

EXPERTIZERS SOFTWARE : SQL LANGUAGE – SIMPLE AND CLEAR



Objectives:

Through a series of examples demonstrate that SQL is much more simple and straightforward as the language of spreadsheets.

Find in this document all logical formulations that at the end of their reading provide assurance to the reader a Masters very fast, and even immediate language SQL (Structured Query Language).

Expertizers Copyright 2006-2009

SQL FORMULAS IN THE SOFTWARE

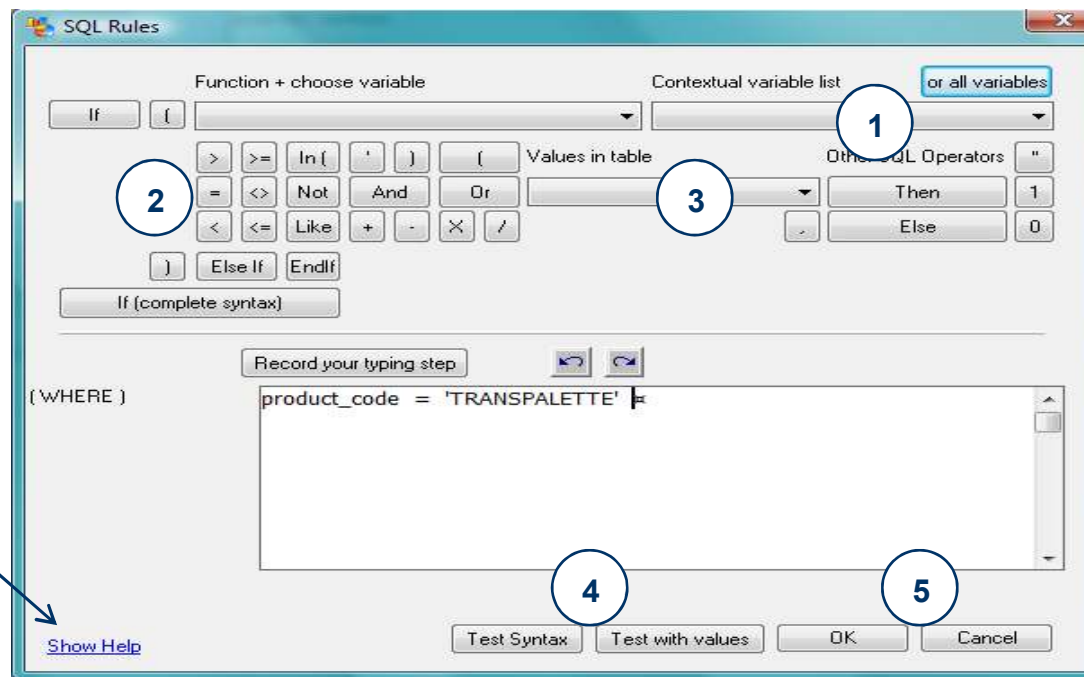
The software EXPERTIZERS based solely on the implementation of formulas included in a model and processed sequentially in the structure outlined in the document prior '**logic and functions**'

The formulas (or rules) are of two kinds:

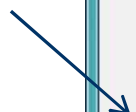
Conditional formulas (where ...)

Calculation formulas (variable = ...)

To help you write a formula, double-click on the box. You will then display the tutorial in which the most cases you do not enter any character.



To find examples formulas



EXAMPLES OF CONDITIONAL

WHERE...

Condition OK

Condition KO

country = 'USA'	USA	Other values
country in ('USA','GB','FR')	USA, GB, FR	Other values
country like 'U%A'	USA, UBA	ASA, USB
city like 'P%%S' or city like 'N%%K'	PARIS, NEW-YORK	XXXPARIS
city like '%P%%S'	XXXPARIS	PARISXXX
city like '%P%%S%'	XXXPARISXXX	
UCASE(city) = 'PARIS'	PARIS,paris	
Country <> " (Type 2 single quotes without intermediate white)	One or more characters other than white	absence, even with white
diameter = 10 or diameter = 10.50	10 or 10.50	Other numerical values
diameter in (10,10.50,30)	10 or 10.50 or 30	Other numerical values
delivery_date < '2005/12/31'	Date below	date equal to or greater
(country = 'USA' and delivery_date < '2005/12/31') or (country = 'GB')	(USA and date below) ou GB	FR ou (USA and date equal to or greater)
(country = 'USA' and (diameter in (10,10.50) or diameter > 100)) or (country = 'GB')	(USA and (diameter =10 or 10.50) ou > 100) or GB	Find out yourself !
(if country ='FR' then 1 else 0.80 endif) * diameter > 150	FR and diamètre * 1 => 150, GB and diamètre * 0.80 => 150	Find out yourself !
machine = " or machine = 'LINE_1'	Machine LINE_1 or missing	Specified machine and different from LINE_1



EXAMPLES OF CALCULATION (depending on level)

Variable =

VARIABLES DEFINED AT 'USER INTERNAL VARIABLES' LEVEL

```
transport_price = 10.45
```

```
transport_price= if today() > '2008/11/30' then 10.70 else 10.45 endif
```

```
transport_price=if country = 'FR' then 10.45 else if region = 'UE' and country  
<> 'GB' then 10.55 else 11 endif endif
```

Comments

Calculated according to the date of the PC

So many 'endif' than 'if'. In case of multiple values, according to the same variable, use the decode function instead (choice menu 'utilities').

VARIABLES CALCULATED AT 'OBJECTS OF OPERATION' LEVEL

```
cadence = 100
```

```
cadence = cadence * 0.7
```

```
cadence = if diameter = 20 then cadence * 0.7 else if diameter = 30 then  
cadence * 0.8 else cadence * 0.9 endif endif
```

```
quantity = if (diameter in (10,20,30,50) or diameter > 70) then (quantity * 1.1)  
else quantity endif
```

Initializes the nominal speed of an object (eg machine)

Redefined the value of the cadence using the last stored value

Do not hesitate to put parentheses to clarify the formula

VARIABLES CALCULATED IN ACTIVITIES

```
activity_value = if cadence_ope_PRODUCTION = 0 then 0 else  
(quantity_ope_PRODUCTION / cadence_ope_PRODUCTION) endif
```

```
activity_value = if cadence_ope_PRODUCTION = 0 then 1 else 0 endif
```

```
activity_cost = quantity_init * transport_price
```

```
activity_text = if country = 'USA' then 'transport by DHL' else 'transport by  
normal way'
```

Expression avoids a division by zero generating an unfortunate stop in the process of calculation. The term is the time calculated based on the quantity to be produced at the PRODUCTION level

This formula applied on any activity of type ERROR_xxx generates an anomaly for any value other than 0.

The formula uses the quantity of the current input line multiplied by the transport_price value calculated at the 'User Internal Variables' level

Alpha variable is filled with a text based on the country code

Warning: never use only constants inside parenthesis, for example $\text{quantity} * (2/3)$, as the SQL used seems to calculate $2/3$ with no decimal (so 0) ! Is it a bug ? Use instead $(\text{quantity} * 2) / 3$ and no problem !



HANDLING FUNCTIONS OF A VARIABLE

SQL functions are numerous. They can analyze the contents of a variable to get a result. We just show you how to access the list explanation of each. The help function in the tutorial provides all the examples. Do not worry, their use is rare !

NB: The function is written in the formula after selecting the variable (step 2)

3 UCASE(pays)

Back to tutorial

SQL Functions	DEFINITION DE LA FONCTION	EXEMPLES
VARCHAR		
LCASE(variable)	convertit tous les caractères en minuscules. Peut être utilisé quand vous n'êtes pas sûr de la formalisation du contenu.	activity_text = activity_value then 1 else 0 e
LENGTH(variable)	retourne le nombre de caractères alphanumériques contenus dans la variable. Permet de tester si la variable contient une donnée ou non.	VIOLET AND ERROR_1 = IF 1 else 0 endif
LOCATE(variable,élément recherché, position de départ)	Recherche d'un caractère ou d'une chaîne de caractères au sein de la variable à partir d'une position donnée (facultative 1 par défaut). La fonction	LOCATE(pays: LOCATE (pay

Remember: a function does not change the content of the variable included: Function(**variable**).

The function creates a temporary result named by the function itself and ready to use in your rules (condition as calculation) For instance IF LENGTH(event_code) < 15 Then ... / activity_value = LENGTH(event_code)



IN SUMMARY

A much more structured language than spreadsheet macros,

so much clearer.

A common language with the IT staff ,

therefore shared to express and understand your needs with respect to information system, especially if it needs to be supplemented by information that your models are seen as indispensable to the quality analysis (cost and profitability).

A comprehensive set of examples,

can be used immediately to tap the full potential software expertise.



Warning

This document is brought to you by DB.SOFTART.SERVICES. (« DB »).

This document and its contents are the product of research and important development led by DB.

They are presented solely in order to allow you to evaluate some of EXPERTIZERS software's capabilities

You must process the content of this presentation and any other information or document, in connection with the solutions presented during any lecture, as confidential and exclusive property of DB.

And receiving the information, you agree to use the information for the sole purpose of evaluating your own account for the software's capabilities Expertizers to maintain confidentiality and not to transmit to anyone, all or part of the information without prior written permission of DB.

DB.SOFTART.SERVICES
Didier RICHE
Software Publisher
+33 (0)6.63.92.20.60
+33 (0)1.47.34.40.23

