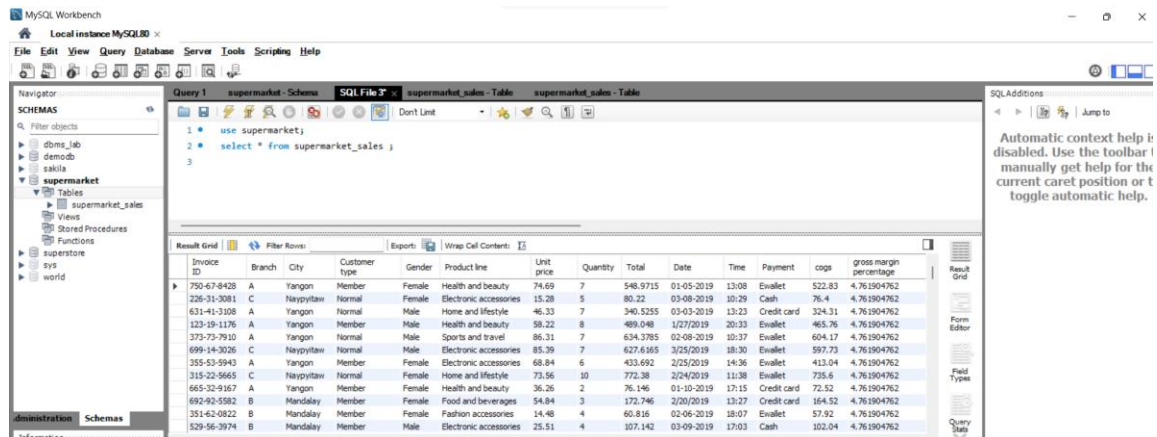


# IBM COGNOS DATA ANALYTICS ASSIGNMENT-3

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## ➤ Uploading data into MySQL



## ➤ Data cleaning

1. Since columns Tax5% and gross income have the same values, we can remove any of the columns so column Tax5% is deleted

**Before :**

| customer type | Gender | Product line           | Unit price | Quantity | Tax 5%  | Total    | Date      | Time  | Payment     | cogs   | gross margin percentage | gross income | Rating |
|---------------|--------|------------------------|------------|----------|---------|----------|-----------|-------|-------------|--------|-------------------------|--------------|--------|
| Member        | Female | Health and beauty      | 74.69      | 7        | 26.1415 | 548.9715 | 1/5/2019  | 13:08 | Ewallet     | 522.83 | 4.761904762             | 26.1415      | 9.1    |
| Normal        | Female | Electronic accessories | 15.28      | 5        | 3.82    | 80.22    | 3/8/2019  | 10:29 | Cash        | 76.4   | 4.761904762             | 3.82         | 9.6    |
| Normal        | Male   | Home and lifestyle     | 46.33      | 7        | 16.2155 | 340.5255 | 3/3/2019  | 13:23 | Credit card | 324.31 | 4.761904762             | 16.2155      | 7.4    |
| Member        | Male   | Health and beauty      | 58.22      | 8        | 23.288  | 489.048  | 1/27/2019 | 20:33 | Ewallet     | 465.76 | 4.761904762             | 23.288       | 8.4    |
| Normal        | Male   | Sports and travel      | 86.31      | 7        | 30.2085 | 634.3785 | 2/8/2019  | 10:37 | Ewallet     | 604.17 | 4.761904762             | 30.2085      | 5.3    |
| Normal        | Male   | Electronic accessories | 85.39      | 7        | 29.8865 | 627.6165 | 3/25/2019 | 18:30 | Ewallet     | 597.73 | 4.761904762             | 29.8865      | 4.1    |
| Member        | Female | Electronic accessories | 68.84      | 6        | 20.652  | 433.692  | 2/25/2019 | 14:36 | Ewallet     | 413.04 | 4.761904762             | 20.652       | 5.8    |
| Normal        | Female | Home and lifestyle     | 73.56      | 10       | 36.78   | 772.38   | 2/24/2019 | 11:38 | Ewallet     | 735.6  | 4.761904762             | 36.78        | 8      |
| Member        | Female | Health and beauty      | 36.26      | 2        | 3.626   | 76.146   | 1/10/2019 | 17:15 | Credit card | 72.52  | 4.761904762             | 3.626        | 7.2    |
| Member        | Female | Food and beverages     | 54.84      | 3        | 8.226   | 172.746  | 2/20/2019 | 13:27 | Credit card | 164.52 | 4.761904762             | 8.226        | 5.9    |
| Member        | Female | Fashion accessories    | 14.48      | 4        | 2.896   | 60.816   | 2/6/2019  | 18:07 | Ewallet     | 57.92  | 4.761904762             | 2.896        | 4.5    |
| Member        | Male   | Electronic accessories | 25.51      | 4        | 5.102   | 107.142  | 3/9/2019  | 17:03 | Cash        | 102.04 | 4.761904762             | 5.102        | 6.8    |

**After:**

```

3 alter table supermarket_sales drop column `Tax5%`;
4 select * from superdata;
5

```

|   | Customer type | Gender | Product line | Unit price             | Quantity | Total | Date     | Time       | Payment | cogs        | gross margin percentage | gross income | Rating  |     |
|---|---------------|--------|--------------|------------------------|----------|-------|----------|------------|---------|-------------|-------------------------|--------------|---------|-----|
| ▶ | n             | Member | Female       | Health and beauty      | 74.69    | 7     | 548.9715 | 01-05-2019 | 13:08   | Ewallet     | 522.83                  | 4.761904762  | 26.1415 | 9.1 |
|   | itaw          | Normal | Female       | Electronic accessories | 15.28    | 5     | 80.22    | 03-08-2019 | 10:29   | Cash        | 76.4                    | 4.761904762  | 3.82    | 9.6 |
|   | n             | Normal | Male         | Home and lifestyle     | 46.33    | 7     | 340.5255 | 03-03-2019 | 13:23   | Credit card | 324.31                  | 4.761904762  | 16.2155 | 7.4 |
|   | n             | Member | Male         | Health and beauty      | 58.22    | 8     | 489.048  | 1/27/2019  | 20:33   | Ewallet     | 465.76                  | 4.761904762  | 23.288  | 8.4 |
|   | n             | Normal | Male         | Sports and travel      | 86.31    | 7     | 634.3785 | 02-08-2019 | 10:37   | Ewallet     | 604.17                  | 4.761904762  | 30.2085 | 5.3 |
|   | itaw          | Normal | Male         | Electronic accessories | 85.39    | 7     | 627.6165 | 3/25/2019  | 18:30   | Ewallet     | 597.73                  | 4.761904762  | 29.8865 | 4.1 |
|   | n             | Member | Female       | Electronic accessories | 68.84    | 6     | 433.692  | 2/25/2019  | 14:36   | Ewallet     | 413.04                  | 4.761904762  | 20.652  | 5.8 |
|   | itaw          | Normal | Female       | Home and lifestyle     | 73.56    | 10    | 772.38   | 2/24/2019  | 11:38   | Ewallet     | 735.6                   | 4.761904762  | 36.78   | 8   |
|   | n             | Member | Female       | Health and beauty      | 36.26    | 2     | 76.146   | 01-10-2019 | 17:15   | Credit card | 72.52                   | 4.761904762  | 3.626   | 7.2 |
|   | lay           | Member | Female       | Food and beverages     | 54.84    | 3     | 172.746  | 2/20/2019  | 13:27   | Credit card | 164.52                  | 4.761904762  | 8.226   | 5.9 |
|   | lay           | Member | Female       | Fashion accessories    | 14.48    | 4     | 60.816   | 02-06-2019 | 18:07   | Ewallet     | 57.92                   | 4.761904762  | 2.896   | 4.5 |
|   | lay           | Member | Male         | Electronic accessories | 25.51    | 4     | 107.142  | 03-09-2019 | 17:03   | Cash        | 102.04                  | 4.761904762  | 5.102   | 6.8 |

## 2. Renamed column 'gross income' to 'revenue'

Query 1: supermarket\_sales - Table

```

1 • use supermarket;
2 • select * from supermarket_sales ;
3 • alter table supermarket_sales drop column `Tax5%`;
4 • alter table `supermarket_sales`
5   change column `gross income` `Revenue` varchar(20) ;
6

```

Result Grid

| City    | Customer type | Gender | Product line           | Unit price | Quantity | Total    | Date       | Time  | Payment     | cogs   | gross margin percentage | Revenue | Rating |
|---------|---------------|--------|------------------------|------------|----------|----------|------------|-------|-------------|--------|-------------------------|---------|--------|
| Yongon  | Normal        | Male   | Food and beverages     | 54.67      | 3        | 172.2105 | 1/21/2019  | 18:00 | Credit card | 164.01 | 4.761904762             | 8.2005  | 8.6    |
| andalay | Normal        | Female | Home and lifestyle     | 40.3       | 2        | 84.63    | 03-11-2019 | 15:30 | Ewallet     | 80.6   | 4.761904762             | 4.03    | 4.4    |
| pyyitaw | Member        | Male   | Electronic accessories | 86.04      | 5        | 451.71   | 2/25/2019  | 11:24 | Ewallet     | 430.2  | 4.761904762             | 21.51   | 4.8    |
| andalay | Normal        | Male   | Health and beauty      | 87.98      | 3        | 277.137  | 03-05-2019 | 10:40 | Ewallet     | 263.94 | 4.761904762             | 13.197  | 5.1    |
| andalay | Normal        | Male   | Home and lifestyle     | 33.2       | 2        | 69.72    | 3/15/2019  | 12:20 | Credit card | 66.4   | 4.761904762             | 3.32    | 4.4    |
| Yongon  | Normal        | Male   | Electronic accessories | 34.56      | 5        | 181.44   | 2/17/2019  | 11:15 | Ewallet     | 172.8  | 4.761904762             | 8.64    | 9.9    |
| Yongon  | Member        | Male   | Sports and travel      | 88.63      | 3        | 279.1845 | 03-02-2019 | 17:36 | Ewallet     | 265.89 | 4.761904762             | 13.2945 | 6      |
| Yongon  | Member        | Female | Home and lifestyle     | 52.59      | 8        | 441.756  | 3/22/2019  | 19:20 | Credit card | 420.72 | 4.761904762             | 21.036  | 8.5    |
| andalay | Normal        | Male   | Fashion accessories    | 33.52      | 1        | 35.196   | 02-08-2019 | 15:31 | Cash        | 33.52  | 4.761904762             | 1.676   | 6.7    |
| Yongon  | Normal        | Female | Fashion accessories    | 87.67      | 2        | 184.107  | 03-10-2019 | 12:17 | Credit card | 175.34 | 4.761904762             | 8.767   | 7.7    |
| andalay | Normal        | Female | Food and beverages     | 88.36      | 5        | 463.89   | 1/25/2019  | 19:48 | Cash        | 441.8  | 4.761904762             | 22.09   | 9.6    |
| Yongon  | Normal        | Male   | Health and beauty      | 24.89      | 9        | 235.2105 | 3/15/2019  | 15:36 | Cash        | 224.01 | 4.761904762             | 11.2005 | 7.4    |

## ➤ Integration of MySQL with Tableau

Tableau - Book1

File Data Server Window Help

Connections: localhost MySQL

Database: supermarket

Table: supermarket\_sales

supermarket\_sales

Need more data? Drag tables here to relate them. [Learn more](#)

supermarket\_sales 16 fields 1000 rows

| Name                    | supermarket_sales |
|-------------------------|-------------------|
| Invoice ID              | 750-67-8428       |
| Branch                  | A                 |
| City                    | Yangon            |
| Customer type           | Member            |
| Gender                  | Female            |
| Product line            | Health and beauty |
| Unit price              | 74.15             |
| Quantity                | 15.2              |
| Total                   | 1107.28           |
| Date                    | 2019-01-21        |
| Time                    | 18:00             |
| Payment                 | Credit card       |
| cogs                    | 164.01            |
| gross margin percentage | 4.761904762       |
| Revenue                 | 8.2005            |
| Rating                  | 8.6               |

Data Source: Sheet1

Tableau - Book1

File Data Worksheet Dashboard Story Analysis Map Format Server Window Help

Columns: supermarket\_sales

Rows:

Sheet1

Drop field here

Drop field here

Drop field here

Data Source: Sheet1

Search: supermarket\_sales

Tables:

- Branch
- City
- Customer type
- Date
- Gender
- Invoice ID
- Payment
- Product line
- Revenue
- Time
- Measure Names
- Cogs
- Gross Margin Percentage
- Quantity
- Rating
- Total
- Unit price
- Latitude (generated)
- Longitude (generated)
- supermarket\_sales (Count)
- Measure Values

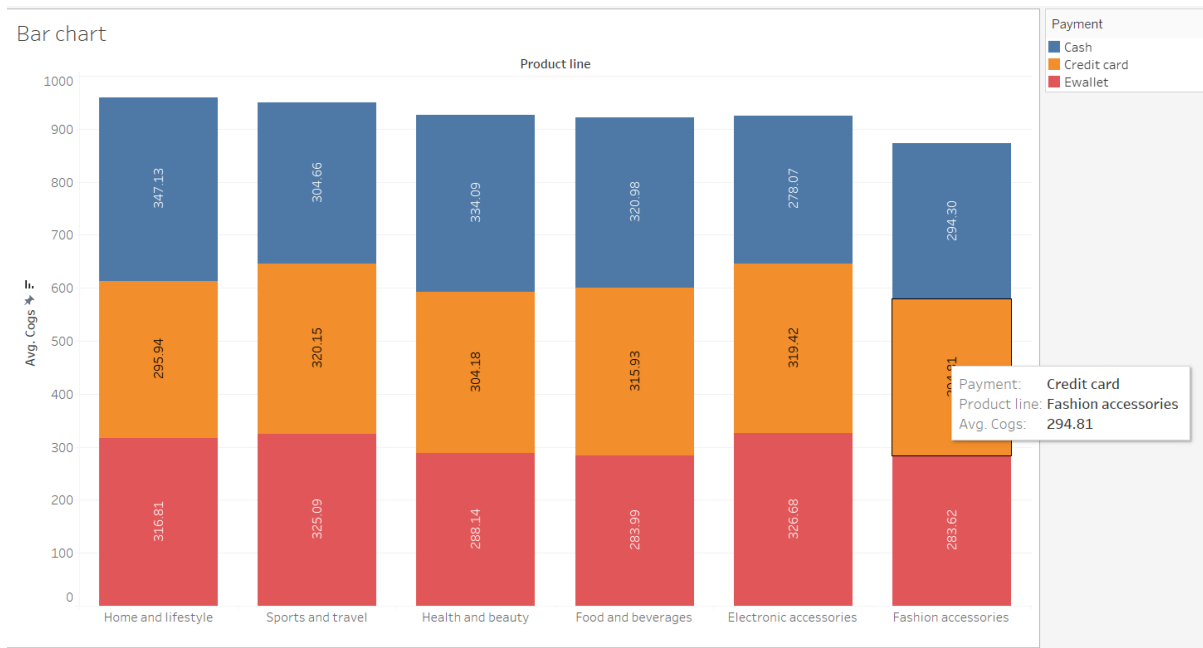
Marks:

- Automatic
- Color
- Size
- Text
- Detail
- Tooltip

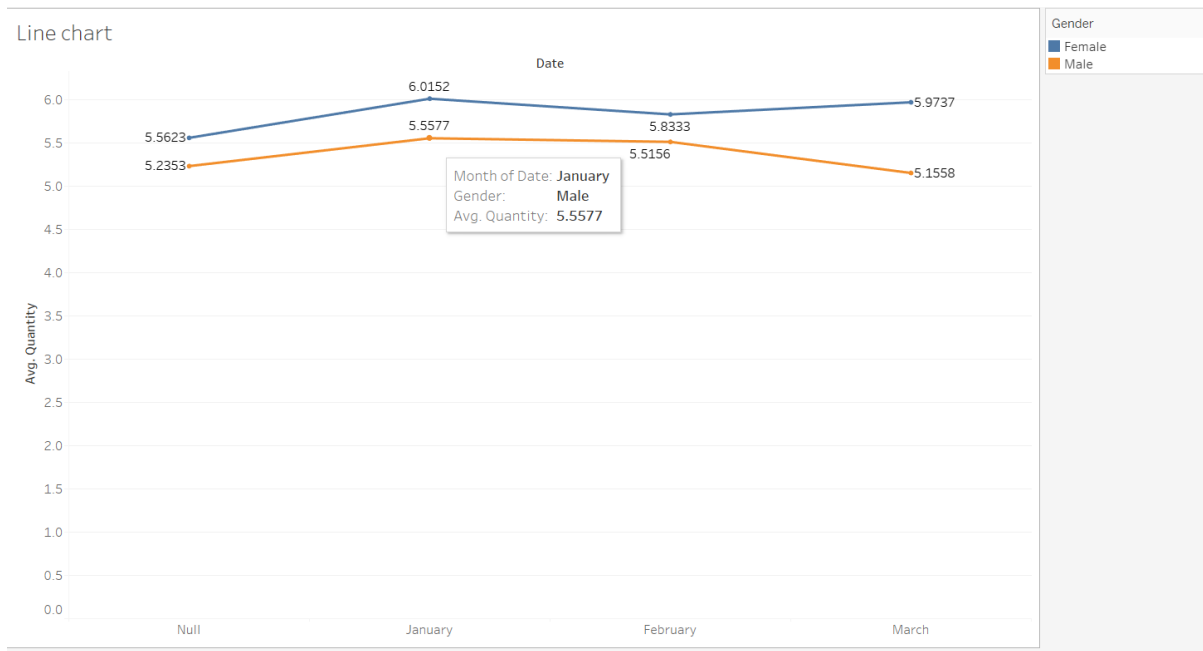
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## ➤ Visualizations of the dataset

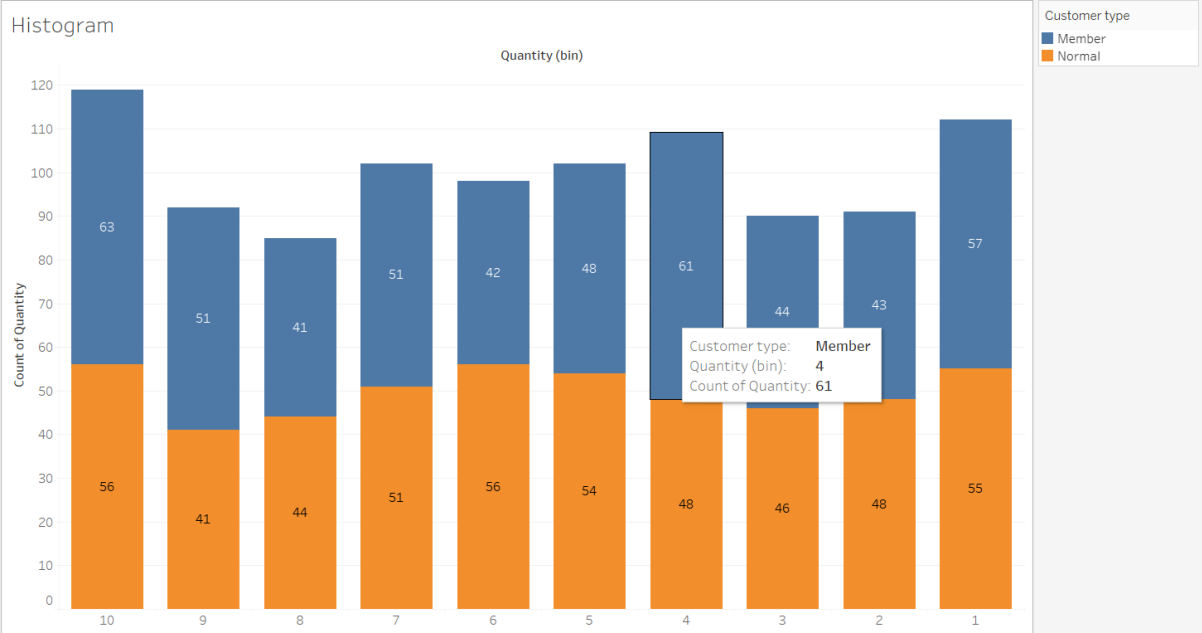
### 1. Bar chart



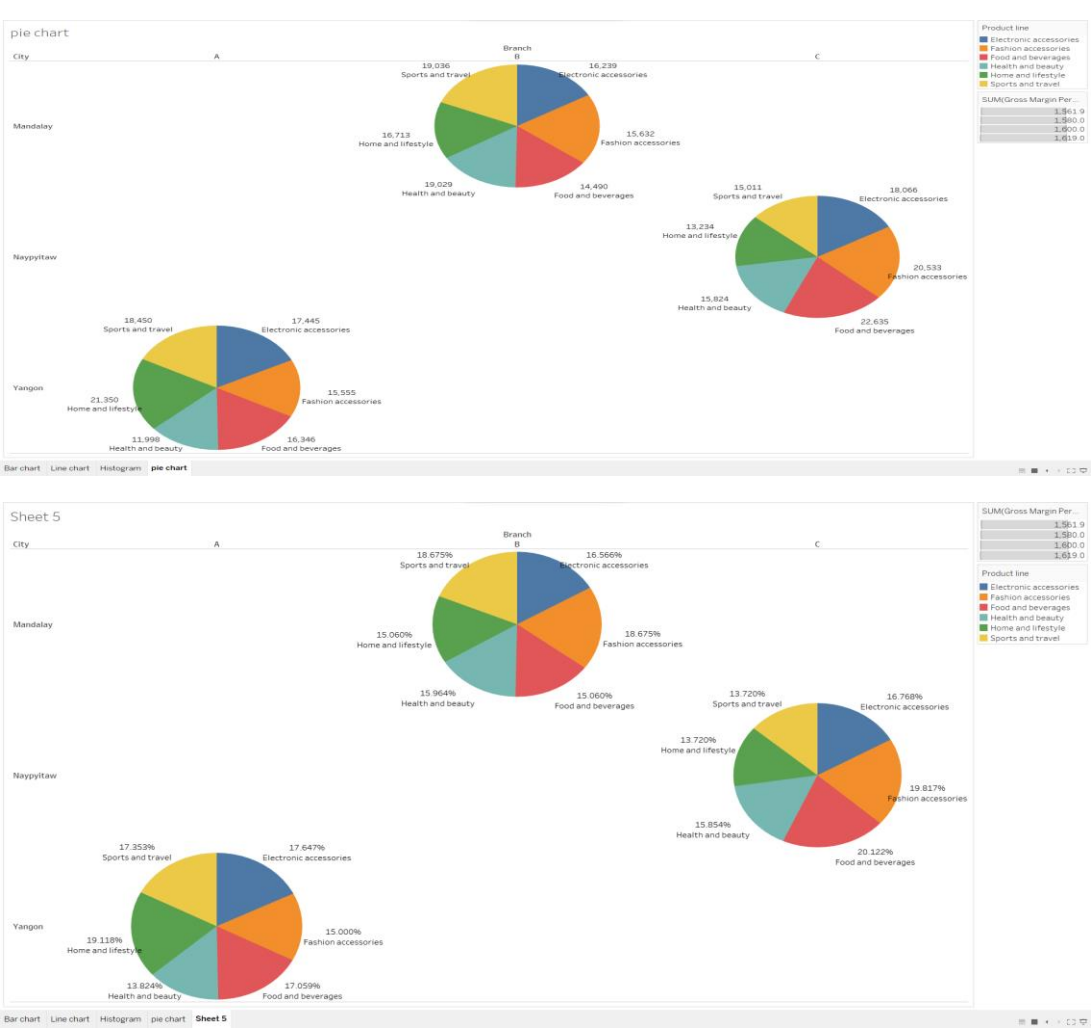
### 2. Line chart



### 3. Histogram



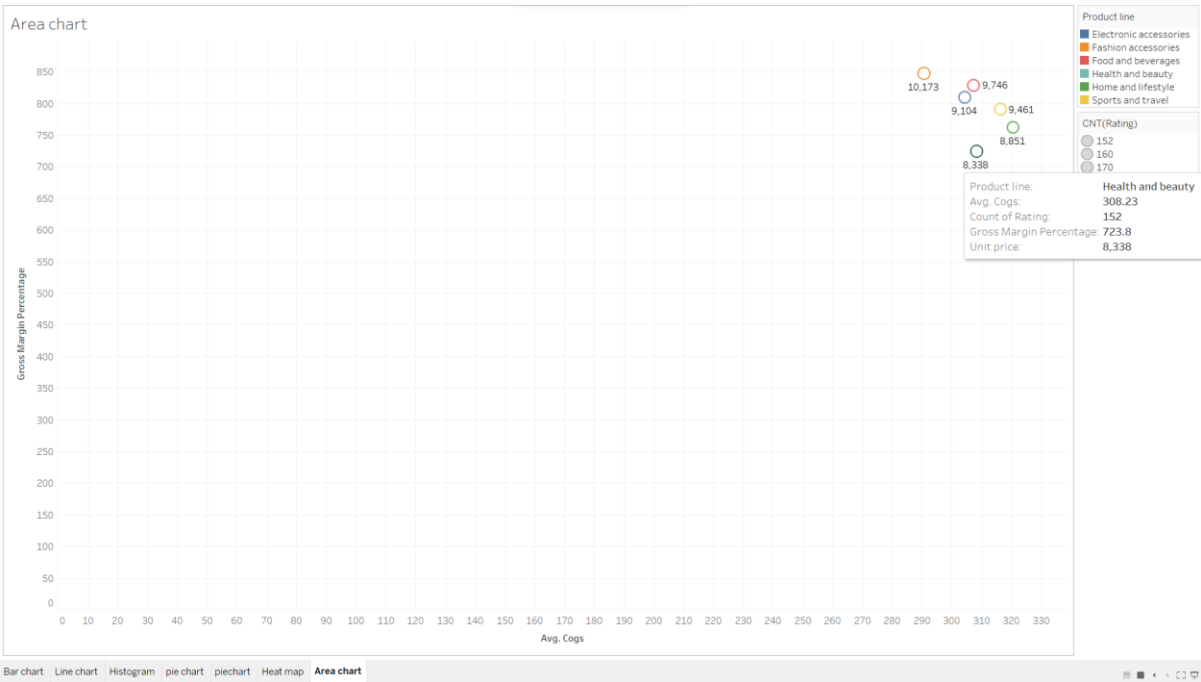
### 4. Pie chart



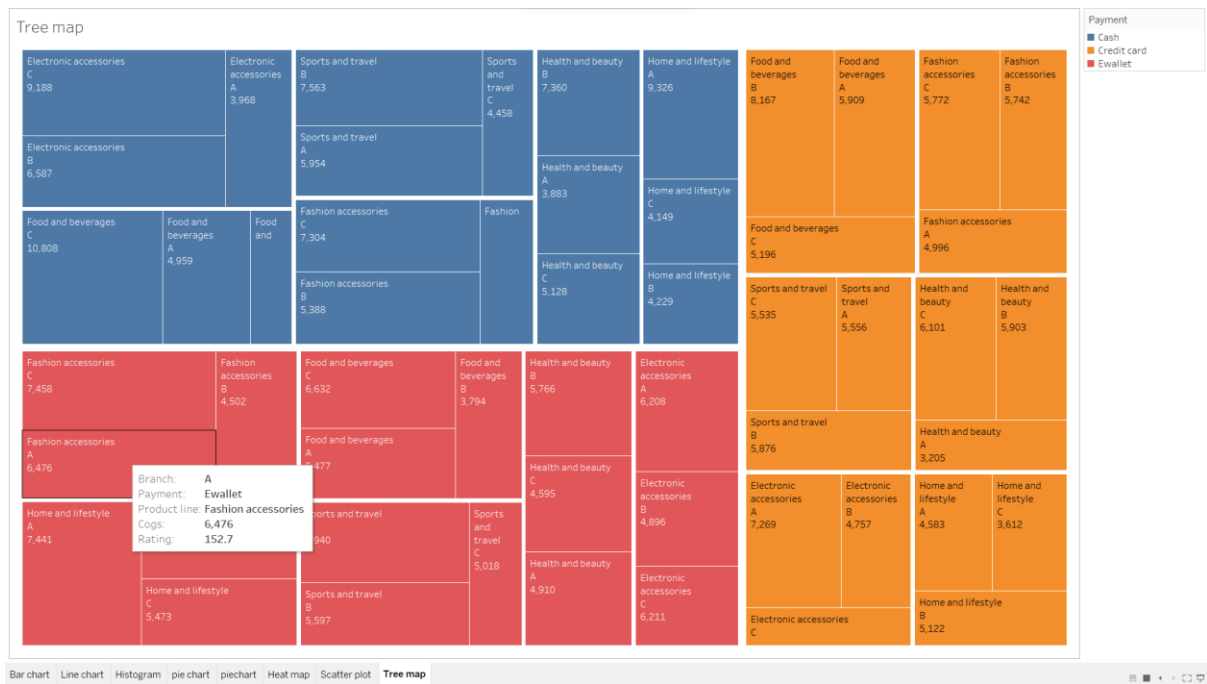
## 5. Heat map



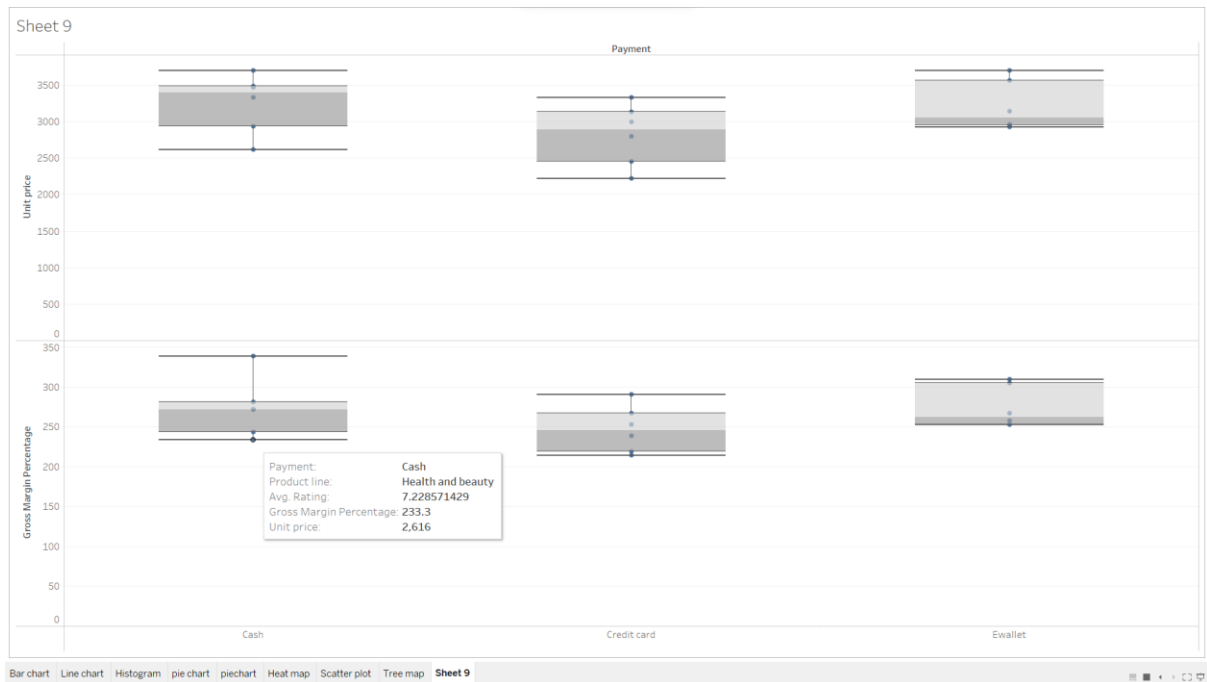
## 6. Scatter plot



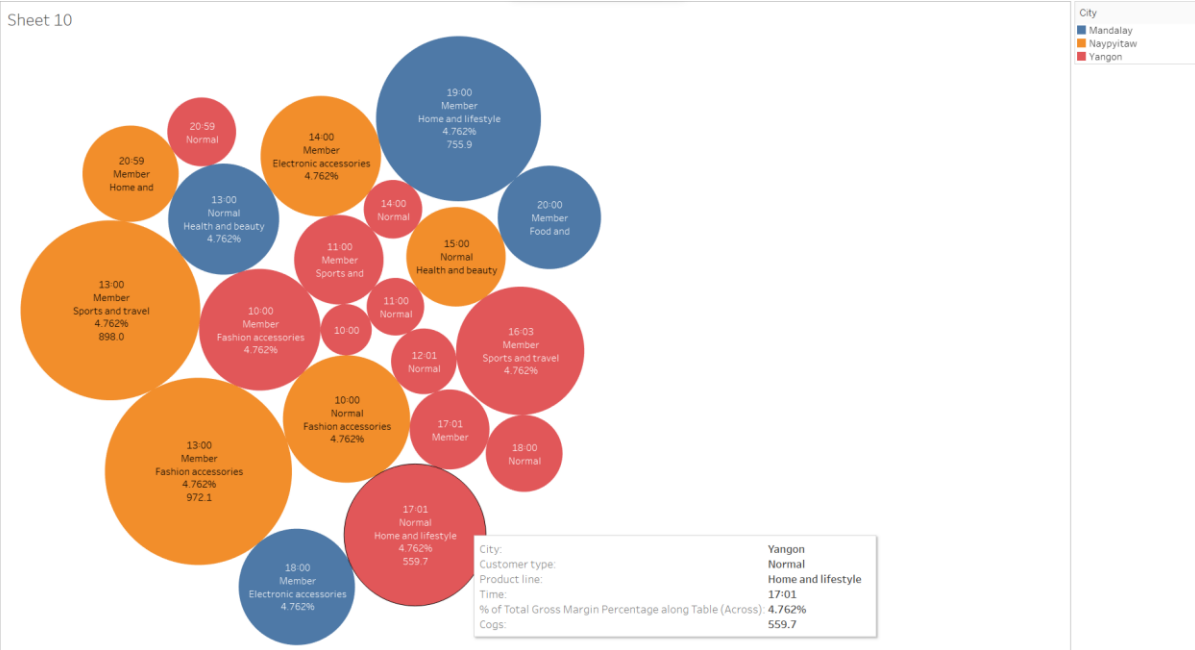
## 7. Tree map



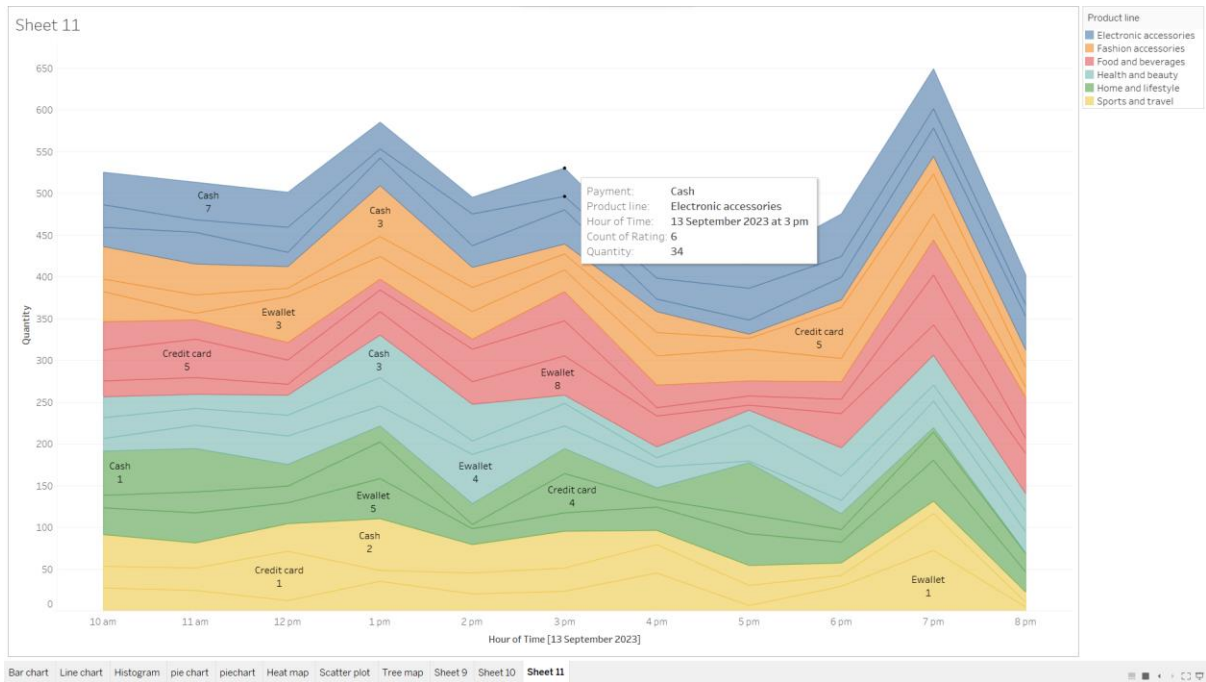
## 8. Box and whisker plots



# 9. Bubble chart



## 10. Area chart



## 11. Stacked Bar chart

