MODULE 5
PBI: INTERACTIVELY PAGE VISUALIZATION

THEME DESCRIPTION

Students can present the results of an analysis of retail sales that have a demographic distribution of outlets by using interactive features for each sales and outlet analysis result in one interactive visualization page like a website..

COURSE SUB-LEARNING OUTCOMES (SUB-CLO)

CLO-3 Sub-CLO-5: Student are able to understand and present statistical methods used to prepare data as input to produce descriptive and inferential measures- C4,

As well as being able to apply visual analysis that supports human analytical reasoning and develop approaches that combine visualization, interactive operations, and computational processing, through processing steps consisting of :

1. Loading the Source Data
2. Create the "Homepage" page
3. Build the "Store Sales" page
4. Build the "District Monthly Sales" page
5. Create a "New Stores" page

PRACTICUM SUPPORT

a. Windows Operating System
b. Java Standard Edition JRE and JDK version 1.8 or above *(installed)*
c. Microsoft Power BI version (min.) 2.86.727.0 64-bit (*installed)*

PRACTICUM STEPS

- To show your creativity as a big data visualizer engineer, then you apply interactive visualization like a website on one page.
- So that later on, your president directors just need to use one page to find out the results of the big data analysis that you have generated for monitoring the sales performance of all outlets owned by the company.

1) Loading the Source Data

The data used in today's practice has been provided in the form of a power bi file, make sure you have downloaded the 5. Data IS-529 ADV.BDA Lab PBI INTERACTIVELY PAGE .pibx file and make sure that the data loaded consists some tables of: Customer, Date (Order), Date (Ship), Geography, Internet Sales, Product, Sales Territory, Temperature.

2) Create a "Homepage" page

This homepage is the main page of the executive menu on the sales performance of the sales department of the Multimedia Nusantara group which contains analytical results from measurements of:

- Sales performance of all existing outlets
- Monthly Sales Performance per District
- Sales Performance of newly opened outlets.

a. on the visualization sheet named the page by "Homepage" and mark as bookmarks: View – Bookmarks -Add, then renamed the dafault bookmarksname to be "Homepage".
b. Place the icon with the appropriate image format that reflects the measurements above, the way to do this is: Insert- Image
c. Enter the command to go to the measurement report on each of these icons by "Format Image" :
    1. Type = Bookmark
    2. Bookmark = Store
    3. Tooltip = Store Sales Overview
d. do steps of 2) a. till 2) c. for the other two icons, with name of page, bookmarks and tooltips that reflect to the contents of the report.

❖ **The form of the resulting page in accordance with figure 6.1. Homepage.**

3) Build the "Store Sales" page

- On the store sales overview page contains 5 (five) kinds of sales reports below.
- On the filter tab in order from top to bottom Filters on this page:
  Chain – City – District – Name – Open Month – Store Type

a. "This Year Sales by Chain" **Pie Chart,** on Visualization tab filled in**:**
    1. Legend = Chain (from Store Table)
    2. Value = This Year Sales (from Sales Table)

b. "Total outlets " and number of "newly opened outlets", each in the form of a visual **Card,** on Visualization tab filled in from the Store table**:**
    1. Fields = New Stores the New Stores Card
    2. Fields = Total Stores for the Total Stores Card

c. "Total Sales Variance by Fiscal Month and District Manager" **Clustered Column Chart,** on Visualization tab filled in:
    1. Axis = FiscalMonth (coming from Time table)
    2. Legend = DM from District table
    3. Total Sales Variance from Sales table

d. "This Year Sales by Postal Code and Store Type" **Map,** on Visualization tab filled in:
    1. Location = PostalCode from Store table
    2. Legend = Store Type (idem)
    3. Size = This Year Sales from Sales table

e. "Total Sales Variance %, Sales Per Sq Ft and This Year Sales by District and District" **Scatter Chart,** on Visualization tab filled in:
    1. Details = District from District ; StoreNumber (from Store table)
    2. Legend = District
    3. X Axis = Total Sales Variance %
    4. Y Axis = Sales Per Sq Ft
    5. Size = This Year Sales

❖ **The form of the resulting page in accordance with figure 6.2. Store Sales**

4) Build the "District Monthly Sales" page

- On the store sales overview page contains 5 (five) kinds of sales reports below.
- On the filter tab in order from top to bottom Filters on this page:

  Category – Chain – District – DM – FiscalMonth – Name

a. "District Manager" **Slicer,** on Visualization tab filled in Field = DM from District table

b. "This Year Sales by Store Number Name" **Clustered Column Chart,** on Visualization tab filled in from the Store table**:**

5.

1. Axis = Store Number Name (coming from Store table)
2. Values = This Year Sales from Sales table

c. "Total Sales Variance % by Fiscal Month" **Clustered Column Chart,** on Visualization tab filled in from the Store table**:**

1. Axis = FiscalMonth (coming from Time table)
2. Values = Total Sales Variance % from Sales table

d. "Last Year Sales and This Year Sales by Fiscal Month" **Area Chart,** on Visualization tab filled in from the Store table**:**

1. Axis = FiscalMonth (coming from Time table)
2. Values = Last Year Sales ; This Year Sales (both coming from Sales table)

e. "Total Sales Variance %, Avg $/Unit TY and This Year Sales by Category and Category" **Scatter Chart,** on Visualization tab filled in:

1. Details = Category (from Item table)
2. Legend = Category
3. X Axis = Total Sales Variance % (Sales Table)
4. Y Axis = Avg $/Unit TY
5. Size = This Year Sales

❖ **The form of the resulting page in accordance with figure 6.3. District Monthly Sales**

5) **Create a "New Stores" page**

- On the store sales overview page contains 5 (five) kinds of sales reports below.
- On the filter tab in order from top to bottom Filters on this page:

  Chain – City – District – Name – Open Month - Store Type

a. "This Year Sales by Postal Code and Chain" **Map,** on Visualization tab filled in**:**

1. Location = PostalCode (from Store Table)
2. Legend = Chain
3. Size = This Year Sales

b. "Open Store Count by Open Month and Chain" **Clustered Column Chart,** on Visualization tab filled in from the Store table**:**

1. Axis = OpenMonth (coming from Store table)
2. Legend = Chain
3. Values = Open Store Count

c. "Sales Per Sq Ft by Name" **Stacked Column Chart,** on Visualization tab filled in:

1. Axis = Name (coming from Store table)
2. Values = Sales Per Sq Ft from Sales table

d. "This Year Sales by Fiscal Month" **Line Chart,** on Visualization tab filled in:

1. Axis = FiscalMonth (coming from Time table)
2. Size = This Year Sales from Sales table

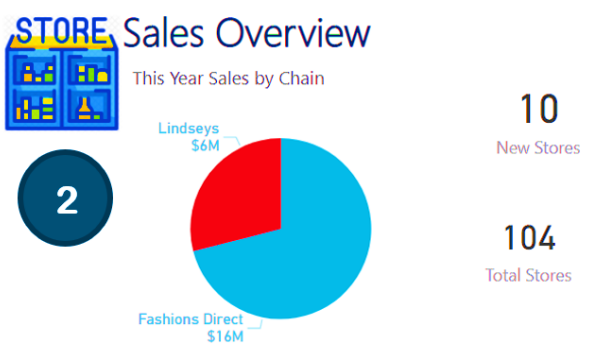
e. "Name" **Slicer,** on Visualization tab filled in :

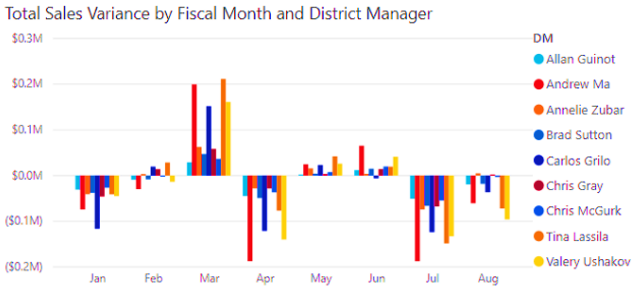
Field = Name (from Store table)

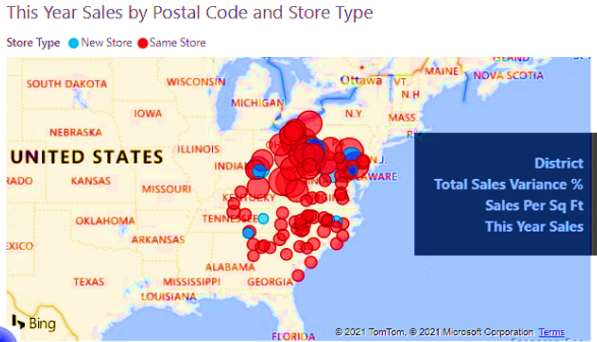
❖ **The form of the resulting page in accordance with figure 6.4. New Stores.**

❖ Finally, save all pages on 5. IA IS-529 Lab W05 PBI INTERACTIVELY PAGE yourname-NIM.pbix and submit to e-Learning IS-529 Lab Week#5.

Figure 5.1 Homepage







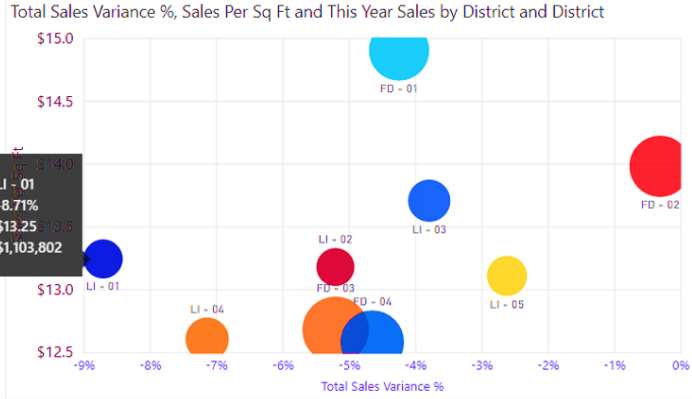


Figure 5.2 Store Sales

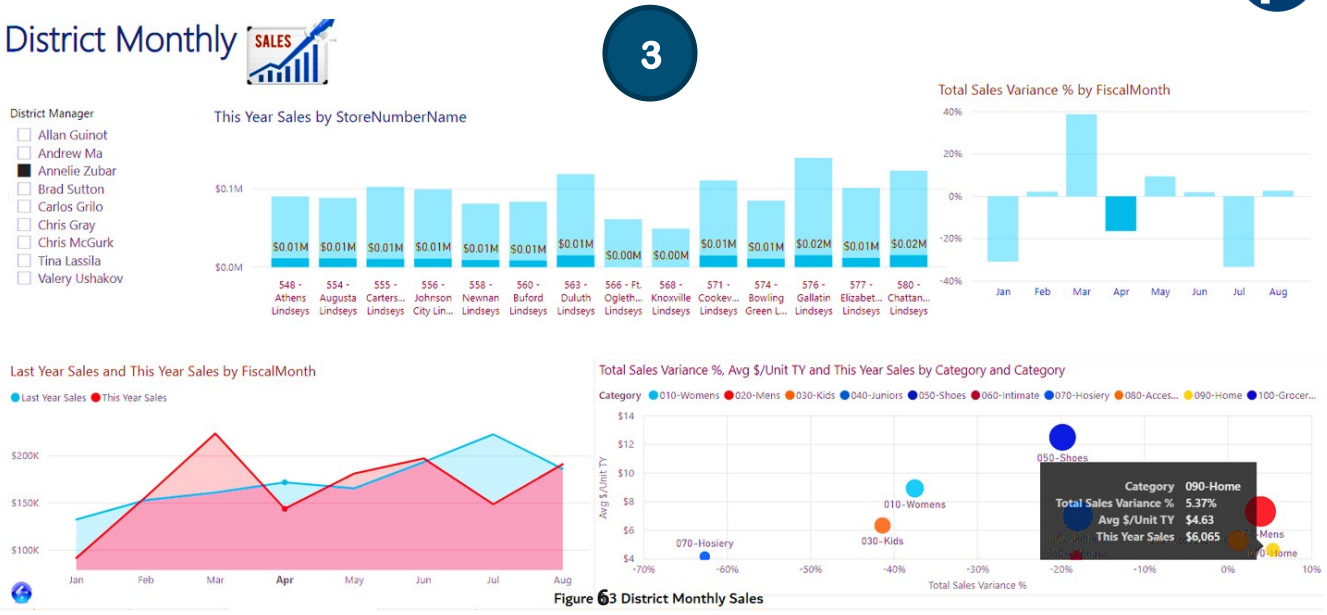


Figure 6.3 District Monthly Sales

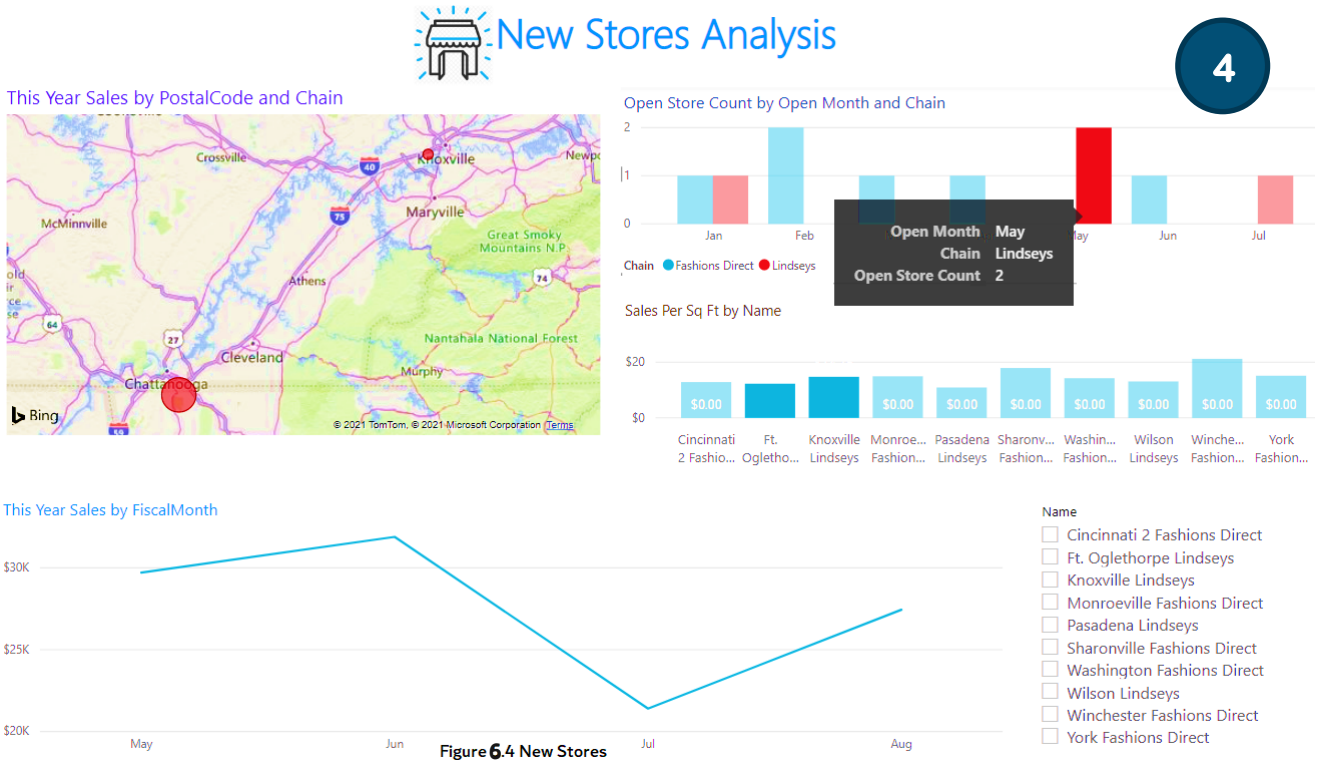


Figure 6.4 New Stores

REFERENCE

(1) https://docs.microsoft.com/en-us/power-bi/

(2) https://community.powerbi.com/

(3) Brett Powell. 2017. Microsoft Power BI Cookbook. Packt Publishing Ltd., Livery Place 35, Livery Street, Birmingham, B3 2PB, UK.

The End