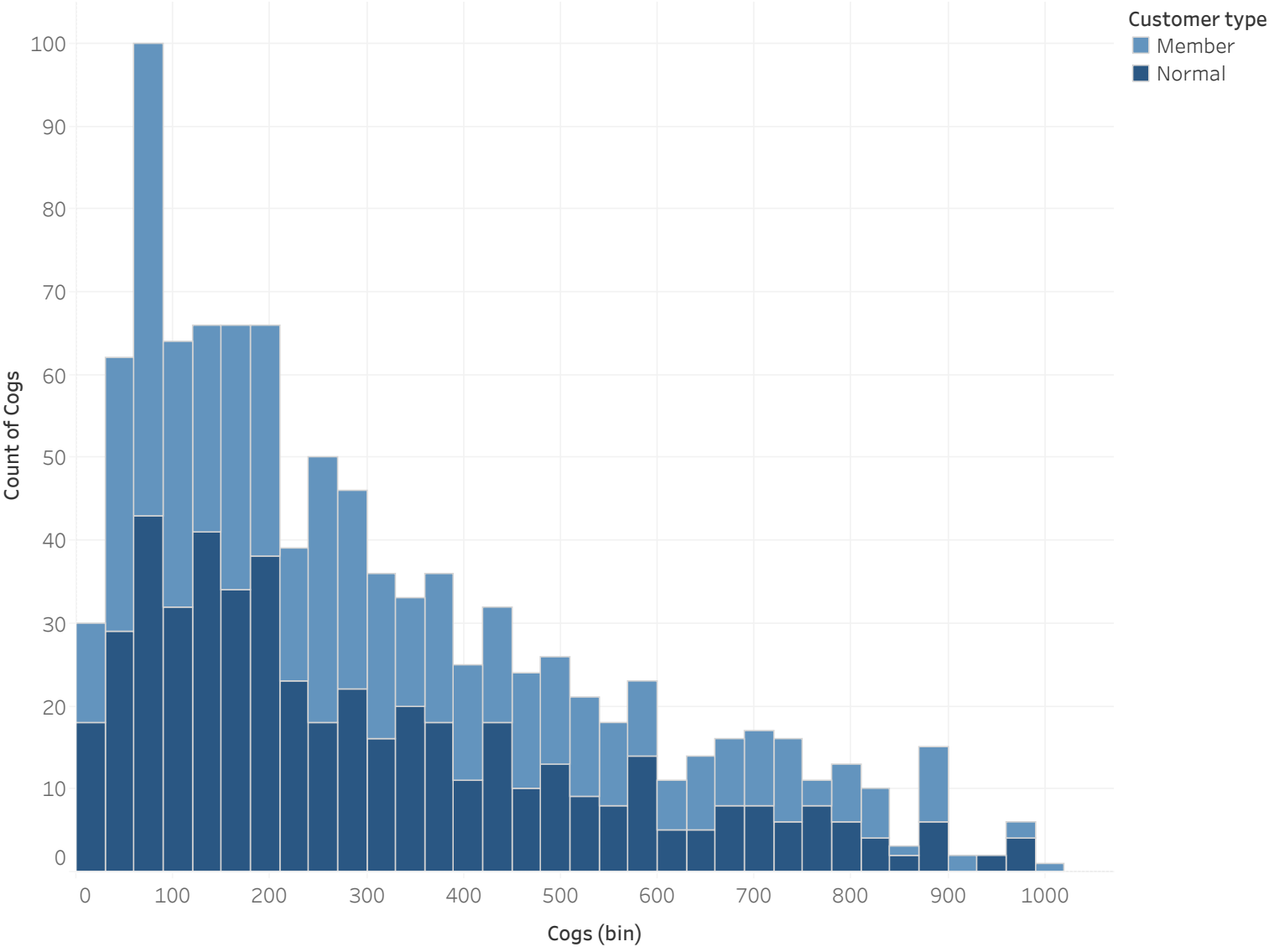| Gender	Product line	Payment		
		Cash	Credit card	Ewallet
Female	Electronic accessories	261.8	173.3	135.0
	Fashion accessories	203.2	223.1	257.3
	Food and beverages	252.1	224.7	171.5
	Health and beauty	164.7	137.5	155.2
	Home and lifestyle	160.1	172.7	201.5
	Sports and travel	236.3	191.8	167.4
Male	Electronic accessories	230.3	157.2	219.6
	Fashion accessories	195.6	162.2	209.8
	Food and beverages	166.2	215.0	208.2
	Health and beauty	189.5	206.0	211.6
	Home and lifestyle	169.0	132.5	258.2
	Sports and travel	168.9	182.0	201.7

Rating
132.5   261.8

Sum of Rating broken down by Payment vs. Gender and Product line. Color shows sum of Rating. The marks are labeled by sum of Rating.

Gnatt Bar Chart

Product line

Branch
- A (yellow)
- B (light green)
- C (dark green)

Avg. Rating

7

6

5

4

3

2

1

0

Electronic acces.. Fashion accesso.. Food and bevera.. Health and beau.. Home and lifest.. Sports and travel
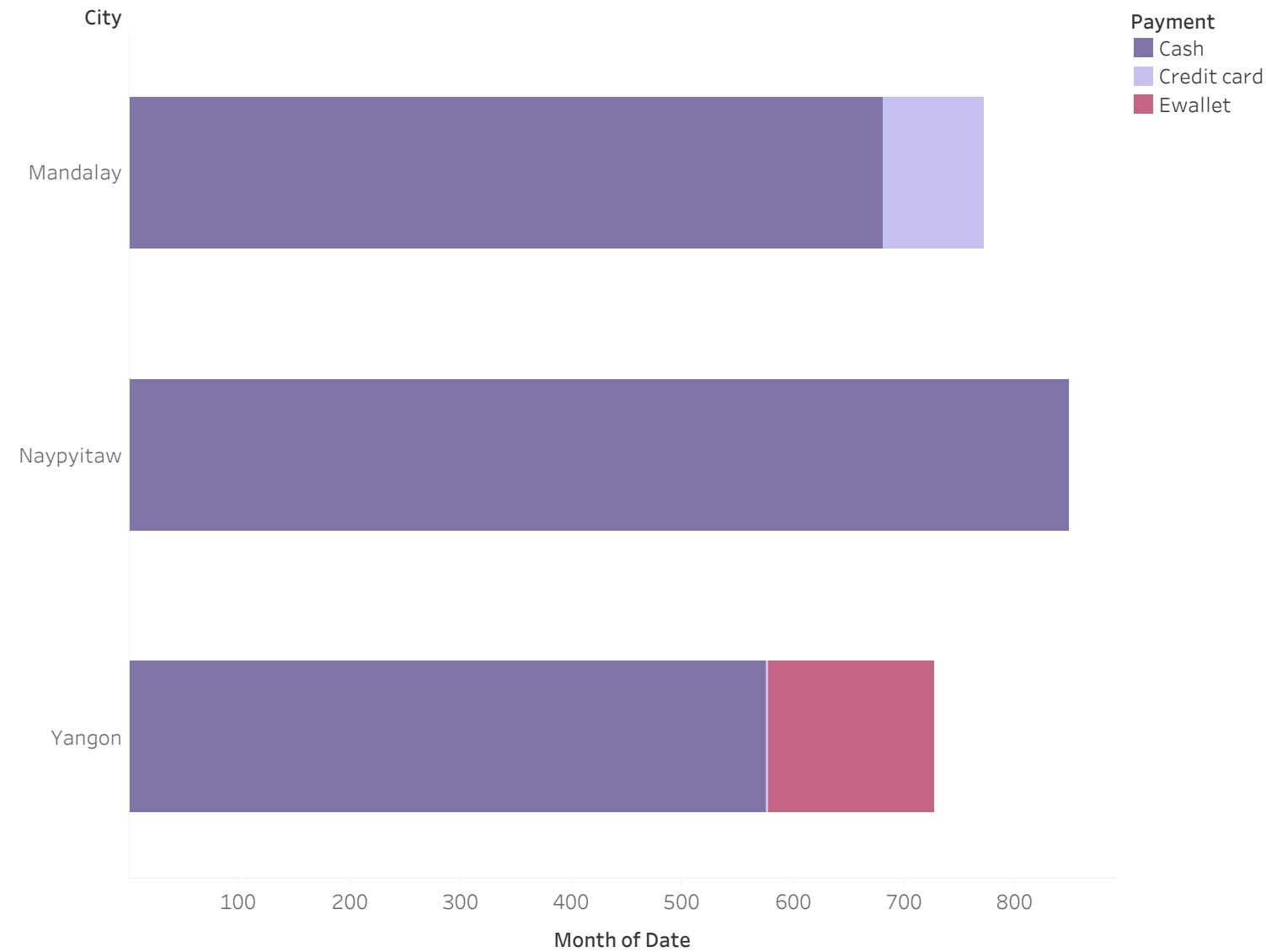
Average of Rating for each Product line. Color shows details about Branch.

Histogram

The trend of count of Cogs for Cogs (bin). Color shows details about Customer type.

Gnatt Chart

City

Payment
- Cash
- Credit card
- Ewallet

Mandalay

Naypyitaw

Yangon

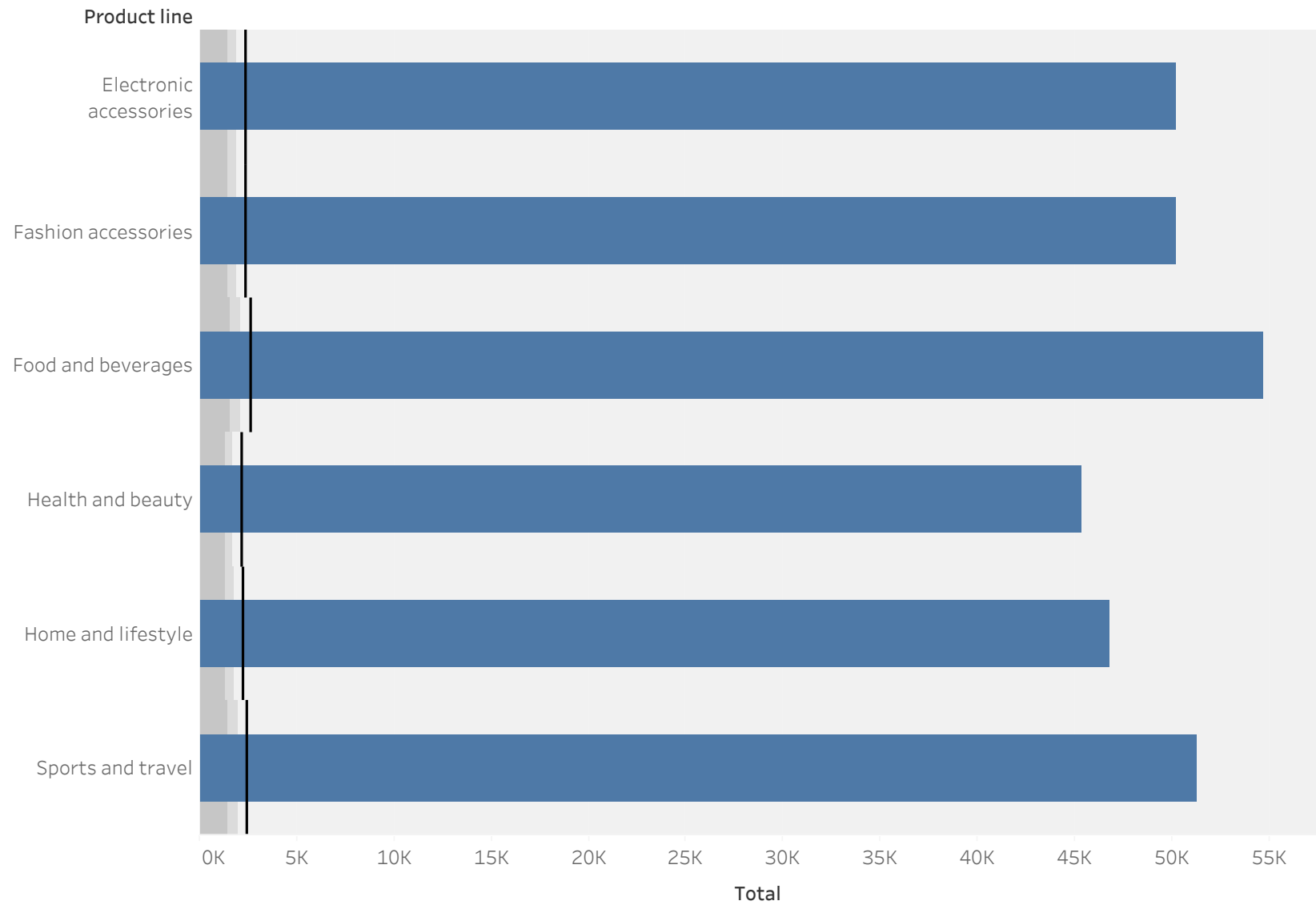100   200   300   400   500   600   700   800

Month of Date

Date Month for each City. Color shows details about Payment. Size shows sum of Tax 5%.
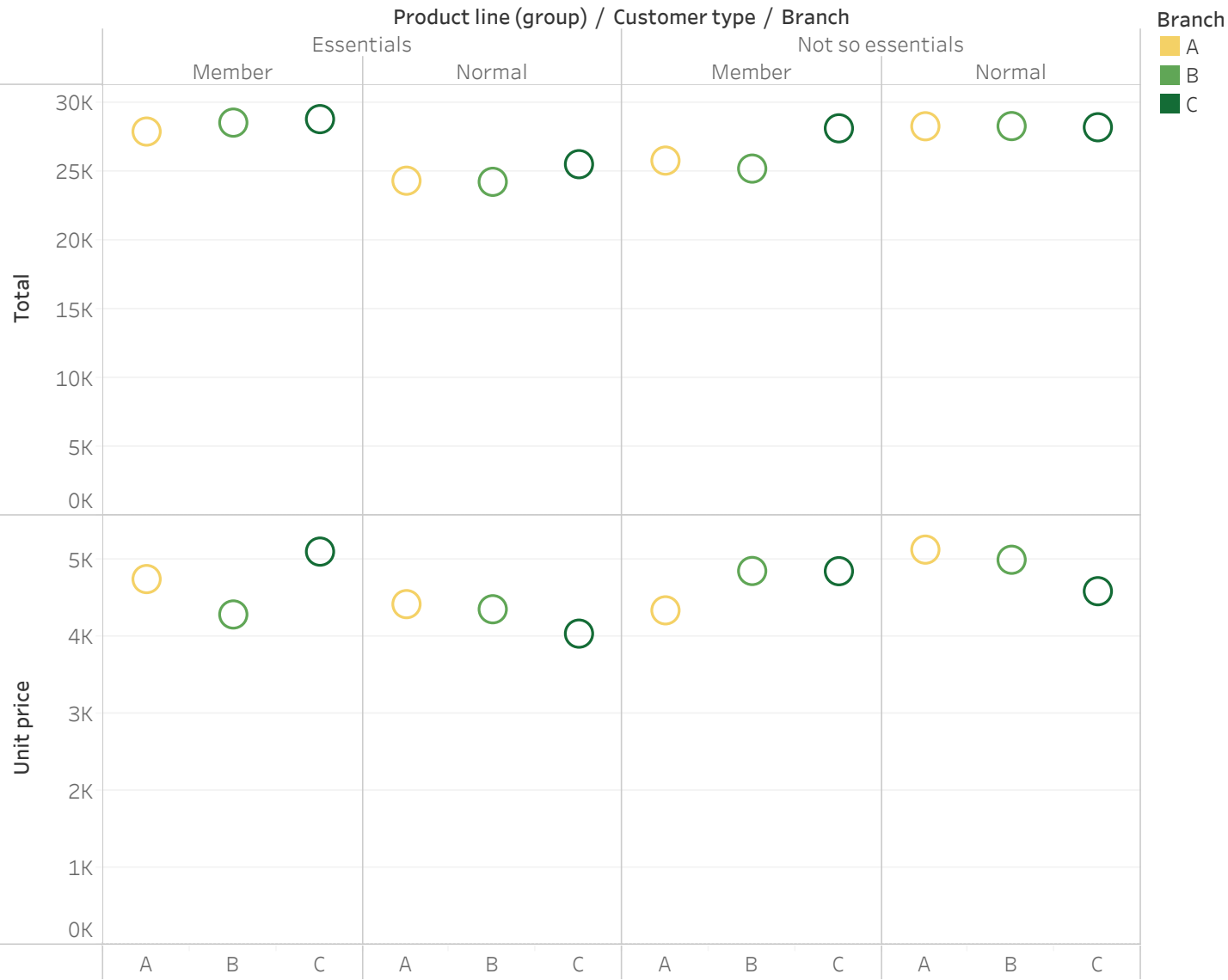
Dual combination Chart
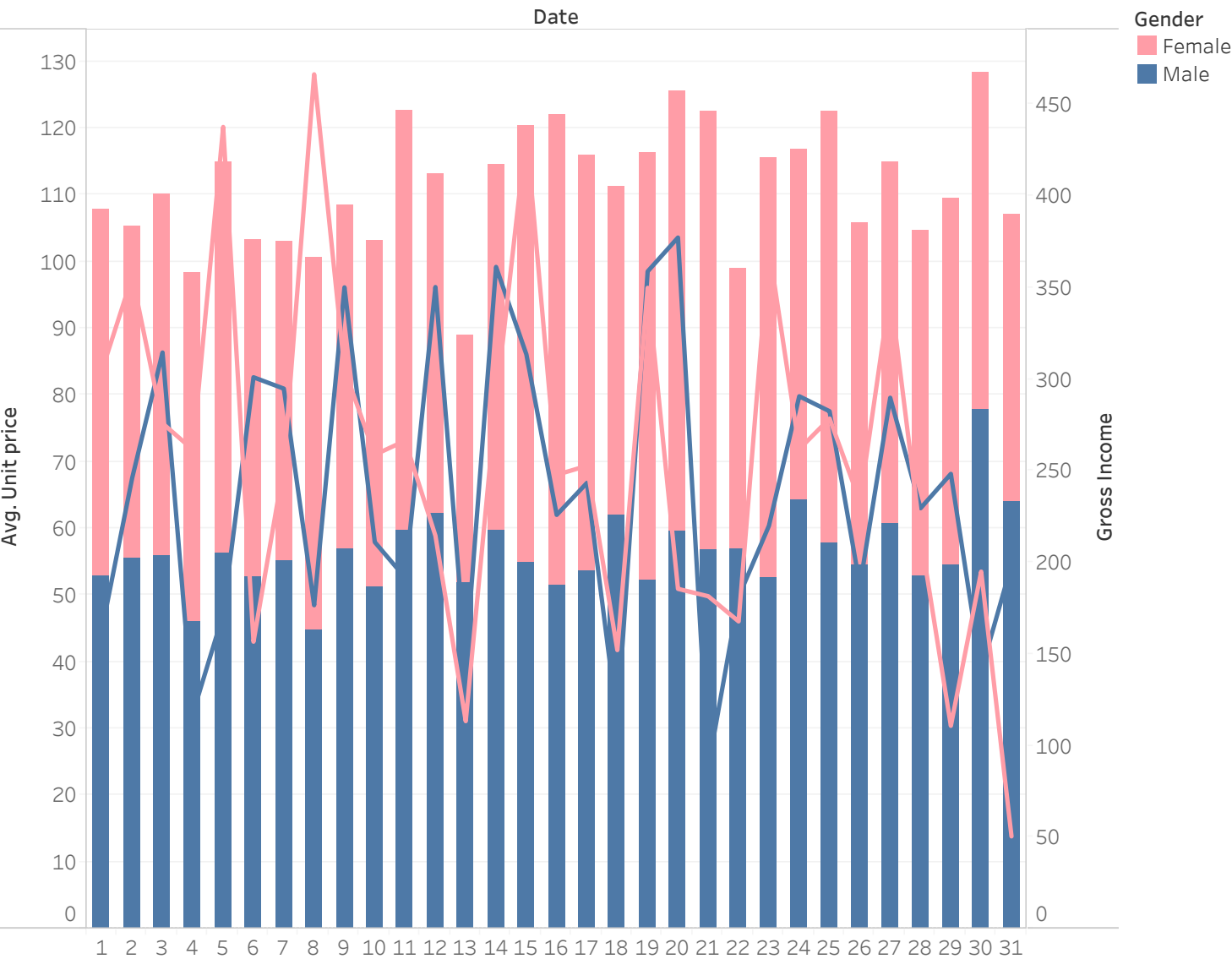
The trends of average of Unit price and sum of Gross Income for Date Day. Color shows details about Gender. The data is filtered on Date Month, which keeps January, February and March.

Bullet Chart

Product line

Sum of Total for each Product line. The data is filtered on Time, which excludes 17.

Comparision scatter plot

Product line (group) / Customer type / Branch

Essentials		Not so essentials	
Member	Normal	Member	Normal

Branch
- A
- B
- C

Sum of Total and sum of Unit price for each Branch broken down by Product line (group) and Customer type. Color shows details about Branch. The data is filtered on Time (group), which excludes Null.