

Business Analytics

Assignment No. 2

Name : Ayush Jain

Branch : Computer Engineering

Sap Id : 60004200132

Division : B3

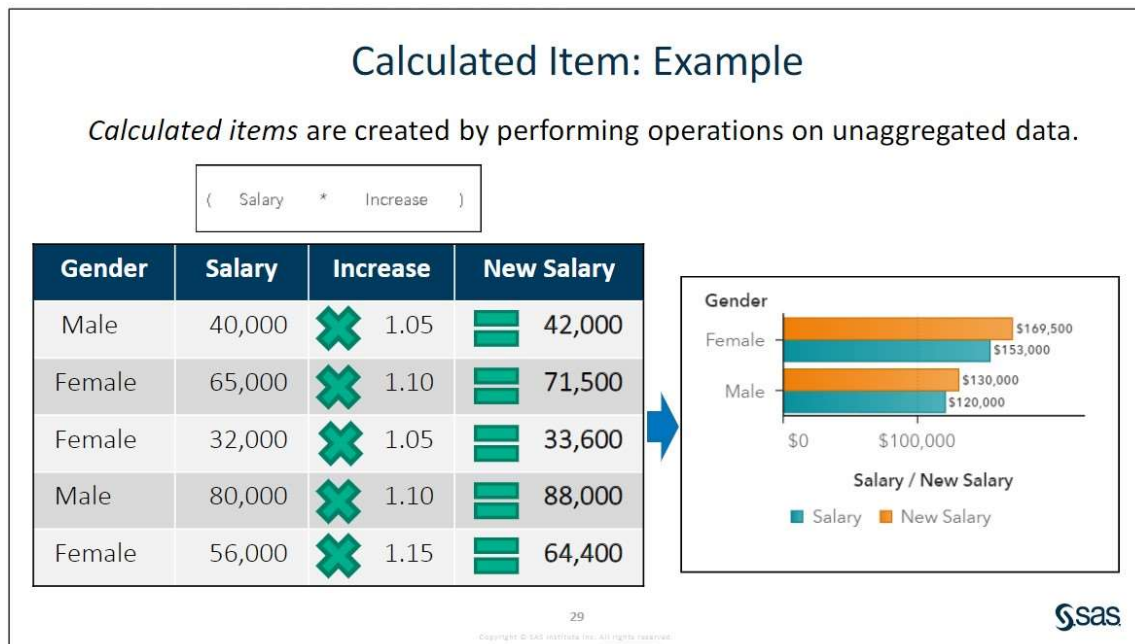
1) Explain the following with relevant examples

- a) Calculated item
- b) Aggregated measure
- c) Custom Category
- d) Derived items

Answer:

a) Calculated item

Calculated items are created by performing mathematical calculations on numeric values, or by performing operations on datetime data items or categories. All calculations are performed on unaggregated data. That is, the expression is evaluated for each row in the data source.

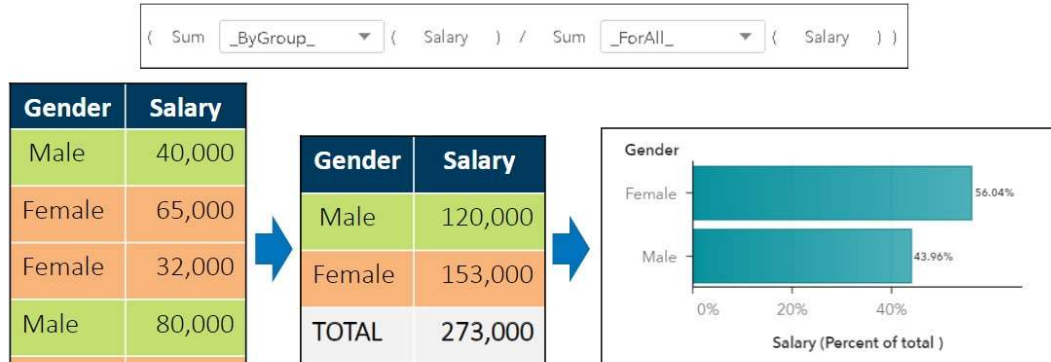


b) Aggregated measure

Aggregated measures enable you to calculate new data items using aggregated values. This means that the calculation changes depending on the other data items available in the graph. For example, you can see the profit margin for each region or by each store.

Aggregated Measure: Example

Aggregated measures are created by aggregating and then performing the operation.



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c) Custom Category

A custom category creates labels for groups of values of category or measure data items. When you create a custom category from a measure data item, you can use ranges or distinct values to group the data.

Custom Category: Example

Custom categories create labels for groups of category or measure data items.

Custom category

Value Groups
▼ Northern
Africa
Europe
Oceania
▼ Southern
Asia
North America

Calculated item

IF	Continent Name	In	(multiple selected)
RETURN	"Northern"		(Asia, Europe, North America)
ELSE	"Southern"		

This calculated item and custom category produce equivalent results.

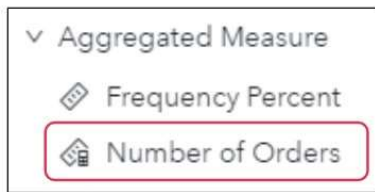
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d) Derived item

Derived data items are aggregated measures that display values for the measure and the formula type on which the derived item is based. example:



Note: You can view the calculation by right-clicking the calculated item and selecting **Edit**.



2) Explain in detail how detail reports are generated in SAS with respect to following points

- a) Subsetting report data
- b) Sorting and Grouping report data
- c) Enhancing reports

Answer:

a) Subsetting report data in SAS Viya:

SAS Viya provides several ways to subset or filter data in order to generate detail reports only for a subset of data that meets certain criteria. Some common methods include:

Filter pane: SAS Viya provides a Filter pane in the Visual Analytics interface that allows users to create filters based on one or more variables. Users can define filter conditions using operators such as equals, not equals, contains, not contains, etc., to subset data based on specific criteria. These filters can then be applied to the report to generate a detail report only for the filtered data.

Data item filters: In SAS Viya, users can create data item filters while creating calculated data items or measures. Data item filters allow users to define filter conditions based on one or more variables or expressions. These filters can be used in the report to subset data before generating the report.

b) Sorting and Grouping report data in SAS Viya:

Sorting and grouping report data in SAS Viya can be done using the following methods:

Sorting options in Visual Analytics interface: SAS Viya provides sorting options in the Visual Analytics interface that allow users to sort data by one or more variables. Users can select variables and choose ascending or descending order to sort the data in the report. This sorting can be applied to different sections of the report, such as rows, columns, or measures, to organize the data in a desired manner.

Grouping data in Visual Analytics interface: SAS Viya allows users to group data based on one or more variables in the Visual Analytics interface. Users can drag and drop variables to the grouping area in the interface, and the data will be grouped accordingly in the generated report. Grouping data can be helpful in generating reports with aggregated or summarized data based on specific variables.

c) Enhancing reports in SAS Viya:

SAS Viya provides various features to enhance the appearance and content of detail reports, making them more visually appealing and informative. Some common methods include:

Customizing report layout: SAS Viya allows users to customize the layout of the report, such as adding titles, subtitles, footnotes, and images, changing fonts and colors, and resizing report objects. Users can also add report objects such as text boxes, images, and shapes to provide additional information or visual elements to the report.

Customizing report objects: In SAS Viya, users can customize individual report objects, such as charts, tables, and gauges, to modify their appearance and behavior. Users can change chart types, apply different visual styles, modify data labels, adjust axis settings, and add data-driven parameters to make the report objects more interactive and informative.

Using SAS Visual Themes: SAS Viya provides Visual Themes, which are predefined sets of formatting options that can be applied to reports and report objects. Users can choose from a variety of Visual Themes to quickly apply a consistent and professional appearance to their reports.

3) Explain the purpose of following panes available in SAS Visual Analytics Report Builder.

- a) Suggest Pane
- b) Roles Pane
- c) Action Pane
- d) Rules Pane

Answer:

Suggest pane:

The Suggest pane in SAS Viya provides suggestions for objects that would work well with the selected data. It analyzes the data and recommends relevant report objects such as charts, tables, and gauges that can be added to the report to visualize the data effectively. This pane helps users discover and add relevant report objects quickly, saving time and effort in report creation.

Roles pane:

The Roles pane in SAS Viya allows users to add or modify role assignments for the currently selected report object. Roles are used to determine how data is displayed in the report object. For example, users can assign variables to different roles such as measure, category, or detail, which determine how the data is plotted or displayed in the report object. This pane provides a convenient way to customize the data representation in report objects based on the roles assigned to variables.

Actions pane:

The Actions pane in SAS Viya provides a quick way to set up various actions on report objects. Users can define actions such as filters, linked selections, or page, report, or URL links to create interactive and dynamic reports. For example, users can set up a filter action on a chart to allow users to click on a data point and filter other report objects based on the selected data. This pane enables users to create interactive and dynamic reports with ease.

Rules pane:

The Rules pane in SAS Viya allows users to view, add, or modify display rules for the currently selected object. Display rules are used to customize the appearance of report objects based on specific conditions or expressions. For example, users can define rules to change the color of a chart bar based on the value of a measure or apply gauge rules to customize the gauge appearance based on specific thresholds. This pane provides users with flexibility in customizing the visual appearance of report objects.