

# Mastering Set Analysis

Created by: [Mastering QlikView Set Analysis course](#)  
Shilpan Patel, [learnqlikview.com](http://learnqlikview.com)



## Set Analysis Syntax

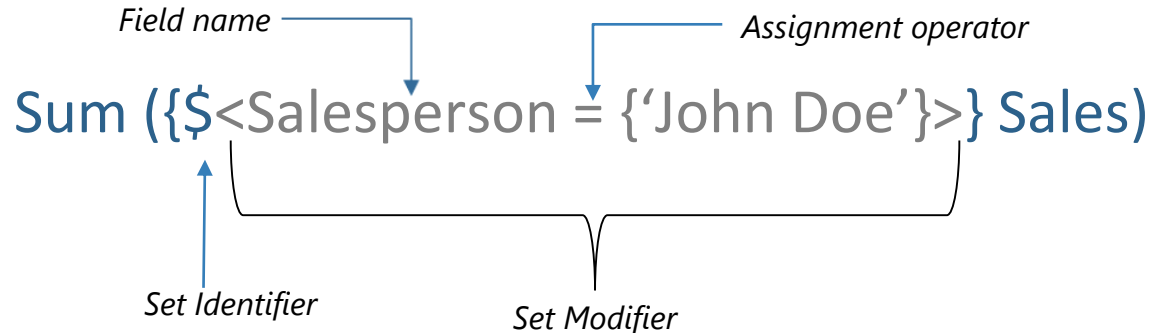
Three components:

- Set identifier (defines scope of the record set)
- Set modifier (adds filters)
- Set operators (allow interactions between sets)

Two curly braces:

{ } Outer curly braces for the record set, inner curly braces for the element set

There is always an = sign between field name and element set in the modifier





## Set Identifiers

Identifier	Description
<b>1</b>	Represents the full set of all the records in the document.
<b>\$</b>	Represents the records of the current selection. The set expression <b>{ \$ }</b> is the equivalent of not stating a set expression.
<b>\$1</b>	Represents the previous selection and is equivalent to pressing the Back button. <b>\$2</b> represents two selections back. <b>\$0</b> represents the current selection.
<b>\$_1</b>	Represents the next (forward) selection. <b>\$_2</b> represents the two selections forward. This only works if you have gone back from.

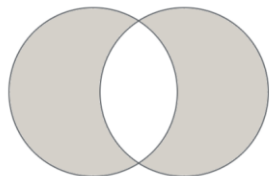
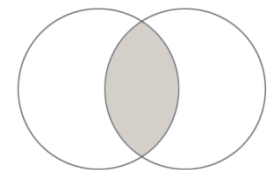
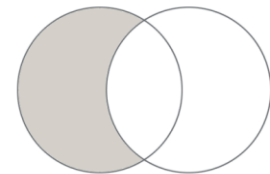
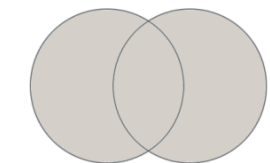


## Set Identifiers

Examples	Results
<b>sum({\$} Sales)</b>	Returns sales for the current selection, that is, it is the same as Sum(Sales).
<b>sum({\$1} Sales)</b>	Returns sales for the previous selection.
<b>sum({1} Sales)</b>	Returns total sales within the application, disregarding the current selections but not the dimension. If used in a chart with, for example, with Products as dimension, each product gets a different value.
<b>sum({1} TOTAL Sales)</b>	Returns total sales within the application, disregarding both current selections and any chart dimensions. This is the sum of all sales.



## Set Operators

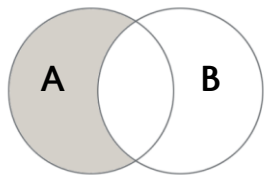


<b>+</b>	<b>Union</b>	Returns the set of all records that belong to the unioned sets
<b>-</b>	<b>Exclusion</b>	Returns records that belong to the first but not the other of the two set identifiers.
<b>*</b>	<b>Intersection</b>	Returns records that belong to both of the set identifiers.
<b>/</b>	<b>Symmetric Difference</b>	Returns a set that belongs to either, but not both of the set identifiers.



## Interesting Operators: Examples

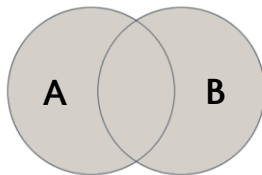
**Exclusion**



< [Category Name] -= {'Seafood'} >

**Removes Seafood category from user selection**

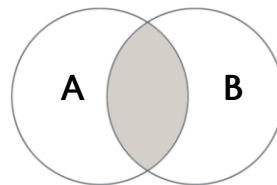
**Union**



< [Category Name] += {'Seafood'} >

**Includes all selected categories and Seafood**

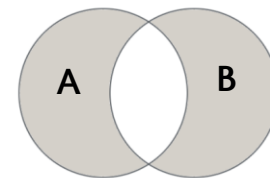
**Intersection**



< [Category Name] \*= {'Seafood'} >

**Excludes all categories but Seafood**

**Symmetric Difference**



< [Category Name] /= {'Seafood'} >

**Includes all categories but Seafood**



## Set Modifiers: Examples

● `count( {1<Modality= {'Radiology'} >} PatientID )`

*Returns Radiology patient count disregarding the current selection.*

● `sum( {$<Year = {2000}, Region = {'US', 'SE', 'DE', 'UK', 'FR'}>} Sales )`

*Returns the sales for current selection, but with new selections both in 'Year' and in 'Region'.*

● `sum( {$<Year = {"2*"}>} Sales )`

*Returns the sales for the current selection, but with all years beginning with the number . Since this is a Year field, it is for all years from 2000 onwards.*

● `sum( {$<Year = {"2*", "198*"} - {2000}>} Sales )`

*As above, but also the 1980's are included in the selection, but the year 2000 is excluded.*



## Remember!

### String values

Require single quotes within the element set.

Example:

< SalesPerson = {'Joe'}>

### Numeric values

Do not require single or double quotes

Example:

< OrderID = {1001}>

### Expressions or Search

Require double quotes

Example:

<Year = {">=2011"} >

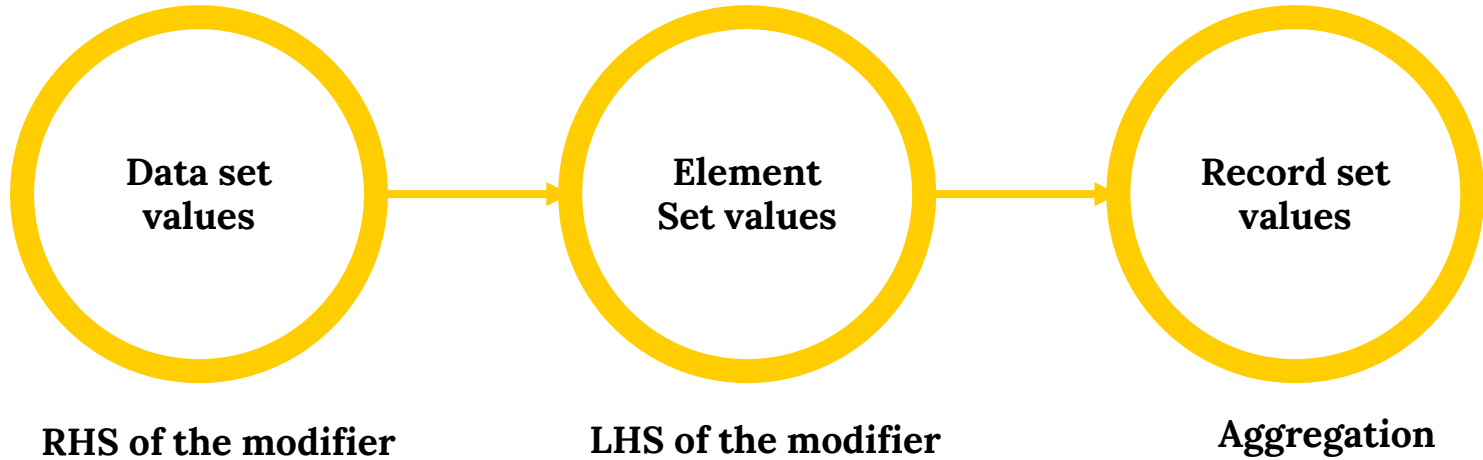
<Year = {"(2009)|(201\*)"}>





## Under the hood

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## Let's review some concepts

### Modifiers are sets too!

Remember that both LHS and RHS of the modifiers are sets

### = Sign in the modifier

Is not an equal sign. It is an assignment by association

### Two Curly braces {}

Outer curly braces for the record set and inner curly braces for the elementset

### < > Angle brackets

Modifier starts with left angle bracket and ends with right bracket.

### Quotes

Litteral values need single quote; search string or expression requires double quotes and numeric values require no quotes.

### Mixed state

Record set can be in a default state while element set can be in different state such as alternate state.



# Thanks!

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***Shilpan Patel, [learnqlikview.com](http://learnqlikview.com)***