Data Visualization and Dashboards

Assignment:

Car Sales Dataset

Leonardo Rodriguez

PART 1

Dataset Used in this Assignment

The dataset used in this lab comes from the following source: https://community.ibm.com/accelerators/?context=analytics&type=Data&product=Cognos%20Analytics&industry=Automotive in the **IBM Accelerator Catalog**. The Terms of use for such are located at https://developer.ibm.com/terms/ibm-developer-terms-of-use/.

Scenario

As a regional manager for a chain of car dealerships you need to create some visualizations to allow you to understand your car sales and profits for each dealer.

Tasks

Create visualizations for the following captured KPI metrics:

1. **'Quantity Sold' by 'Dealer ID'** - as a bar chart, sorted in either ascending or descending order of quantity sold, and change the chart title to "Quantity Sold by Dealer ID"
2. **'Profit' by 'Date' and 'Model'** - as a line chart, and give the chart a title of "Profit by Date and Model"
3. **'Profit' by 'Year' and 'Dealer ID'** - as a column chart, titled "Profit by Year and Dealer ID" with the data columns in red

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4. **‘Sum of Profits’ for ‘Hudson model cars’ by ‘Dealer ID’** - as a line chart, titled “Profit of Hudson Models by Dealer ID”. Also remove the horizontal gridlines from the chart, put the legend on the right side of the chart, and color the series outline in green.

PART 2

Software

Cognos Analytics from IBM.

Dataset

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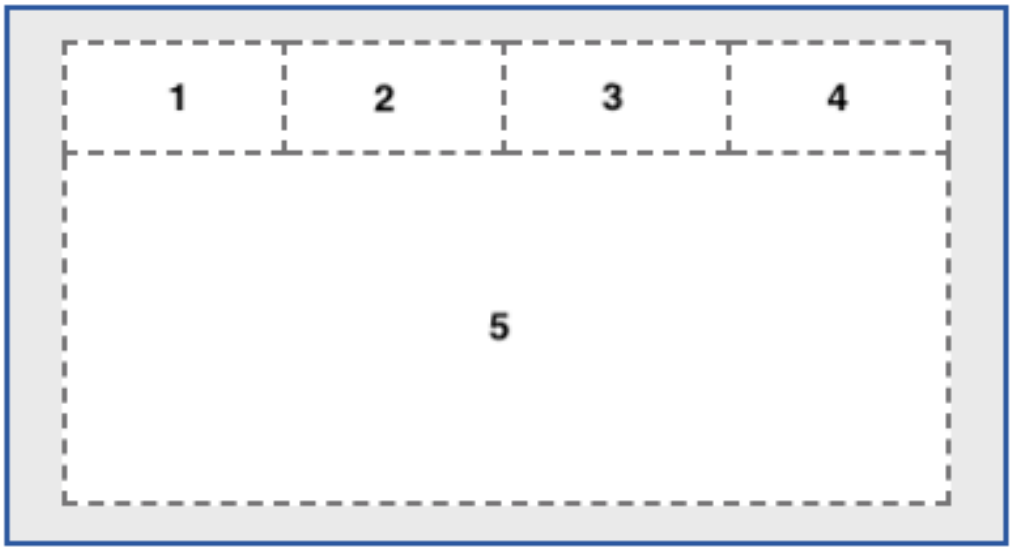
Scenario

As a regional manager for a chain of car dealerships you need to build out a dashboard to allow you to understand your sales and service departments.

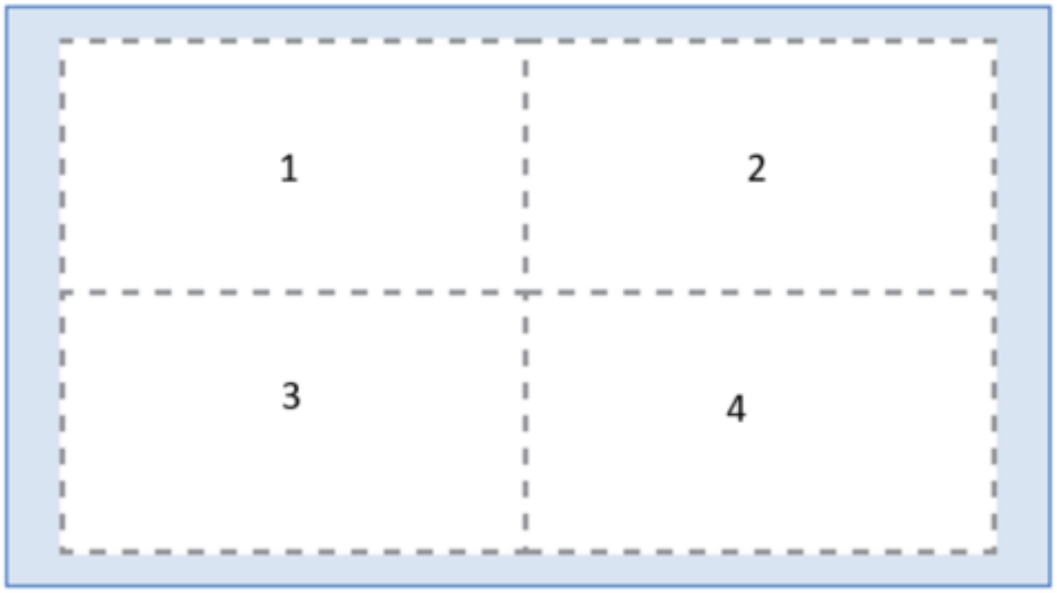
Tasks

Create two dashboards as follows:

- One dashboard using the tabbed template that has 4 small rectangles at the top and a large rectangle below - rename this dashboard tab to **Sales**.



- One dashboard using the 2 x 2 rectangle areas tabbed template - rename this dashboard tab to **Service**.



Capture the following KPI metrics as visualizations:

1. On the **Sales** dashboard, capture the following KPI metrics:
    - In the first small rectangle **(Panel 1)**, capture **Profit** (formatted to 1 decimal place in millions of US dollars)
    - In the second small rectangle **(Panel 2)**, capture **Quantity sold**
    - In the third small rectangle **(Panel 3)**, capture **Quantity sold by model** (as a bar chart)
    - In the fourth small rectangle **(Panel 4)**, capture **Average quantity sold**
2. On the **Sales** dashboard in the large rectangle **(Panel 5)**, display 'Profit' by 'Dealer ID' as a column chart, sorted in ascending order.
3. On the **Service** dashboard, capture the following KPI metrics as visualizations:
    - In the top left area **(Panel 1)**, capture the number of recalls per model of car (as a column chart)

- In the top right area **(Panel 2)**, capture the customer sentiment by comparing positive, neutral, and negative reviews (as a treemap)
- In the bottom left area **(Panel 3)**, capture the quantity of cars sold per month compared to the profit (as a line and column chart).
- In the bottom right area **(Panel 4)**, capture the number of recalls by model and affected system (as a heat map). This will help us understand if there are any outliers for a given model or a specific system.

4. Export your dashboard as a PDF