Unique clause of For each command

GeneXus™ 16

Requirement...

A list of the categories recorded in attractions. Repeated categories must not be displayed.

```
Print Title
For each Attraction
   unique CategoryId
   print Category
- endfor
```

A list is required to show all the categories recorded in attractions. However, repeated elements must not be displayed.
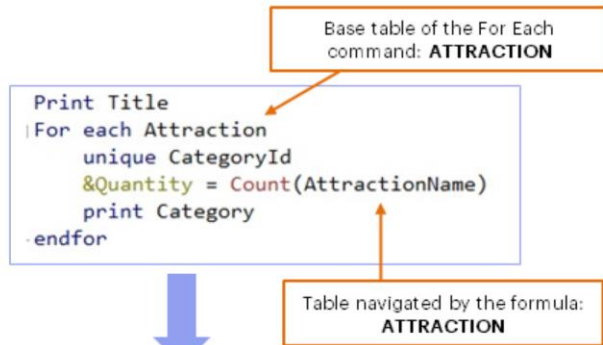
If we run through the attractions to show the categories recorded in them, we would see repeated elements. The Unique clause makes it possible to show a list without those repeated elements.

Unique clause

It also allows joining data with inline formulas.


```
Category  X
Structure  | Web Form | Rules | Events | Variables | Patterns
Name                          Type
Category                      Category
    CategoryId                Id
    CategoryName              Name

Attraction  X
Structure  | Web Form | Rules | Events | Variables | Patterns
Name                          Type
Attraction                    Attraction
    AttractionId              Id
    AttractionName            Name
    CountryId                 Id
    CountryName               Name
    CityId                    Id
    CityName                  Name
    CategoryId                Id
    CategoryName              Name
    AttractionPhoto           Image
```

Base table of the For Each command: **ATTRACTION**

```
Print Title
For each Attraction
    unique CategoryId
    &Quantity = Count(AttractionName)
    print Category
endfor
```

Table navigated by the formula: **ATTRACTION**

It returns the list (with no repeated elements) of all categories, each one with the corresponding number of attractions recorded.

In this example, the base table of the For Each command is the same as the base table of the inline formula.

Therefore, the Count formula will add, from the context, an implicit condition in its evaluation: it will count all the attractions for the attribute included in the Unique clause, CategoryId.

Unique clause with inline formulas

Pattern: [   ]

✅ CategoriesInAttractions

Procedure CategoriesInAttractions Navigation Report

Name	CategoriesInAttractions
Description	Categories In Attractions
Output Devices	File

Levels

For Each Attraction (Line: 5)

Order: CategoryId
Index: IATTRACTION2

Unique: CategoryId

Navigation filters: Start from: FirstRecord
Loop while: NotEndOfTable

Join location: Server

=Attraction (*AttractionId*) INTO CategoryId

~Category (*CategoryId*) INTO CategoryName

=count(AttractionName) navigation (*CategoryId*)

Formulas

Navigation to evaluate: count(AttractionName)

Given: CategoryId
Index: IATTRACTION
Group by: CategoryId

=Attraction (*CategoryId*)

In the detailed navigation report (to set this: Tools/Options/Build, Detailed Navigation = True) it is showed that the formula will count all attractions instances for the CategoryId attribute declared (Given) in unique clause.

For Each syntax

For each *BaseTransaction*
    order att_1, att_2, … , att_n [when *condition*]
    order att_1, att_2, … , att_n [when *condition*]
    unique att_1, att_2, … , att_n
    where *condition* [when *condition*]
    where *condition* [when *condition*]

      main code
When none
     …
Endfor

The list of attributes (including formula attributes) will be processed together (only once in the output). Thus, if two or more records have the same values for that list of attributes, only one of them is taken into account.

The attributes included in the unique clause should belong to the extended table of the For each base table. (All attributes from designated places should do).

More about unique clause:
http://wiki.genexus.com/commwiki/servlet/wiki?24592,Unique%20Clause

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