

Inline Formulas

GeneXus 16

[video: <https://training.genexus.com/genexus-en/genexus-16-course-analyst-level?en#inline-formulas-gx15>]

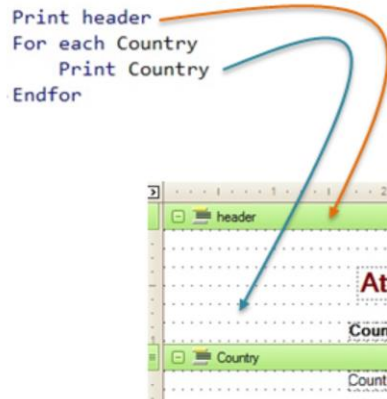
We create a list to meet the requirement

Print header

For each Country

Print Country

Endfor



Attractions by Country					
Country		Quantity			
Country		CountryName		&Qu	

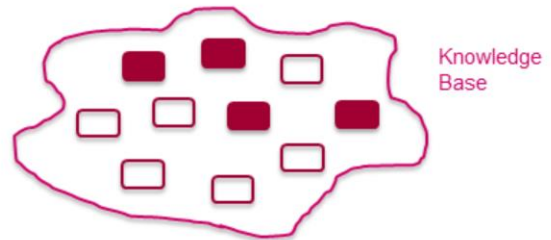
Global Formulas vs. Inline Formulas (local)

- **Global Formulas**

Attribute = fX



(in the Transaction structure)



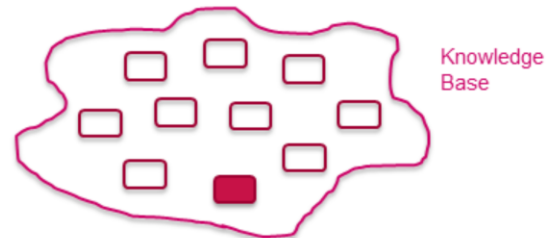
- Any object of the KB can access the calculation.
- The formula is evaluated every time an object uses the attribute.
- The attribute is no longer stored in the database.

Global Formulas vs. Inline Formulas (local)

- **Inline (or local) Formulas**

&Variable = fX

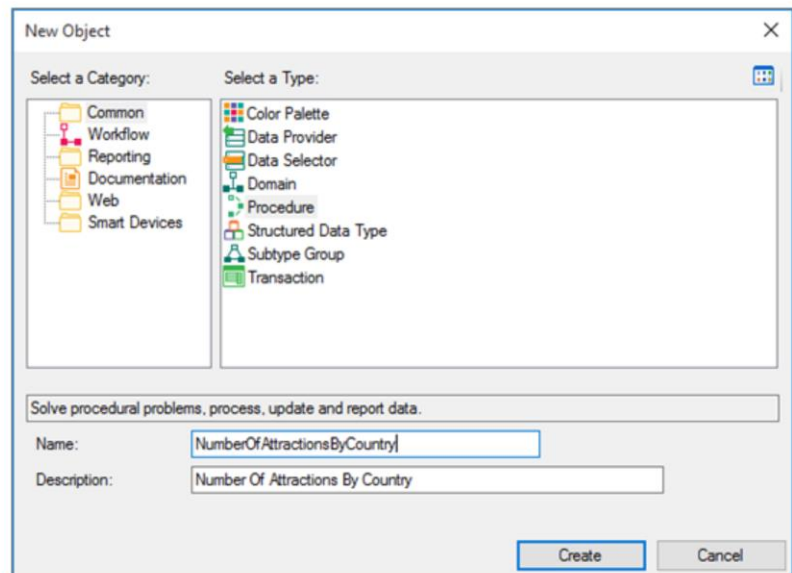
(in the code of an object)



- The calculation is only accessed by the object that has it defined.
- They are the equivalent of a function that returns a value.

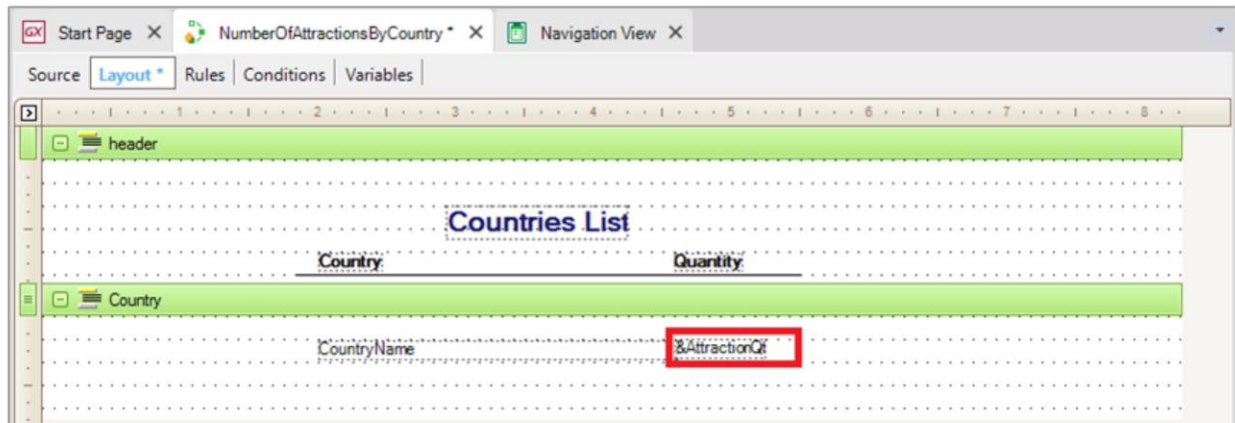
Let's see an example...

- We're asked to create a list of countries with the number of attractions of each one of them.
- We create a procedure object...



We define its layout

- ...with an &AttractionQty variable to show the number of attractions.



We define an inline formula

Name	Type	Is Collection	Description
Variables			
Standard Variables			
AttractionQty	Numeric(4,0)		Attraction Qty

```
Print header
For each Country
    &AttractionQty = Count(AttractionName)
    Print Country
Endfor
```

Table navigated by the formula: ATTRACTION

Base table of the For Each command: COUNTRY

INTERSECTION: CountryId

```
&AttractionQty=Count (AttractionName, CountryId=CountryId)
```

Implicit filter

We run the procedure and see how the formula is calculated

Countries List

Country	Quantity
Brazil	1
France	3
China	2
United States	1

Another use of the inline formula

- Requirement: to list all the countries that have more than 2 attractions to visit.
- We will add a Where clause to the For Each command and use the formula for the condition:

```
Print header
For each Country
  Where Count(AttractionName) > 2
  &AttractionQty = Count(AttractionName)
  Print Country
Endfor
```

At runtime...

Countries List

Country	Quantity
France	3

Remember that:

- The formulas that we've seen before (Sum, Average, Max and others) can also be used as inline formulas.



Global Formulas vs. Inline Formulas (local)

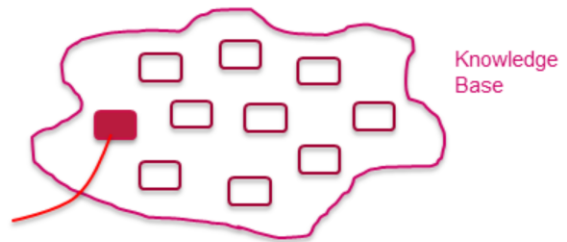
- Inline formulas can use variables from the object where they are stated.

Inline(or local)Formulas

&Variable = fX



&var



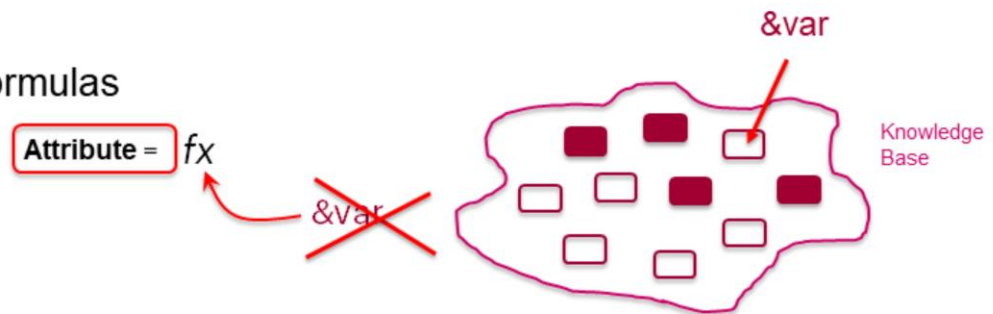
Knowledge
Base

e.g. &AttractionsQty = Count(AttractionName)

Global Formulas vs. Inline Formulas (local)

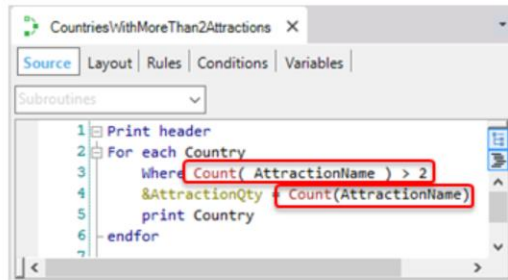
- Global formulas don't allow using variables for the calculation because **they are attributes** that can be used in any object, and variables only have local scope.

Global Formulas



In sum...

- An "inline" formula is a formula that we state as a specific instruction within a certain piece of code, such as a procedure Source, web panel event, Data Provider Source, etc.



In sum...

- The formula is only known in the object where it was defined.
- For this reason, we also call it local formula. It is calculated when the object is run and then its value disappears.
- They are different from global formulas (those stated for attributes in transactions), which are calculated every time the value of an attribute within any object is queried at runtime.



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