

Query Assistant version 1.80 - Help

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This program

The Query Assistant is an aide for connecting to a database and executing SQL query's using Microsoft ADO. A query's results can be exported to a text or Microsoft Excel file. The program can also automatically create and send an e-mail containing the exported file(s) using Microsoft Outlook.

The required software and files for this program:

File / Program:	Optional:	Remark:
Comdlg32.dll	No.	Preferably should be in the Microsoft Windows system directory. Must be registered using Regsvr32.exe.
Msvbvm60.dll	No.	Preferably should be in the Microsoft Windows system directory. Can also be in the same folder as the program.
Microsoft ADO	No.	Without this program the Query Assistant cannot connect to a database or execute queries.
Microsoft Excel	Yes.	Without this program no Microsoft Excel files can be exported.
Microsoft Outlook	Yes.	Without this program the Query Assistant's e-mail function cannot function.

Logging on

When logging onto a database which requires a username and/or password, a logon window will appear in which this information should be entered. To see which settings file (this can help to check which database is being logged onto), hold the mouse pointer above the "Logon" button, a label displaying the path of the active settings file will appear.

Opening queries

A query can be loaded using the following methods:

- Clicking on the folder icon and then browsing to the query file.
- Dragging the query file's icon and releasing it into the "Query" input box.

- Dragging the query file's icon onto the Query Assistant's icon and releasing it. The program will be started and the query will load automatically.
- Entering a path in the "Query" input box and then loading the query by clicking the disk icon.
- Specifying the query file's path as a command line argument.

Query files

A query file is a text file (with the ".qa" extension) containing SQL code. This code can contain parameter definitions which can be added by the user. These definitions are processed by the Query Assistant when opening a query and specify if and what kind of input boxes should be displayed by the program. The parameter definitions are replaced by the user's input when the query is executed. This allows the user to influence the query. These parameter definitions can appear at any desired position in the code.

Parameter definitions can be made up out of the following characters:

Characters(s):	Name:	Function:
\$\$	Dollar sign(s)	Indicates a parameter definition's start and end.
:	Colon	Delimits the parameter definition's elements.

The parameter definition's elements:

Elements:	Optional:	Function:
definition's name	Yes.	Is displayed next to the input box.
input mask	Yes.	Specifies the input possible.
fixed input mask	Yes.	Specifies the fixed characters in the input.
default value	Yes.	Specifies the default value.
properties	Yes.	A string of letters that turn specific parameter properties off.
comments	Yes.	Specifies an input box' comments.

Input masks can be made up out of the following characters:

Character:	Name:	Possible input:
#	Hash	Numbers (0-9)
	Space	None. Indicates fixed input.
_	Underscore	Uppercase letters (A t/m Z)

The parameters fixed input can be made up out of the following character:

Character:	Name:	Function:
*	Asterisk	Any character within the restrictions imposed by the mask character at the corresponding position.
<i>Any other character.</i>	n/a	These characters form a fixed part of the parameter's input and cannot be modified by the user.

The following parameter properties can be turned off by adding the following letters to the property string:

Property:	Letter:
Fixed length input.	V
Visible input box.	H

Remarks:

- With a batch all parameter elements except the default value are ignored with the exception of the first query in an interactive batch.
- Comments belonging to invisible parameter definitions are not displayed.
- The double dollar signs ("\$\$") is exclusively used to define a parameter definition.
- Input with a variable length cannot be longer than the mask's length.
- Using symbols in default values, new symbols can be created. These are processed as input before the query is executed. A mask cannot be specified for the parameter definitions containing these symbols. Visible parameter input boxes containing these symbols cannot be modified.

Example:

\$\$Date:::*c42*1*c42*\$\$

This results in the symbol “*1*” and will be replaced with the input of the first parameter's input box before the query is executed.

- Symbols in the default values are processed directly after loading the query. ATTENTION: symbols that refer to other parameter definitions are replaced by the default value of the definition as it is at the moment the query is loaded. These symbols can also not refer to a parameter definition that comes next.

Examples:

Definitions:	Result:
\$\$Number:##:01\$\$	Numeric input box with "01" as the default value.
\$\$User:_____:**1234*\$\$	Text input box with "1234" as a fixed part of the input.
\$\$Input:_____::V\$\$	A text input box which allows variable input.
\$\$::*c36**c36*:H\$\$	An invisible parameter definition with symbols that produce "\$\$" as result.

Executing queries

When a query is executed, the following steps are executed regarding the query's code:

1. The parameter definitions are replaced with the input values.
2. Any symbols in the input are processed.
3. Any redundant spaces and/or tabs are removed.
4. Any line breaks (carriage returns and/or line feeds) are removed.
5. Comment lines that start with two dashes ("--") are removed.
6. Comment blocks starting with a forward slash followed by an asterisk ("/*") and ending with an asterisk followed by a forward slash ("*/") are removed.
7. The query is passed on to and executed by the database provider.

Remarks:

- At steps 3 to 6 query code located between two single quotes (""') is not processed. In these cases the code is viewed as a string literal.

- Except for the cases named above, all other syntax in the query is ignored. This means that an error message with a source other than "QueryAssistantProgram" is not related to these steps.

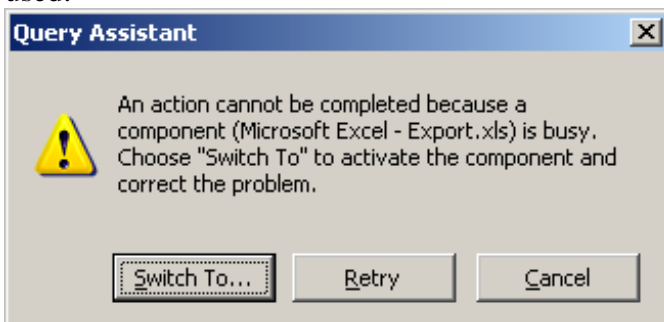
Exporting and e-mailing

A query's result can be exported to a file. This file can also be opened automatically with Microsoft Excel, amongst others. It is also possible to automatically let an e-mail be created with the exported file attached. The following file types are supported for the export of query results:

Extension:	Type:
.xls	Microsoft Excel
.xlsx	Microsoft Excel 2007
<i>Any other extension.</i>	Text file.

The export path can be influenced by adding symbols to the path. See the topic "Symbols" for more information.

A message similar to the example below can appear when the export/automatic e-mail functions are used:



This means that Microsoft Excel or Microsoft Outlook cannot perform the desired task (creating/opening/closing of an exported file amongst others) Check these applications for open message/dialog windows and unfinished input actions.

Settings files

By default, the Query Assistant searches for the program settings in the file "Qa.ini". It must be in the same folder as the executable file "Qa.exe" (the Query Assistant program). It is possible to specify another settings file as a command line argument. This is useful when the Query Assistant is used for more than one database because only one database per settings file is supported. When a settings file cannot be found, the program offers to generate it. See "Command line arguments" for more information.

A settings file can contain the following special characters:

Character:	Name:	Function:
[<i>section name</i>]	Square brackets	A settings file's section name is placed between these.
<i>parameter name=value</i>	Equal sign	Delimits the name and value of a parameter.
#	Hash	Indicates the start of a comment line.

Sections and parameters:

Section:	Parameter:	Possible values:	Default value:	Description:
batch	interactive	false/true	false	Indicates that the user must specify the input for the parameters for the first query in a batch before it can be executed.
	querypath	<i>path</i>	<i>None.</i>	The path of a series of queries. All queries must have the same name with a unique index number directly left to the extension. They must all be in the same folder.
	range	<i>number-number</i>	<i>None</i>	The left number is the index number of the first query in a series of queries. The right number is the index number of the last query.
connection	n/a	<i>multiple lines of text</i>	<i>None.</i>	Here, the required information for a connection to a database is located. This information can contain the variables "\$\$user\$\$" and "\$\$password\$\$. When a user and/or password are required for connection to the desired database, these indicate where in the connection information the user and/or password are located. These variables are a specific part of the Query Assistant and are merely placeholders for the information in question. More information: http://www.connectionstrings.com/ .
emailtext	n/a	<i>multiple line of text</i>	<i>None.</i>	Here the text for the e-mail with the exported query result is located.
export	autoopen	false/true	false	Indicates whether the exported results should be opened automatically after exporting.
	autosend	false/true	false	Indicates whether the e-mail with the exported results should be sent automatically.
	ccrecipient	<i>e-mail address</i>	<i>None.</i>	The e-mail address to which the exported result's copy is sent.
	defaultpath	<i>path</i>	.\Export.xls	Specifies the default export path. If the parameter is present, but has no value, the automatic export function is disabled.
	padcolumn	false/true	false	Indicates whether a column will be padded with spaces.
	recipient	<i>e-mail address</i>	<i>None.</i>	The e-mail address to which the exported query results are sent.
	sender	<i>name</i>	<i>None.</i>	The e-mail containing the exported results' sender.
	subject	<i>e-mail</i>	<i>None.</i>	The e-mail containing the exported

		<i>subject</i>		results' subject.
preview	columnwidth	<i>number</i>	-1	Specifies the maximum column width used for the preview. If <i>number</i> has the value of -1, no maximum column width is used.
	rows	<i>number</i>	10	Specifies the maximum number of rows that will be used for the preview. If <i>number</i> has the value of -1, all rows are displayed.
query	autoclose	false/true	false	Indicates whether the Query Assistant is closed automatically after executing the query and performing any exports.
	autoexecute	false/true	false	Indicates whether the query is automatically executed after having been loaded.
	recordsets	false/true	false	Indicates whether the database can return more than one recordset as the result of a query.
	timeout	<i>seconds</i>	30	Specifies the number of seconds to wait for the result after having given the command to execute a query.

Remarks:

- Column padding with spaces is only supported with files exported as text.
- The automatic e-mail function will only be activated if both the "sender" and the "defaultpath" parameters have been specified.
- Some parameter values support symbols. See: "Symbols" for more information.
- When the "column padding" option is used, spaces are used instead of tabs to delimit columns.

Example query batch:

There are two queries in the directory "D:\Qa\Batch" with the names "Query1.qa," "Query2.qa", and "Query3.qa" that should be executed in a batch. Then, the settings should be as follows:

[Batch]

QueryPath=D:\Qa\Batch\Query.qa

Range=1-3

In this example the program automatically fills in the index number for the QueryPath parameter as follows:

QueryPath = D:\Qa\Batch\Query + *index* + .qa

Example connection information:

[Connection]

Provider=Microsoft.Jet.OLEDB.4.0;

Data Source=.\database.mdb;

Persist Security Info=False;

User=\$\$user\$;

Password=\$\$password\$;

Command line arguments

The Query Assistant can be started with the following command line arguments:

- A path and/or file name referring to a query file.
- A path and/or file name referring to a settings file.
- A path and/or file name preceded by two question marks ("??") referring to a file to be generated containing the default settings. ATTENTION: This is an incomplete settings file. The connection information must still be added.
- A path and/or file name referring to a session list file. See: "Sessions".

If both the possible parameters are specified, these should be delimited using a question mark ("?"). The file name's extension determines whether file will be loaded as a settings file or a query file.

Examples:

-The following command will load a query and settings file:

"Qa.exe C:\Program Files\Qa\Query\Query.qa ? C:\Program Files\Qa\Settings.ini"

-The following command will create a file containing the default settings at the path specified:

"Qa.exe ??.\Qa.ini"

Symbols

Using symbols variable information can automatically be inserted into parameter definitions and e-mails containing exported results.

Symbol:	Range:	Description:
0	n/a	The file name of the current query without extension or reference to a directory.
* <i>Number</i> *	<i>1-number of parameter definitions</i>	Inserts the contents of the parameter input box with the specified index number.
D	n/a	Inserts the current date in "ddmmyyyy" format.
* <i>bNumber</i> *	<i>0-number of parameter definitions minus one</i>	Inserts the contents of the first query in a batch's parameter input box with the specified index number.
* <i>cCode</i> *	0-65535	Inserts the character with the specified character code (ASCII, ANSI or Unicode, for example).
d	n/a	Inserts the current day in "dd" format.
* <i>eVariable</i> *	n/a	Inserts the specified operating system environment variable.
m	n/a	Inserts the current month in "mm" format.
y	n/a	Inserts the current year in "yyyy" format.

Symbols can be used in:

- An e-mail's text.
- The e-mail containing the exported results' subject.
- The exported results' path.
- The parameter definition's default value.
- The parameter definition's input.

Remarks:

- Unknown symbols are removed.
- Unnecessary symbol arguments are ignored.
- Symbols can be placed as fixed input in a parameter definition's mask. ATTENTION: when a symbol's left asterisk ("*") is the first character in the mask it will be processed as an indicator that the parameter definition allows variable length input. Use symbols in the default value to generate new symbols to prevent this.
- Symbol names are case sensitive.

Example:

The query "D:\Qa\Query\BankIdNr.qa" has been opened and the first parameter input box contains the value "1234". The specified export path is: "C:\Temp\ "*0*_1*.xls". The export path will be: "C:\Temp\BankIdNr_1234.qa".

Sessions

It is possible to specify a list of query's and any settings files as a command line argument to the Query Assistant. This list is expected to be a text file with a ".lst" extension. This file can contain one or more rows with each row containing a query file path and/or settings file path. When both are specified these must be separated from each other by a question mark ("?"). When the connection information is exactly the same for two consecutive sessions the logon information is requested only once.

Query and database example

At least one settings file containing at least the information for a connection to a database is required before the Query Assistant can be used. The following steps describe how a connection to a database can be made:

1. Create a text file with the ".ini" extension or let the program generate a settings file containing the default settings. See: "Command line arguments".
2. Add the connection information and save the file.
3. Start the program using the settings file's name as the command line argument. This parameter is not required when the file is called "Qa.ini" and is in the same directory as the program.

Example files:

Table ("Days.txt")

Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday

Settings ("Qa.ini")

[Connection]

Provider=Microsoft.Jet.OLEDB.4.0;
Data Source=.\;
Extended Properties="text";

Query ('Query.qa')

SELECT * FROM Days.txt WHERE UCASE(Days) LIKE '%\$Day:____::V:Specify a few letters.\$\$%';

Database settings ('Schema.ini')

[Days.txt]
Format=TabDelimited
CharacterSet=ANSI
ColNameHeader=false
Col1=Days Text
MaxScanRows=0

Save all these files in the same folder as "Qa.exe". If everything is in order, the program can now connect to the database at (".\") and the query ("Query.qa") can be executed without problems.

Getting help

For each button and input box a short description can be retrieved by holding the mouse pointer still over the button or input box in question. Any comments that an input box may have can be retrieved in the same manner. A short description of the program can be retrieved by using the Microsoft Windows Explorer to retrieve the program's properties.

By: Peter Swinkels, January 13, 2019