

SYSDECO TOOLS

QBE Vision Query Builder



The Query-by-Example module within QBE Vision provides access and update facilities for SQL databases without the need for its

users to know SQL or other programming languages.

On connection to a database, users are given access to the database tables they are authorized to use. By selecting one or more table(s) a graphical display of the columns in the selected tables can be presented. From this display a QBE query can be generated.

Column Operators

Embedded Column Operators can be used to express query actions on selected tables. QBE Vision generates the appropriate SQL statement to execute the call to the database.

The Column Operators supplied for reading and updating the database are:

p	% print
avg	% calculate average
x	% exclude print
in	% <i>in</i> subquery
h	% rename column header
all	% <i>all</i> subqueries
asc	% ascending order
any	% <i>any</i> subquery
desc	% descending order
u	% update column value
g	% group column
i	% insert new row
cnt	% count occurrences
ix	% insert row via form
un	% count unique occurrences
d	% delete rows
min	% find minimum value

br	% permit updates
max	% find maximum value
sum	% sum

Text String Operator

The text string operator allows the user to search in text columns by precise character matching, by matching part of a string within a text column or by matching characters at the beginning and the end of a text string.

Question Elements

Variables may be used in an SQL expression as well as constants. When starting up the query a dialog box will then be displayed, prompting the user for input parameters.

Join Operator

QBE Vision has advanced functions for expressing different join methods:

equi-join - self-join - not equal join- outer join

Predefined Joins

QBE Vision enables the user to specify and implement predefined joins between several tables.

Subqueries

In some cases, queries are so complex that the selection criterion is dependent on the result of a separate query. This query can be included as a subquery.

Aggregate Function

Aggregate operators are used to calculate a value based on a set of column values. The following operators are available:

cnt, min, max, avg and sum.



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Condition Box

When selection criteria are typed in the table frames, there is an implicit **and** between any two criteria in the query.

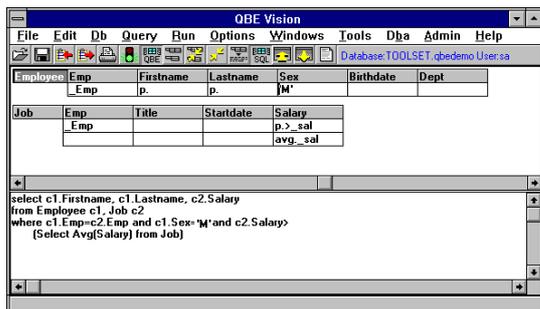
QBE Vision's "Condition Boxes" allow complex queries to be constructed by using a combination of **or** & **and** operators.

SQL-Window

Usage of an SQL window can be selected by the user from the QBE Menu Bar. The user can choose between editing the SQL statement and using the visible expression as an SQL tutor.

The figure below illustrates the column operators used to generate an SQL expression from QBE. The equivalent SQL expression is visible in the lower half of the screen.

This query example lists all male employees having an above average salary:



Executable Stored Procedures

Executable SQL expressions can be written and edited in the SQL window. It is also possible to call named stored procedures and execute them on the server computer. If a stored procedure returns several result sets, the user can scroll within these sets.

Storing Queries

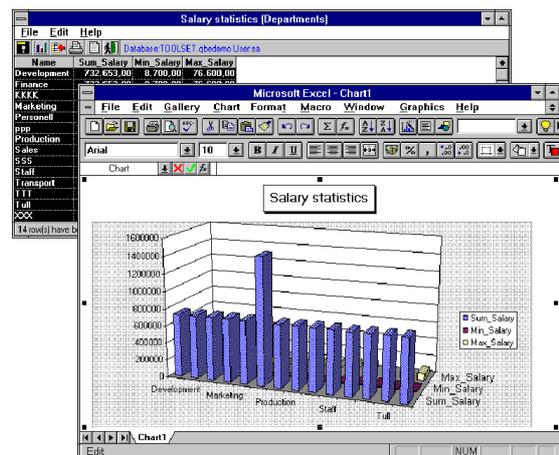
A query which is likely to be run more than once can be saved ready for re-use.

Transferring data to other standard programs

After a query has been generated and executed, the result can be exported to standard programs, such as Excel to create charts.

Excel's graphical facilities can then be used to customize the layout of the graph as required.

In the illustration below, part of a result set has been highlighted in QBE's query results screen and exported to Excel.



Exporting data in other file formats

Data in the result browser may be exported to .CSV or ordinary ASCII text files. If these files will subsequently be imported to other database tables, then table headings may be included.

Use of QBE Vision as a database engine in other products

It is often necessary to read data from databases directly into products such as Excel or Word. With QBE Vision this can be achieved via DDE, by utilizing expanded menus in the spreadsheet or word processor.

QBE Vision Database Automation Server

A set of Automation objects are exposed enabling other programming tools, such as Visual Basic for Applications, to programmatically fetch data from different database systems. In this way solutions can be created in MS Office, or other ActiveX enabled products, which utilize QBE Vision's fast database access.



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