QDS™ v5.0

New Features Documentation

NOVA Research Company

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Design Studio Features

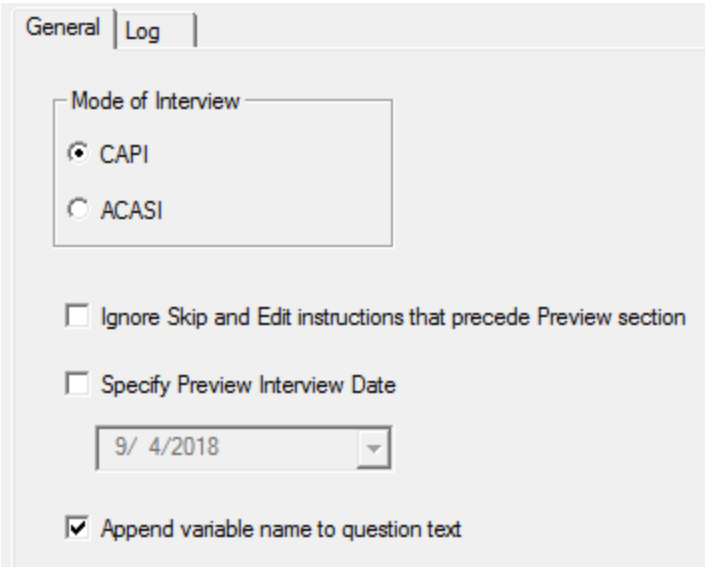
The following features are new to v5.0 Design Studio.

Design Studio Preview Mode Enhancements

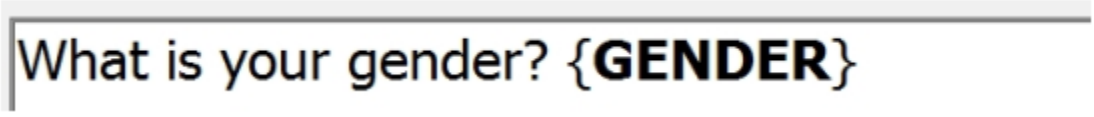
With the Design Studio Preview Tool, you can run sections of your survey in a CAPI or ACASI emulator (without the CAPI or ACASI module installed) by highlighting elements and then selecting **Tools|Run Preview**. Preview options are set under **Options|Preview**. QDS™ 5.0 includes several enhancements for this feature, which was added in QDS™ 4.0. See Preview Tool in QDS™ online help.

Preview Mode: Display Variable Name in Question Text

Variable names can now optionally be displayed in the Question Text box. To display the variable name during a preview session, go to **Options|Preview,** *General* tab and check the *Append variable name to question text* box.

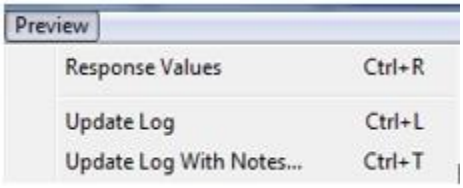


Variables names are displayed in all CAPS within {}, e.g., {GENDER}.



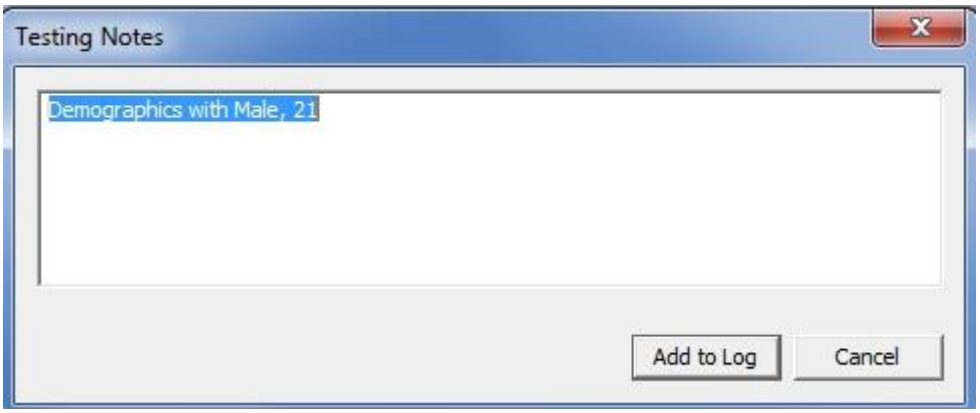
Preview Mode: Log Response Values During Preview Session

During a Preview Mode session, you may write out response values to a text file as a log by either using keyboard shortcut *Ctrl+L*, selecting **Preview|Update Log** from the menu bar (CAPI only), or selecting the *Update Log* button in the *Response values* box. See Viewing Response Data in Preview Tool. Every time you update the log, a new row of response values, separated by commas, is added to the log file and a message notifies you that "Response Values have been added to log file". For cases where a tracked variable doesn't have any response data, a blank space will be written to the log file.



Log Testing Notes

You may add an optional note to the end of a row of response data by using *Ctrl+T*, selecting **Preview|Update Log With Notes** from the menu bar (CAPI only), or selecting the *Update Log with Notes* button in the *Response values* box. When you *Update Log with Notes,* the log is updated ***and*** text entered into the *Testing Notes* box is added to the *Notes* column at the end of the row of data; a message notifies you that "Response Values and notes have been added to log file" (See Log Spreadsheet Data).

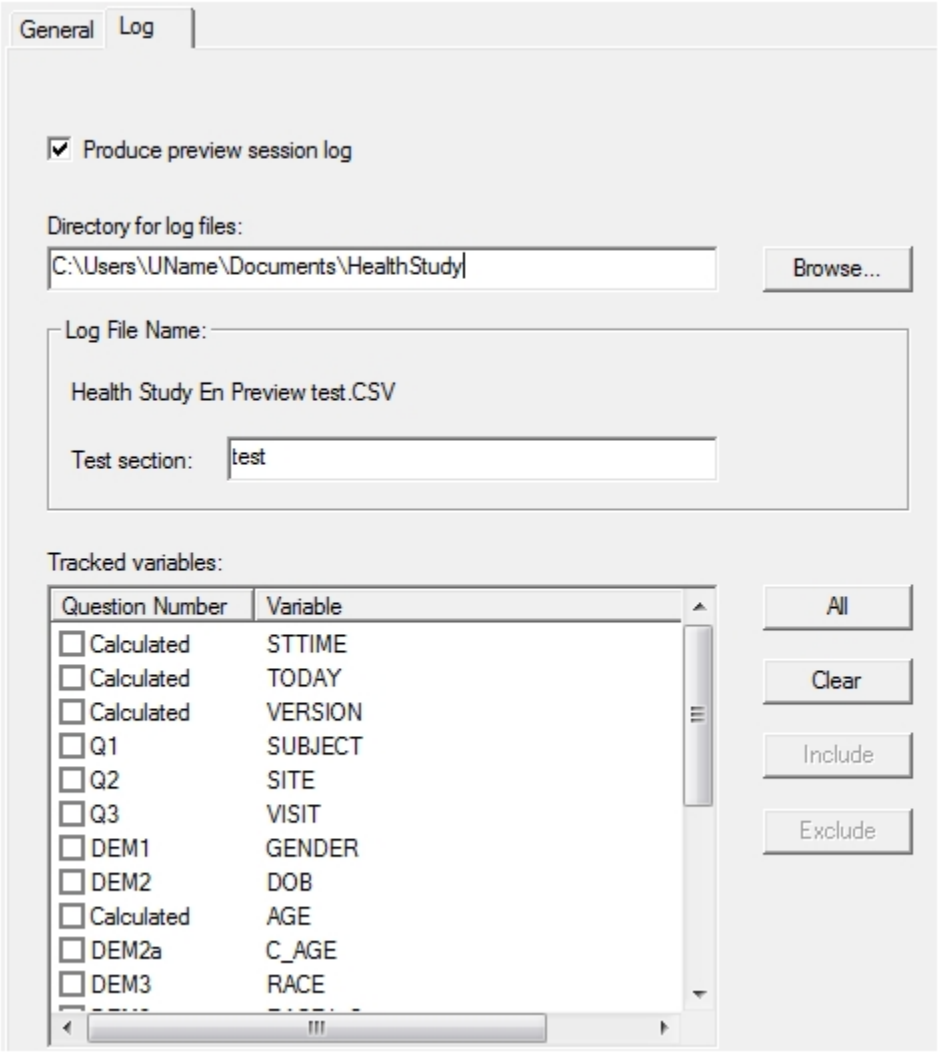


Preview Tool Log Options

To turn on preview session log and modify options, go to **Options|Preview**, *Log* tab. Check the *Produce preview session log* box. When that box is checked, all options fields become enabled. To produce a log, you must enter a directory for the log file and check at least one variable in the *Tracked variables* list box. You may enter a *Directory for log files*, or use the *Browse* button to select directory.

Log Naming Options

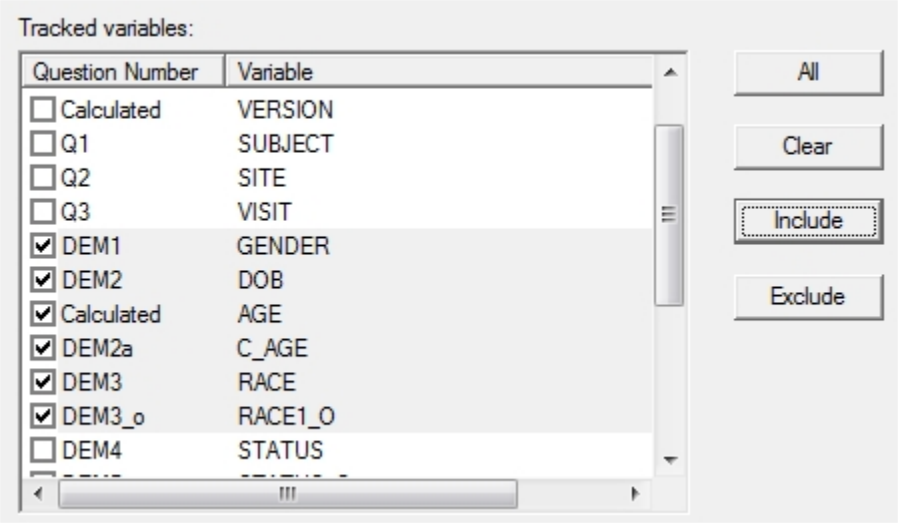
By default, the name of the log file is: <survey-name> <language> Preview test. You may change this by entering a new name into the *Log File Name: Test section* box. The updated name will be displayed the next time you open Preview options. A unique test section name can be entered for each language in the specifications file.



Tracked Variables

The *Tracked variables* list box contains all variables in the specifications file since the last validate. The listing does *not* include component variables, but these will be included automatically in the log file if the associated composite variable is checked.

To check all variables, select the *All* button; to uncheck all variables, select the *Clear* button. To check or uncheck more than one variable at a time, use *Shift* key plus mouse or arrow keys or *Ctrl* key plus mouse to select variables you wish to highlight. Select *Include* to check all highlighted variables or *Exclude* to uncheck.



If you modify the checked list of tracked variables without changing the log file name, QDS™ will prompt you "Do you wish to close out the existing log file and then start a new log with the old name?"

- If you say *Yes*, QDS™ will rename the existing log file to include the current date and time and begin a new file with the same name for the next logged Preview session.
- If you say *No*, you will be required to update the *Log File Name*.

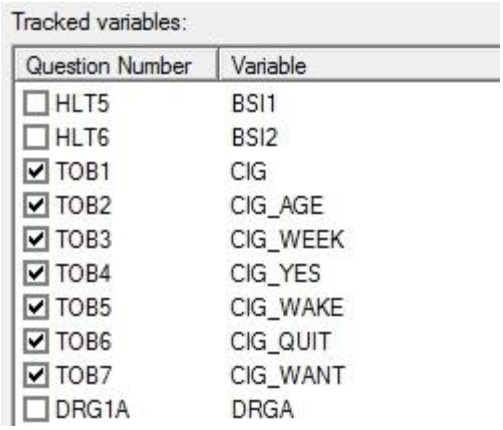
If you select a set of variables on the *Log* tab, and then modify a Data Element that causes a tracked variable name to be changed or deleted, the next time you run the Preview tool, an error message will indicate that the list of tracked variables is not consistent with the current state of the specifications file.

Logged Data Example

If you had a survey named "Health Study" and wanted to test and review data entered for specific variables in your tobacco section, you could do this with Preview data logging with the following steps:

1. Under **Options|Preview**, *Log* tab, check the *Produce preview session log box*.
2. Enter your Directory for log files.
3. Name your log file "Health Study En Preview Cigarettes.CSV" by entering "Cigarettes" into *Log File Name: Test section* box.

4. Under tracked variables, select only the variables in the Tobacco section you want to test (e.g., CIG to CIT_WANT).



5. Click *OK* to return to the Design Studio element listing.
6. Highlight the elements you would like to test (this can include any number of elements, not just those selected in tracked variables).
7. Select **Tools|Run Preview** or *F5* to launch Preview.
8. During your Preview session, select **Preview|...Update Log** *(Ctrl+L)* or **Update Log with Notes** (*Ctrl+T*), or select the *Update Log/Update Log with Notes* button on the *Response values* box to save data for tracked variables entered so far into the log file. See Viewing Response Data in Preview Tool.
9. Add successive rounds of test data to the log by either:

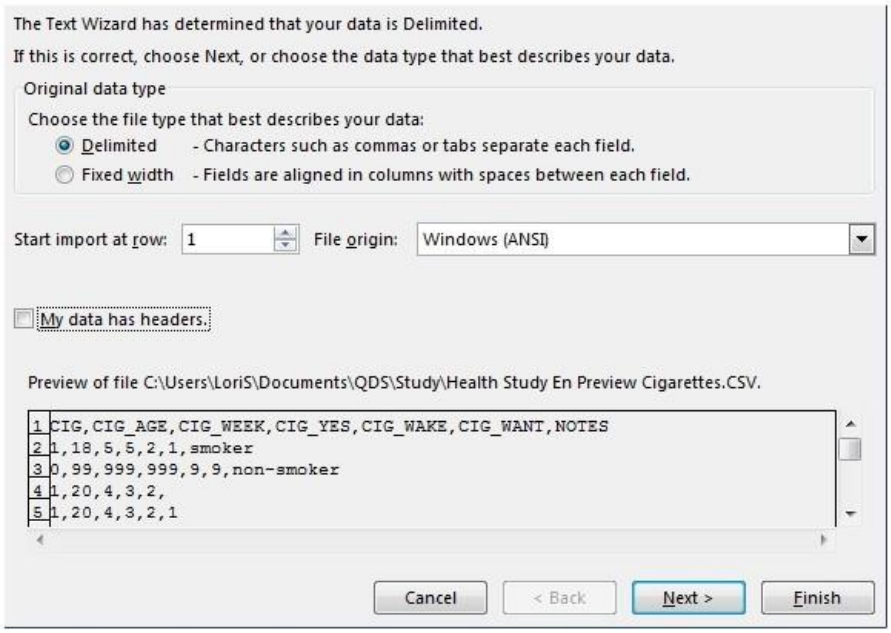
    - Entering data in successive Preview sessions and update log data at end. Each separate session will be a separate row in a single logged data file until you rename the log file.
    - Going "back and forth" during a single preview session using the *Previous Question* and *Next Question* buttons and select to update the log data every time you would like to start a new row of data.

After you exit the Preview session, the .CSV log file will be saved into the folder specified under log options for *Directory for the log file*.

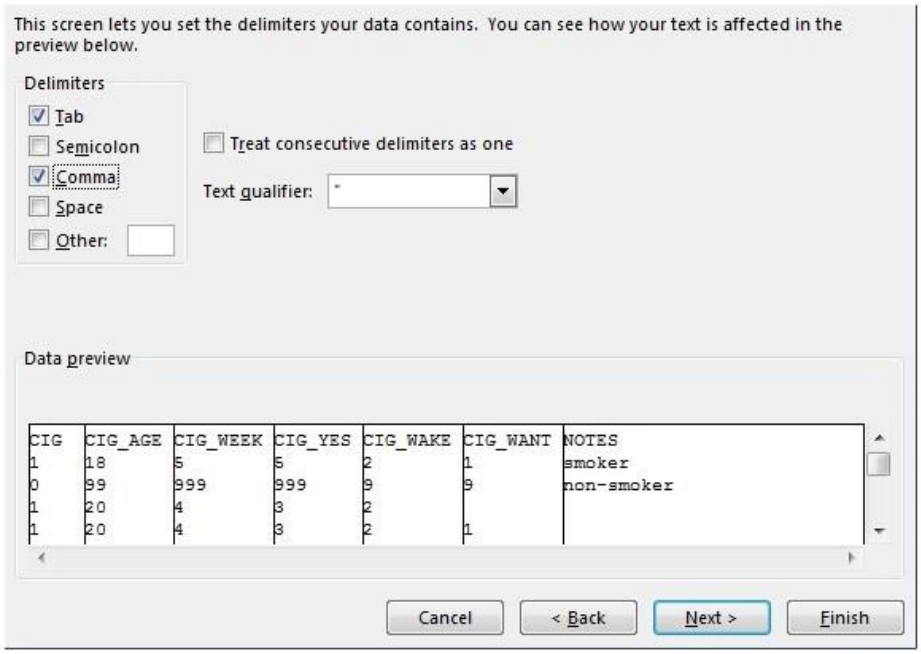
CSV Log Data

You can open the .CSV file in any spreadsheet program. The steps for importing to MS Excel would be as follows (*this may differ depending upon version*):

1. Open the .CSV file (the spreadsheet program may automatically detect that the file is text delimited and prompt you to specify details about importing it).
2. Highlight the first column.
3. Go to **Data|Text to Columns**.
4. Select the *Delimited* radio button, then select *Next*.



5. Select the delimiters: Tab and Comma; the *Data preview* should show your data lined up in columns. Select *Next*.



6. Select additional options and *Finish*.

Log Spreadsheet Data

The logged data is presented in columns with each variable's data in a column in survey order (component variables at the end of the listing); the Notes column is presented as the last column if any notes were entered. Data does not include labels, and special codes are presented as their numeric codes.

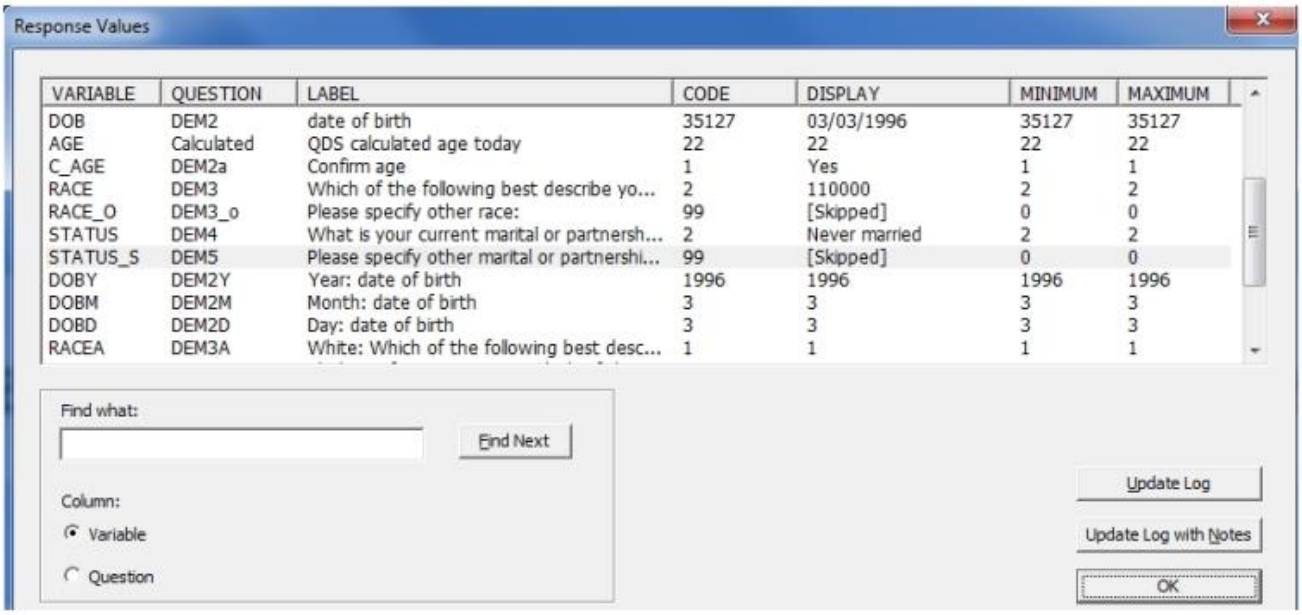
	A	B	C	D	E	F	G
1	CIG	CIG_AGE	CIG_WEEK	CIG_YES	CIG_WAKE	CIG_WANT	NOTES
2	1	18	5	5	2	1	smoker
3	0	99	999	999	9	9	non-smoker
4	1	20	4	3	2		
5	1	20	4	3	2	1	
6	7	97	997	997	7	7	Don't Know responses

Preview Mode: Enhanced Preview Tool Response Values Box

The Preview Tools *Response Values* box has been enhanced in v5.0 to include a search function for specific variable names or question numbers. This is useful for large surveys in order to quickly locate responses.

At any point while running in either CAPI or ACASI Preview mode, you may view all current data by selecting **Preview|Response Values** (CAPI only) or pressing *Ctrl+R* (CAPI or ACASI). This will open the *Response Values* box displaying all Data Elements and Automatic Variables, starting with the first Data Element in the survey (i.e., not limited to current selection) through the most recent response collected in the active Preview session. Variables preceding the highlighted section of the survey contain the test value assigned in the Design Studio on the Data Element *Test* tab. The Response Values listing includes columns for:

- Variable name
- Question number
- Variable label
- Numeric code
- Display value
- Minimum value for range of response
- Maximum value for range of response



By default, variables are displayed in the same order as that used when viewing variables in the Warehouse Manager (i.e., component variables are at the end of the listing, such as DOBY, DOBM, and DOBD for a composite variable DOB). When the *Response Values* box first opens, the variable associated with the last question answered is highlighted. For Automatic Variables that are skipped or not yet encountered, the variable, question, and label information is displayed; however, all other columns are blank.

Response data is continually updated during the Preview session; if you use the *Previous Question* button to go back and change responses, the next time Response Values are opened, they will be updated to reflect updated data values.

Find and Sort Options

QDS™ v5.0 contains a new feature to find a variable or question number (complete or partial match). Select either the *Variable* or *Question* radio button to select the column, type your search text in the *Find what:* box, and then select the *Find Next* button or *F3*.

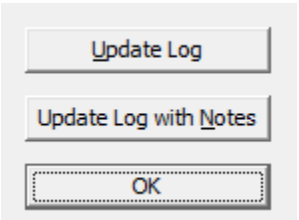
When QDS™ finds a matching variable or question number, the first matching item is highlighted in the list box and scrolled into view; select *Find Next* or *F3* to search for the next instance.

Display order can be sorted by clicking on any column header; the sort order will vary depending on which column is clicked. Sorting by *Variable*, *Question*, *Label*, and *Display* columns sorts alphabetically; sorting by *Code*, *Minimum*, and *Maximum* columns sorts numerically. The first time clicking on a column header, rows are sorted in ascending order; clicking on a column a second time results in the rows being sorted in descending order.

Clicking *OK* will return you to Preview mode if the end of the section has not yet been reached; it will return you to the Design Studio file if the response data were opened at the end of the highlighted section.

Response Values Log Options

If the *Produce preview session log* option is checked on the Preview options *Log* tab, the *Update Log* and *Update Log with Notes* buttons are enabled and you will be able to update the current log or update the log and add notes. See Preview Tool Log Options.



*Note: You can also exit Preview tool prior to section end (**Interview|End**, **Interview|Exit**, or Alt+F4). In Design Studio Preview Options, set the option to "Ignore Skip and Edit Instructions that Precede Preview Section" to facilitate testing as needed. See Preview Tool General Options* in QDS™ online help.

Data Element: Longer Variable Names

As of v5.0, QDS™ variable names may be a maximum of 32 characters. Variable names must begin with a letter and contain only letters, digits, underscores, and substitution tokens to ensure compatibility with output file requirements when data is exported from the Warehouse Manager (e.g., SAS XML, SPSS, Stata, and MS Access formats). *Note: SPSS v6.1 and SAS Transport file formats have 8 character variable name limits; if you attempt to export to these formats with a data file containing more than 8 character variable names, the Warehouse Manager will issue an error.*

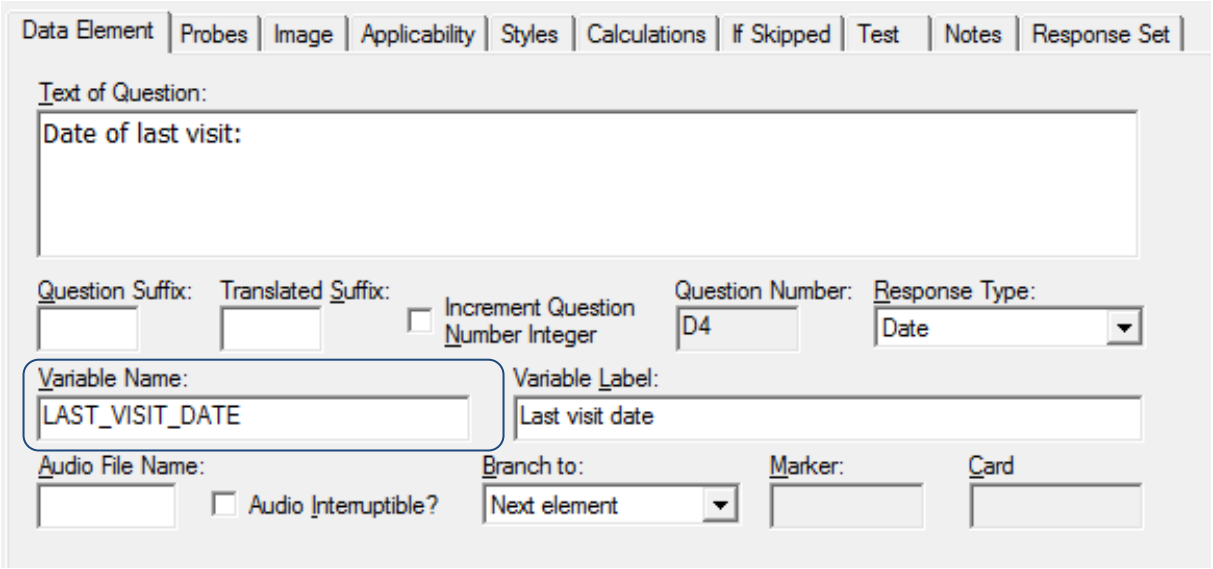
The following are examples of valid and invalid variable names:

- Valid: INTERVIEWDATE, FIRSTNAME, DOB, LAST30, MONTH_YEAR, DOLLAR_AMOUNT
- Invalid: 30DAYS, MONTH/YEAR, AMOUNT$

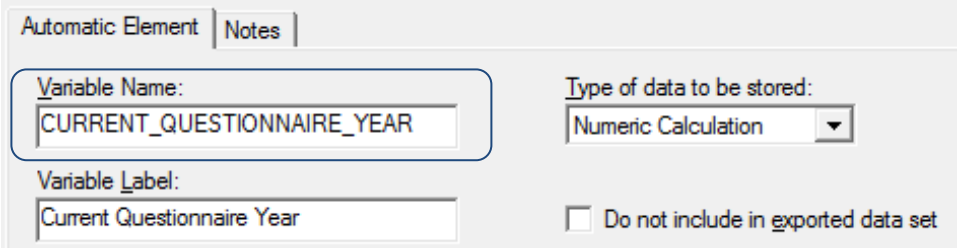
Accommodations for Longer Variable Names

The Design Studio and Warehouse Manager, as well as documentation produced by QDS™ (Codebook files (.RTF And CSV formats), Skip-Edit Check report, and CAPI/ACASI Summary reports), now accommodate the input and display of longer variable names.

The variable name field on the *Data Element* tab is wider to accommodate viewing longer names.

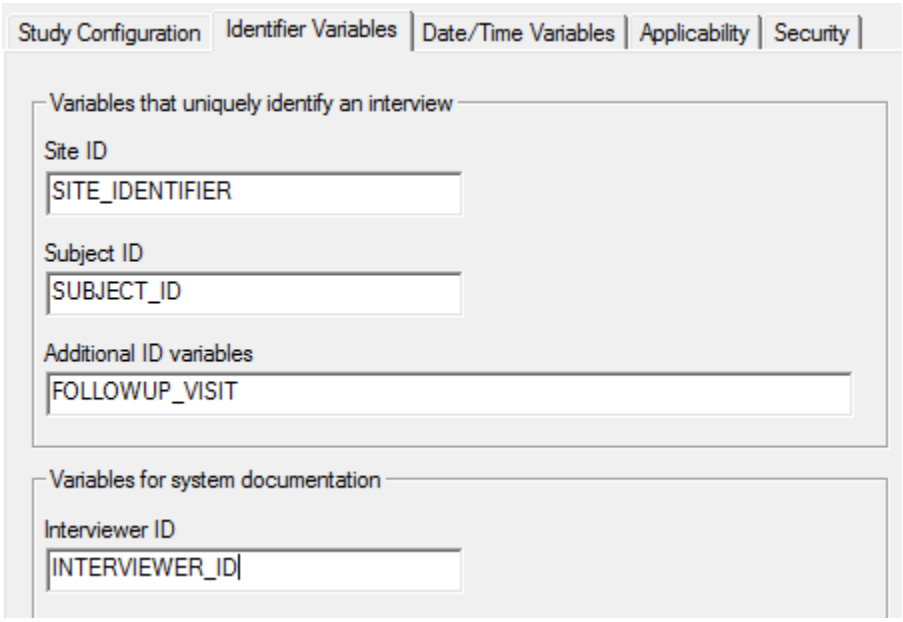


Likewise, the Variable Name fields on the *Data Elements* tab under **Options|Data Defaults** and the *Automatic Element* tab are wider.

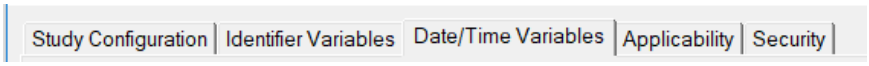


Design Studio Interview Options

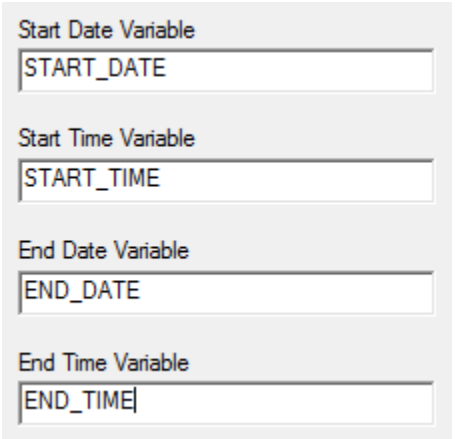
The **Options|Interview,** *Identifier Variables* tab has been redesigned to accommodate the input and display of longer variable names. Identifier variables (Site ID, Subject ID, and Additional ID variables) are entered under *Variables that uniquely identify an interview* box and Interviewer ID is listed in the *Variables for system documentation* box. See Selecting Interview Options in QDS™ online help.



A new *Date/Time Variables* tab has been added to **Options|Interview**.



On this tab, you may specify which variables are used to collect Start Date, Start Time, End Date, and End Time. Completion of these fields is optional; however, they are often useful for study documentation.



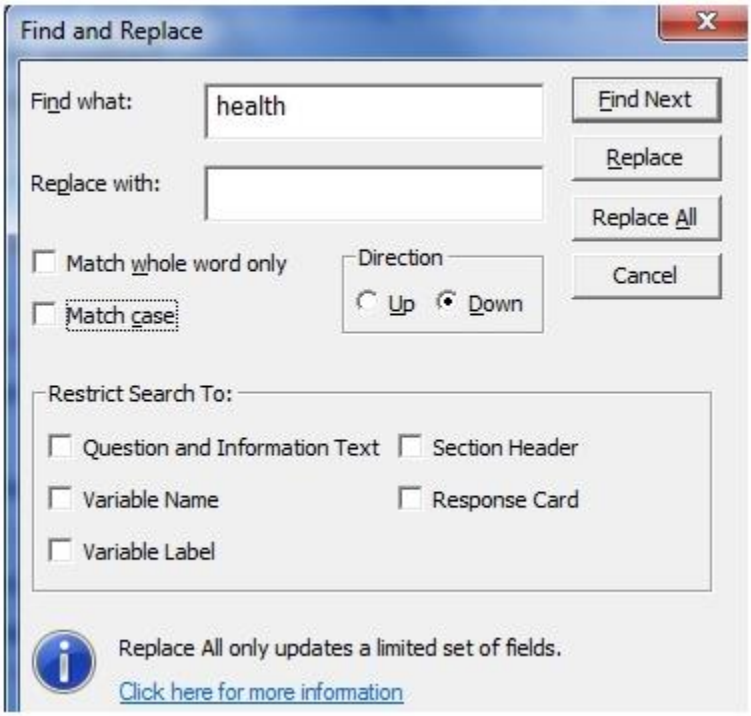
Find and Replace Function

As of v5.0, QDS™ includes a **Find and Replace** function allowing you to search for, and optionally replace, words or phrases located in elements and response cards.

To access the **Find and Replace** function, select **Edit|Find/Replace** from the menu bar, keyboard shortcut *Ctrl+F*, or the *Find/Replace* button on the toolbar.

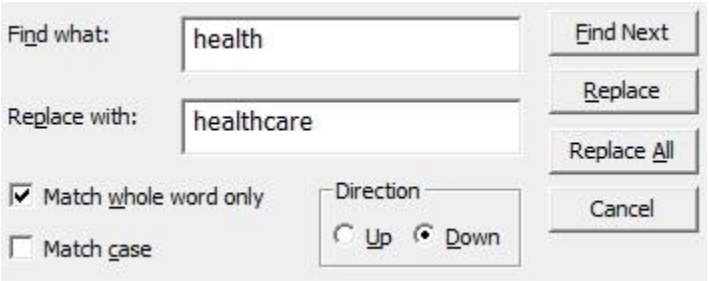
Find

To use the *Find* feature, enter your search text in the *Find what* box and select *Find Next* button. After selecting the *Find Next* button, the **Find and Replace** box closes and QDS™ highlights the first instance of the *Find what* text. To find the next occurrence of the search text (without relaunching the Find function), press *F3*.



Replace

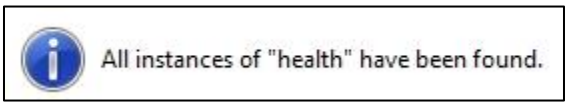
To replace specified text, enter replacement text in the *Replace with* box and select *Replace*.



After selecting the *Replace* button, the **Find and Replace** box closes and QDS™ highlights the first instance of the text specified in the *Find what* box. At this point, you must choose whether to (a) replace this instance and find the next or (b) move on to the next without replacing.

- To replace the highlighted text and find the next instance, select **Edit|Replace & Find Again** from the menu or the *Shift+F3* keyboard shortcut.
- To move on to the next instance without replacing the current text, press *F3*.

A message is displayed when no more occurrences of the *Find what* text are found.

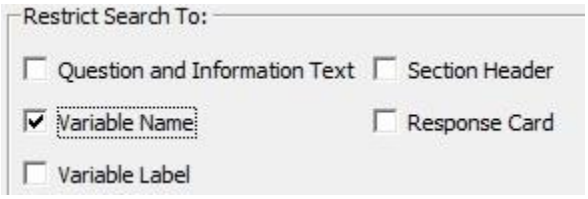


Find and Replace Options

- **Match Whole Word Only**: Finds only whole words that match the text in the *Find What* string.
- **Match Case**: Finds only text that matches the case of the characters in the *Find What* string exactly.
- **Direction**: Specifies direction to search: if Up is selected, search starts at current element and moves to the top. If Down is selected, search starts at the current element and moves to the bottom.

Restrict Search To

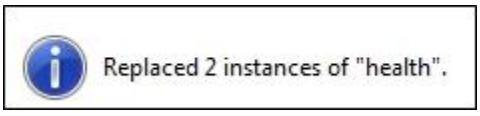
Check the box or boxes to restrict the search:



- **Question and Information Text:** Text fields of Data Elements and Information Elements.
- **Variable Name:** Variable name field of a Data Element or Automatic Variable Element.
- **Variable Label:** Variable label field of a Data Element or Automatic Variable Element.
- **Section Header:** Section Header Element text.
- **Response Card:** Text on response cards.

Replace All

To replace all instances of the *Find what* text, select the *Replace All* button instead of *Replace*. QDS™ will replace all instances (see Replace All Limitations for exceptions) and display a message indicating the number of occurrences modified.



To review the changes, generate a Change History document; each modification will be listed as an *Update*. *Note: Changes to response cards are not included in the Change History document.* See Change History File in QDS™ online help.

To remove changes, select **Edit|Undo** for each occurrence that was changed. For example, if QDS™ reports three instances were changed, select **Edit|Undo** three times.

Replace All Limitations

In order to prevent unintended changes (e.g., updates to range, special code values, or expressions) the *Replace All* function is primarily limited to text. The list below indicates which fields can be replaced using the Find/Replace All function.

> **Tip**: To replace multiple instances in fields excluded from *Replace All*, such as variable names, you can use select **Edit|Replace & Find Again** (keyboard shortcut:*Shift+F3*) to replace the highlighted text and move to next instance.

Data Element

- Question text, variable label, audio file, Marker on *Data Element* tab
- Probe text on *Probes* tab
- File name on *Image* tab
- Text on *Notes* tab

Data Element Response Tabs

- **Yes/No**: Marker if Yes, Marker if No, Audio for Yes response, Audio for No response, Yes Button File, No Button File
- **Gender**: Male Button File, Male Audio, Female Button File, Female Audio
- **Nominal Pick One**: Marker If Code Zero; for each code list item: Description, Button file, Button text, Audio
- **Nominal Check Each**: Marker If None Checked; for each check list item: Description, Text, Audio
- **Local Currency/Number**: Tag, Marker If Zero
- **Numeric Rating Scale**: Low Anchor Text, High Anchor Text
- **Text**: Marker If Blank
- **Ranking**: For each rank list item: Description, Text, Audio
- **Response card (Pick-one card type)**: Marker for If Code Zero
- **Response card (Check each card type)**: Marker for If None checked

Response Cards

- **Response Card**: Description
- **Response Card (Scale)**: Description, Scale Text
- **Response Card (Pick One)**: Description, Audio file, Button file, Button text
- **Response Card (Check each and Ranking)**: Description, Audio file, Button text

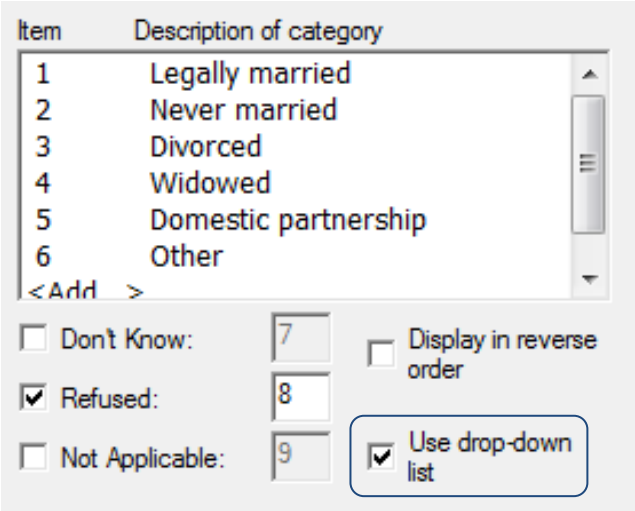
Other Elements

- **Information Element**: Information text, Audio file, Item ID field, File name on *Image* tab, Text on *Notes* tab
- **Skip Element**: Marker, Item ID, Text on *Notes* tab
- **Edit Element**: Display message, Audio file, Marker, Item ID, File name/URL field for Link-to reconciliation, CAPI control file, ACASI control file on *Launch* tab, Text on *Notes* tab

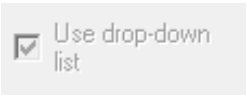
- **Marker Element**: Marker, Description
- **Section Header Element**: Header, Item Id, Text on *Notes* tab
- **Format Element Sheet**: Text on *Notes* tab
- **Table Element**: Text on *Notes* tab; for each Table category: Label, text substitution, alternative text substitution.
- **Automatic Variable**: Variable label, Character string, Text on *Notes* tab
- **Comments Element**: Comments

Data Element: Drop-down Layout for Pick One Response Types

QDS™ v5.0 includes a new option allowing you to use a drop-down list instead of response buttons for a Data Element, Pick One response type. If a response set includes more than 24 choices, the drop-down list will automatically be displayed in CAPI/ACASI. If the response set includes 24 or fewer choices, the default display will be buttons; however, you can choose to use a drop-down list by checking *Use drop-down list* on the *Response Set* tab.

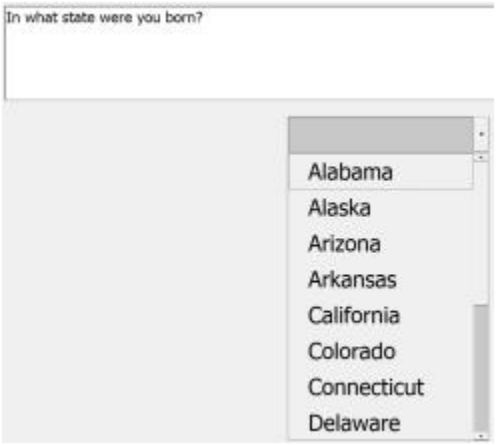


If the number of responses is greater than 24, the box will be grayed out, as the default display in CAPI/ACASI will automatically be a drop-down list.



Entering Reponses for Drop-down List in CAPI and ACASI

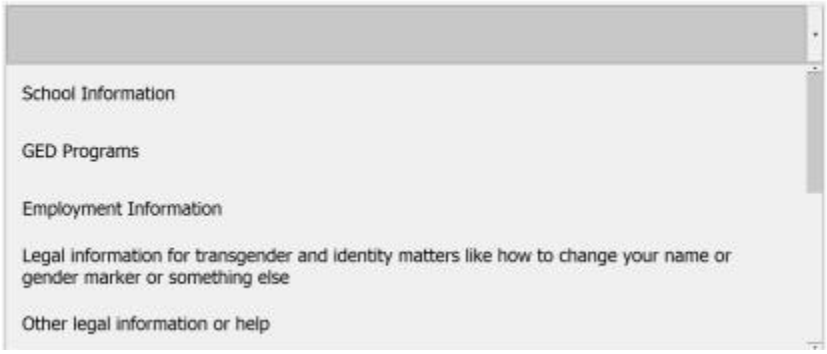
When a drop-down Pick One list is first encountered, CAPI or ACASI displays an open list of response items with the first choices displayed at the top. You can navigate through the list via keyboard with the down arrow, up arrow, *Home*, *and* End keys or with a mouse or touch screen by using the scrollbar.



To select a response, highlight an item and press the *Enter* key or use mouse/touch screen to select response. You may also enter the *first* letter of a response to select the *first* instance that starts with that letter. For example, if the list contained choices for "California" and "Colorado" in that order, entering "C" would select "California".

After a response is selected, the list closes, and the text of the response is copied to the box above the drop-down list. To change a response, use the down-arrow key to re-open the list or use the mouse/touch screen to select the down-arrow icon.

If the list of response items contains an item which is too wide to display on a single line, ACASI/CAPI will reduce the response font or display each response item as two lines to insure every response item is fully visible.



See Response Set Tab: Nominal-Pick One and CAPI/ACASI: Pick One Type Responses in QDS™ online help.

Automatic Variable Function: Round

QDS™ v5.0 includes a new Automatic Variable function, ROUND, that returns the rounded value of a numeric expression or numeric type variable.

Function Expression

ROUND(numeric expression or numeric variable)

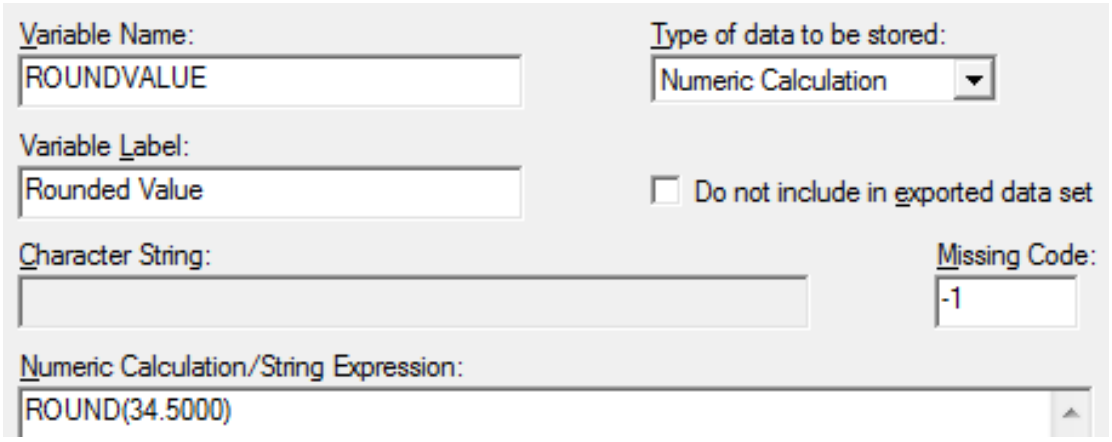
Examples

The function ROUND(34.5000) will return "35" in the collected data. These expressions will give the following results:

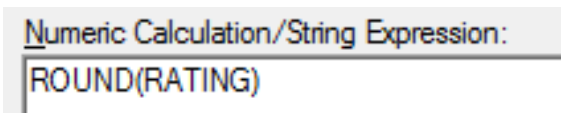
- ROUND(34.4999) returns 34
- ROUND(34.5100) returns 35
- ROUND(-34.5666) returns -35

Adding a ROUND Function Automatic Variable

1. Go to **Edit|Insert**, Automatic Variable
2. Set Type of data to be stored to Numeric Calculation
3. Enter Variable Name, e.g., ROUNDVALUE
4. Enter Variable Label, e.g., "Rounded Value"
5. In the Numeric Calculation/String expression box, enter your expression, for example: ROUND(34.5000) or ROUND (VARNAME)
6. Click *OK*



If you reference a previously collected Data or Automatic Variable Element, it must be a numeric type. In the expression, the variable name is listed in the parentheses, such as ROUND(RATING), where RATING was a previously collected numeric type Data Element.



Automatic Variable Functions: Day, Month, Year

QDS™ v5.0 includes Automatic Variable functions that return the value of a single component of a full or Year-Month date response as an integer. For the MONTH and DAY functions, if the date response was not a full date (e.g. MM/YYYY)[1], then QDS™ will return a range of values for the missing day or month.

Function Expressions

- DAY(numeric expression or numeric variable)
- MONTH(numeric expression or numeric variable)
- YEAR(numeric expression or numeric variable)

Examples

- DAY(01/02/2013) returns 2
- MONTH(01/02/2013) returns 1
- YEAR(01/02/2013) returns 2013

Automatic Variable named TODAY of Today's Date type: Date = 09/30/2018

- DAY(TODAY) returns 9
- MONTH(TODAY) returns 30
- YEAR(TODAY) returns 2018

Data Element, Date type named DATE1: Full date response = 07/04/2000

- DAY(DATE1) returns 7
- MONTH(DATE1) returns 4
- YEAR(DATE1) returns 2000

Data Element, Date type named DATE2: Month/Year only response = 10/2018

- DAY(DATE2) returns -1,[Undefined],min=1,max=31
- MONTH(DATE2) returns 10
- YEAR(DATE2) returns 2018

Data Element, Date type named DATE4 where normal range is 1/1/2000 to 12/31/2020: "Don't Know" response

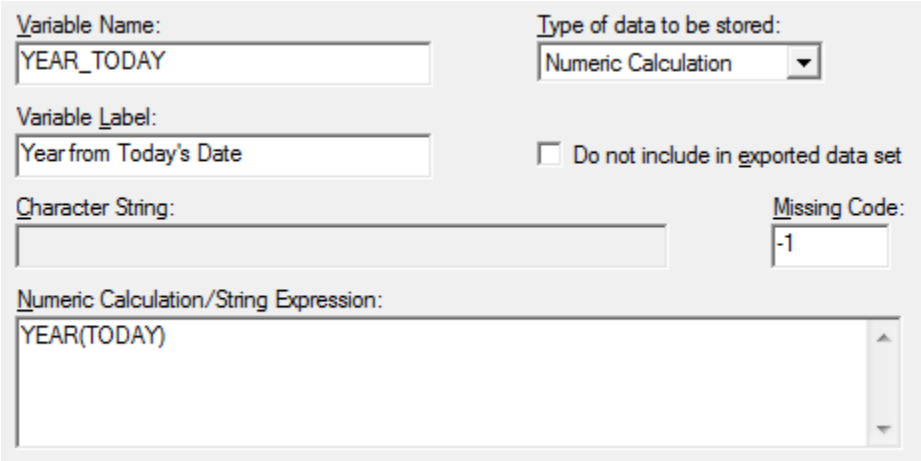
- DAY(DATE4) returns -1,[Undefined],min=1,max=31
- MONTH(DATE4) returns -1,[Undefined], min=1, max=12
- YEAR(DATE4) returns -1, [Undefined], min=2000, max=2020

[1] Day, Month, and Year functions do not work with Year only type dates, and will trigger a validation error.

Adding a Day, Month, or Year Function

To add an Automatic Variable Element that uses the Day, Month, or Year function:

1. Go to **Edit|Insert**, Automatic Variable
2. Set *Type of data to be stored* to Numeric Calculation
3. Enter Variable Name, e.g., YEAR_TODAY
4. Enter Variable Label e.g., "Year from Today's date"
5. In the Numeric Calculation/String expression box, enter your expression, for example: YEAR(TODAY)
6. Click *OK*



Automatic Variable Function: String to Number

QDS™ v5.0 includes an Automatic Variable function that converts a string that contains numbers to the corresponding numeric value. If the string argument contains digits and letters, the function will stop processing when it detects the first letter.

Function Expressions

STRINGTONUMBER(String Expression or Text Variable)

Examples

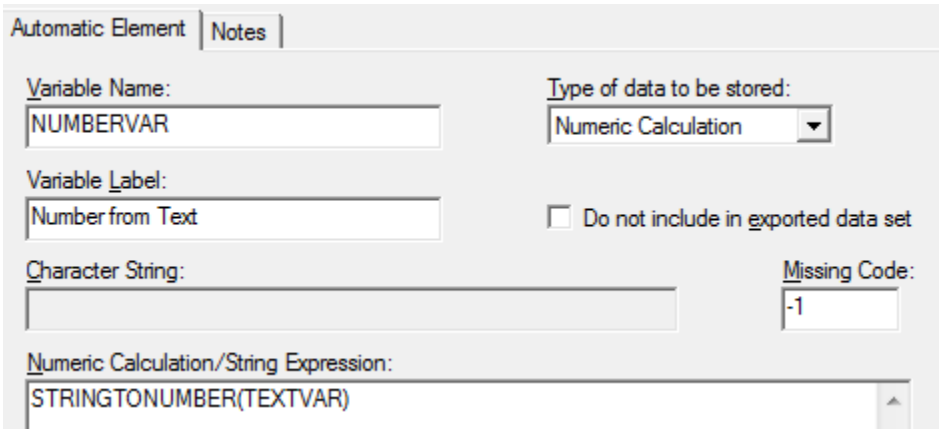
Data Element, text type variable named TEXTVAR with the following responses and result:

- **TEXTVAR** =”0568”: STRINGTONUMBER(TEXTVAR) returns 568
- **TEXTVAR** =”08-31-2018” STRINGTONUMBER(TEXTVAR) returns 8
- **TEXTVAR** =”51 sites” STRINGTONUMBER(TEXTVAR) returns 51
- **TEXTVAR** = ”Site 1” STRINGTONUMBER(TEXTVAR) returns -1, [Undefined],min=0,max=1

Adding a String to Number Function Variable

To add an Automatic Variable Element that uses the StringToNumber function:

1. Go to **Edit|Insert**, Automatic Variable
2. Set *Type of data to be stored* to Numeric Calculation
3. Enter Variable Name, e.g., NUMBERVAR
4. Enter Variable Label e.g., “Number from Text”
5. In the Numeric Calculation/String expression box, enter your expression, for example: STRINGTONUMBER(TEXTVAR)
6. Click *OK*



Automatic Variable Element: Special Constant for Missing

A new special constant ".MSG" assigns a system missing code to an Automatic Variable, which QDS™ stores as a range of values with a display value of [Empty]. The *Type of data to be stored* needs to be Numeric Calculation. In the Warehouse Manager, Preview Mode, or Skip-Edit Check report, values of .MSG will have a Numeric Code of 0, Display Value of [Empty] and a Range of -99 to 100.

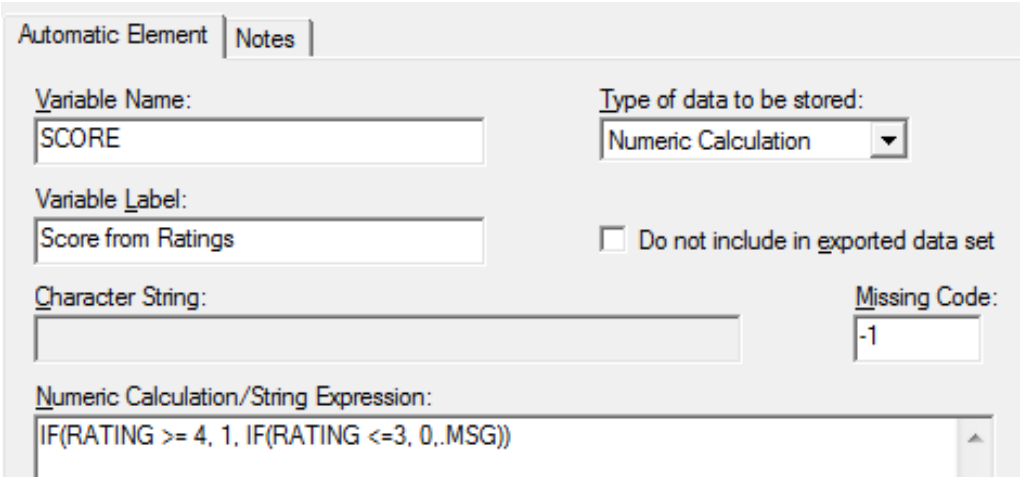
Examples

- IF (NUMVAR1 = 1, .MSG, 1) returns "[Empty]" if the condition is TRUE
- IF (NUMVAR1 = 1, 1, .MSG) returns "[Empty]" if the condition is FALSE
- IF (TEXTVAR1 = "Non-Resident", .MSG, "Eligible") returns "[Empty]" if the condition is TRUE
- IF (TEXTVAR1 = "Resident", "Eligible", .MSG) returns "[Empty]" if the condition is FALSE
- IF (VAR = .MSG, …) returns TRUE if the VAR is equal to "[Empty]"
- IF (VAR ^= .MSG, …) returns TRUE if the VAR is not equal to "[Empty]"

Adding an Automatic Variable using .MSG

To add an Automatic Variable using the .MSG constant as the result for one of the conditions:

1. Go to **Edit|Insert**, Automatic Variable
2. Set *Type of data to be stored* to Numeric Calculation
3. Enter Variable Name, e.g., SCORE
4. Enter Variable Label, e.g., "Score from Ratings"
5. In the Numeric Calculation/String expression box, enter your expression, for example: IF(RATING >= 4, 1, IF(RATING <=3, 0,.MSG))
6. Click *OK*



If RATING has a range of 0 to 5, with “Don’t Know” and “Refused” allowable, this calculation will result in:

- 1, when the variable RATING is greater than or equal to 4 (RATING >= 4)

VARIABLE	QUESTION	LABEL	CODE	DISPLAY	MINIMUM	MAXIMUM
SUBJECT	Q1	Subject	2	2	2	2
RATING	Q2	Rating 1	5	All the Time	5	5
SCORE	Calculated	Score from Ratings	1	1	1	1

- 0, when the variable RATING is less than or equal to 3 (RATING <= 3)

VARIABLE	QUESTION	LABEL	CODE	DISPLAY	MINIMUM	MAXIMUM
SUBJECT	Q1	Subject	1	1	1	1
RATING	Q2	Rating 1	1	A little bit	1	1
SCORE	Calculated	Score from Ratings	0	0	0	0

- Otherwise—i.e., when RATING is equal to “Don’t Know” or “Refused”—it will be equal to the missing constant (.MSG) which has a Numeric Code of 0, Display Value of [Empty], and a Range of -99 to 100.

VARIABLE	QUESTION	LABEL	CODE	DISPLAY	MINIMUM	MAXIMUM
SUBJECT	Q1	Subject	3	3	3	3
RATING	Q2	Rating 1	7	Don't Know	0	5
SCORE	Calculated	Score from Ratings	0	[Empty]	-99	100

See Missing Values in in QDS™ online help.

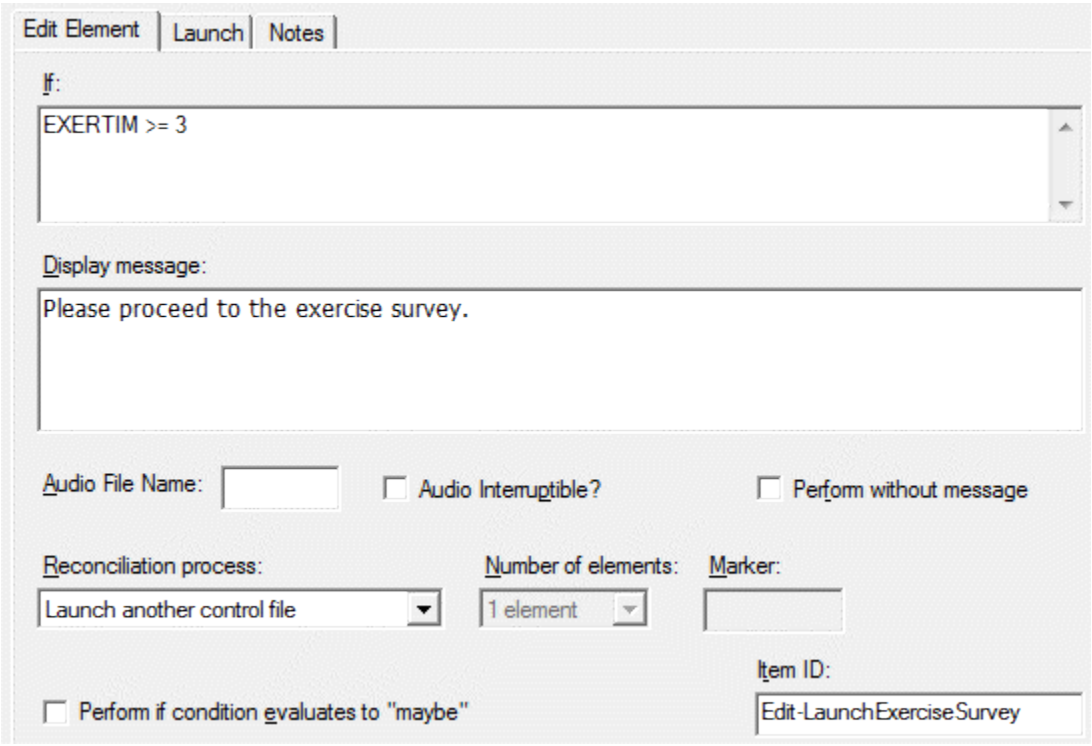
Edit Element: Launch Allows Up to Ten Shared Variables

For CAPI and ACASI modules, you can launch a second control file with the Edit Element, Launch another control file option. As of v5.0, you can specify up to 10 additional variables to be copied to the second questionnaire on the *Edit Element: Launch* tab (see Shared Variables). *Note: any identifier variables specified under Interview Options from the first questionnaire are automatically copied to the second questionnaire.*

Adding an Edit Element with the Launch Another Control File Option

Edit Element Tab

1. Select **Edit|Insert** and choose Edit Instruction.
2. On the *Edit Element* tab, in the *If* text box, enter the condition to be checked by the Edit Element. For example, "EXERTIM >=3" (Number of exercise times was greater than or equal to 3).

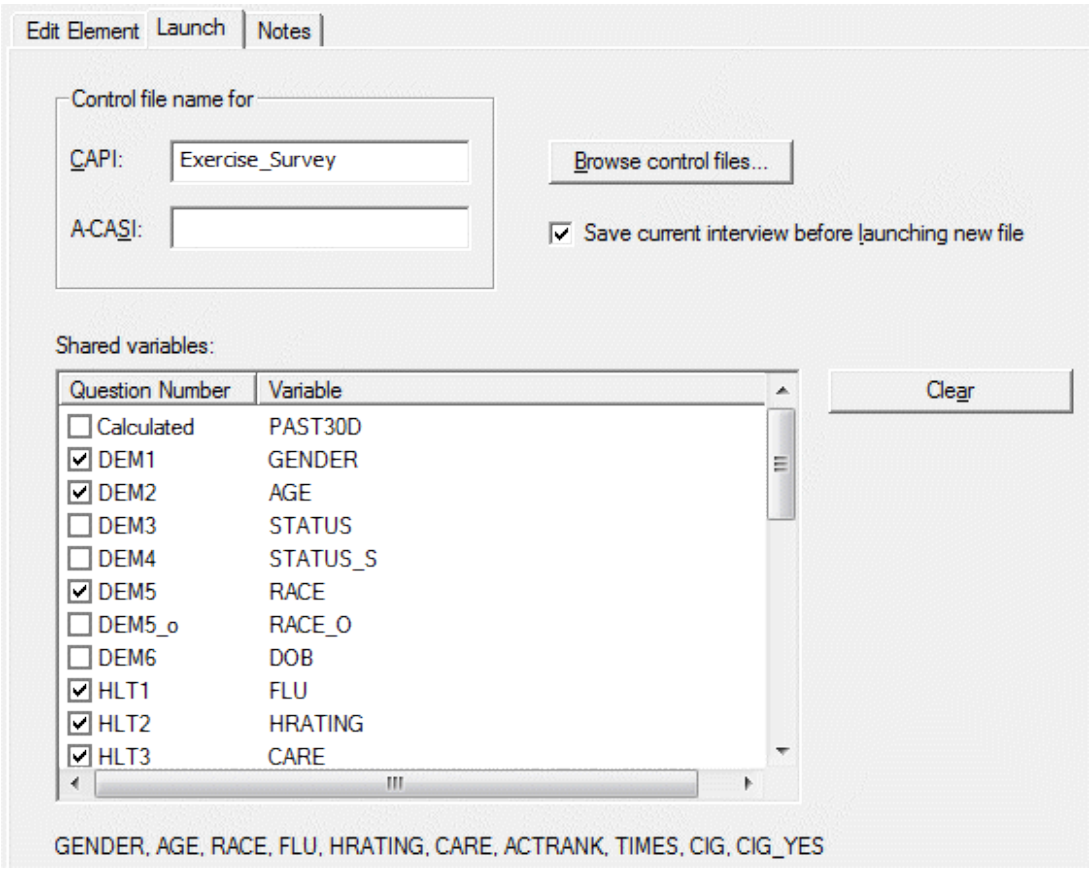


3. In the *Display message* box, enter the message you would like to display before the second questionnaire begins (e.g., "Please proceed to the exercise survey"). If no message is desired, check the *Perform without message box*.
4. In the Reconciliation process box, select Launch another control file.
5. In the *Item ID* field, enter custom identifier, e.g., Edit-LaunchExerciseSurvey (*optional*).
6. Go to the *Launch* tab, which is now enabled.

Launch Tab

1. On the *Launch* tab, enter the name of your destination control file ***without directory or file extension*** in the *Control file name for* box under CAPI or ACASI. This file must be located in the ***same*** directory as the primary control file.

2. Select up to 10 non-identifier variables in the *Shared variables* box you would like shared with the second questionnaire (see Shared Variables). As variables are selected, they will be listed under the box. *Note: to remove all checks, select the* Clear *button.*
3. Check the *Save current interview before launching file* option box to force an automatic save without seeing the save prompt.
4. Select *OK*.



Shared Variables

When the Edit, Launch feature starts the second control file, identifier variables of the current interview are automatically copied to the destination control file, as well as up to 10 variables selected on the *Launch* tab. During a CAPI or ACASI interview the carried over values will be displayed, and can be modified unless they are skipped over (see Skipping Over Shared Variables.)

Shared Variable Requirements

For shared variables to be copied they must have the same name and consistent response sets. QDS™ will only copy a response from one interview to another under the following conditions.

The variable in the second control file must:

- Be a Data Element (not Automatic Variable)
- Have the same variable name as the 1st questionnaire
- Have the same response type as the 1st questionnaire
- Have a valid response set in relation to the 1st questionnaire variable's response set.

For example, if the Subject ID is 1000 and the Subject ID field of the second file has a range of 1 to 100, the response will not be copied. Also, if the shared variable contains a "Don't Know" and the corresponding variable in the second file doesn't allow "Don't Know", the response will not be transferred.

"Destination" variables in the second control file can be any type of Data Element but cannot be an Automatic Variable Element. If the shared sending variable is Automatic Numeric, then the receiving variable must be a Numeric response type Data Element, and if the shared sending variable is Automatic Text, then the receiving variable must be a Text response type Data Element.

Identifier Variables

When you launch a second control file, the identifier variables of the current interview are automatically copied to the destination control file.

Non-Identifier Variables

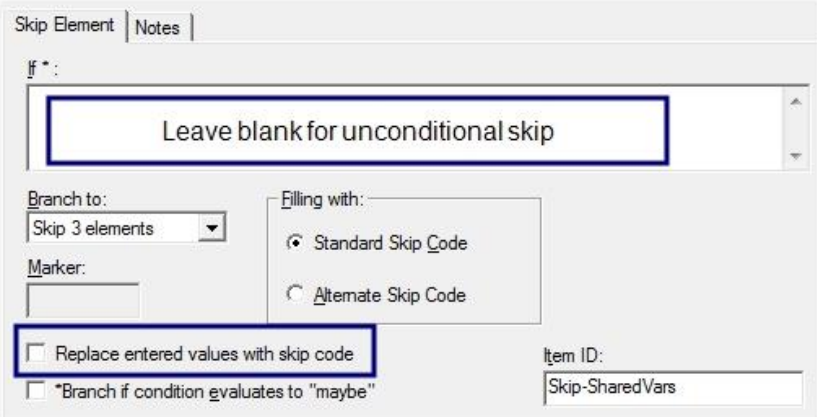
The 10 variables selected on the *Launch* tab can include any variables previously defined in the questionnaire except for Automatic Today's Date type, Automatic Current Time type, or the component of another variable.

Skipping over Shared Variables

If you do not wish to have identifier or shared variable(s) displayed during CAPI or ACASI administration of the second control file, you can add Skip Element(s) to branch over them. In the Design Studio file for the destination control file, use the following options in the Skip Element:

1. Leave *If** box blank or add an unconditional skip (i.e., *If**: 1 = 1).
2. Uncheck option box *Replace entered values with skip code* so that the shared values will ***not be overwritten*** with a skip code.

You may need to add multiple skips if your identifier and shared variables are located in multiple places in the destination file.



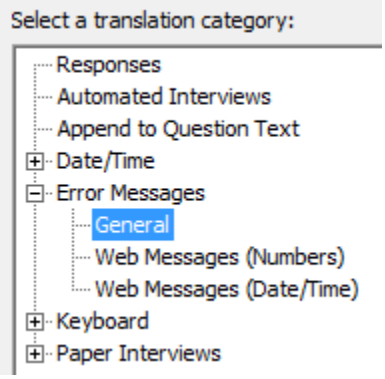
See also Edit Element: Launch Tab in QDS™ online help.

Edit Element: Custom Formatting for Error Messages

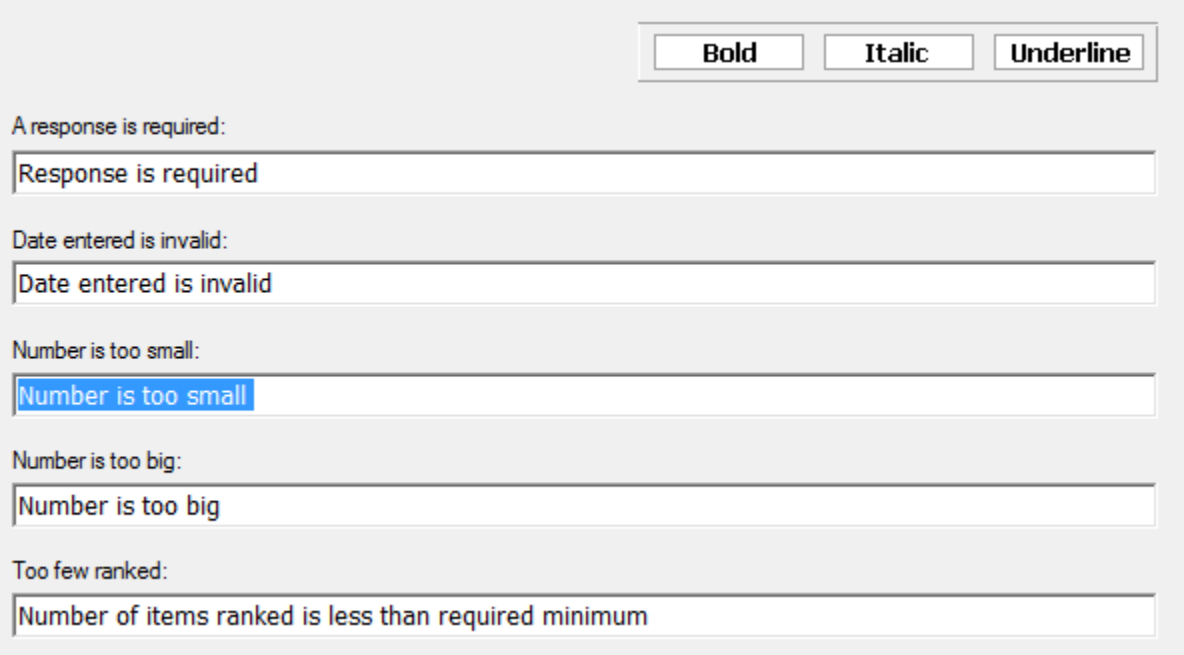
As of v5.0, you may apply formatting (**bold**, *italics*, and underline) to standard error messages through **Language|Translations** and formatting to Edit Element messages is now displayed in CAPI and ACASI.

Adding Formatting for Standard Error Messages

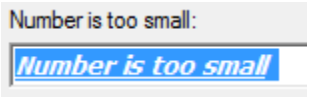
1. Go to **Language|Translations**.
2. Select the language for which you need to add formatting to your standard error messages.
3. Click *Edit*.
4. Under Select a Translation Category, go to Error Messages, General.



5. Select the default text error message where you would like to add formatting (e.g., adding bold, italic and underline to “Number is too small” message).



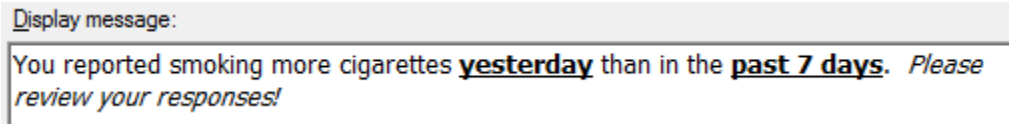
6. Select the *Bold*, *Italic*, and or *Underline* button(s) to add desired formatting, or use keyboard shortcuts, *Ctrl+B*, *Ctrl+I*, or *Ctrl+U*.



7. Add additional formatting as needed.
8. Click *OK.*

Adding Formatting for Edit Element Messages

1. Select **Edit|Insert** and choose Edit Instruction.
2. In the *If* text box, enter the condition to be checked by the Edit Element.
3. In the *Display message* box, enter the message you would like to display.
4. Add bold, italic, and/or underline formatting by highlighting text and then going to **Edit|Bold**, **Italic**, or **Underline** from the main menu. You may also use the toolbar buttons or keyboard shortcuts *Ctrl+B*, *Ctrl+I*, or *Ctrl+U*.
5. Select desired option from the *Reconciliation process* box.
6. In the *Item ID* field, enter custom identifier (*optional*).
7. Click *OK*.



Note: Bold, italics, and underline could be added to Edit Element messages in earlier versions of QDS; however, formatting was only displayed in Rich Text files output, not in CAPI or ACASI.

Warehouse Manager Features

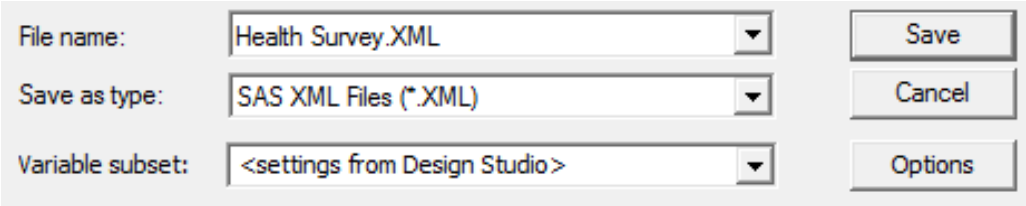
The following feature is new to v5.0 Warehouse Manager.

SAS XML Export Option

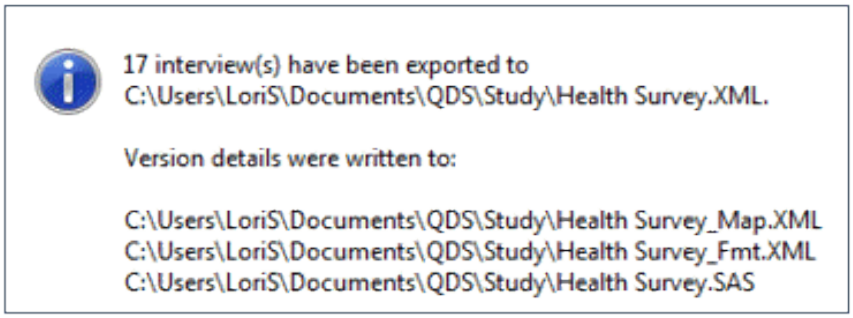
QDS™ v5.0 Warehouse Manager includes a new export option to SAS XML files. If your dataset includes variables with more than 8 characters, you must use SAS XML instead of SAS Transport to export to SAS. The XML format is compatible with later versions of SAS (v8 and higher). See Exporting Data Overview in QDS™ online help.

Export to SAS XML file

1. Go to **File|Export Interviews**.
2. Select SAS XML Files (.XML) from the *Save as type* drop-down box.
3. Select *Variable Subset* if desired.
4. Click *Options* and make any desired changes.
5. Click *Save*.



A dialog box will display number of interviews exported to selected location and list of file names exported.

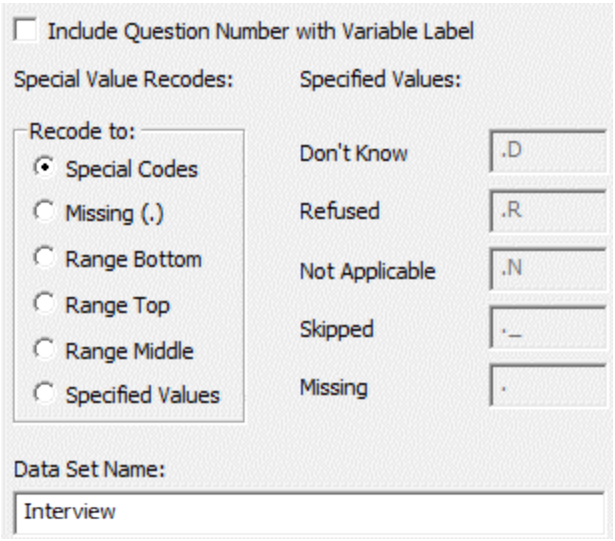


SAS XML Export Function File Types

- **<filename>.XML**: XML data file that contains response values and conforms to SAS XML engine generic markup.
- **<filename>_Map.XML**: XML SXLEMAP file that contains data types and variable labels used by SAS XML import engine.
- **<filename>_Fmt.XML**: XML file that contains value labels for creating user-defined formats.
- **<filename>.SAS**: SAS program file that contains a SAS Format statement which associates variables with format names.

SAS XML Save As Options

After clicking the *Options* button from the *Save As* box, the *SAS XML Options* box will open. Label, Special Value, and missing data options may be set on the SAS Options window.



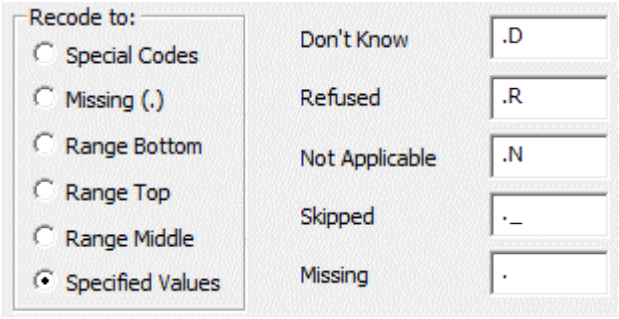
- **Include Question Number with Variable Label**: Check this box to include the question number with the variable label. The question number will be added at the beginning of the label. (*default setting is not checked*)
- **Special Value Recodes**: To change how QDS™ Special Values are exported, select an option from the *Special Value Recodes, Recode to* box.
    - **Special Codes**: Convert to Special Codes, as defined in the Design Studio.
      Special Responses include Don't Know (default = 9 … 7), Refused (default = 9 … 8), Not Applicable (default = 9 … 9), and Skipped (default = 9 … 9). (*default setting*)
    - **Missing (.)**: Convert to SAS System Missing.
    - **Range Bottom**: Convert to the minimum allowable value for the corresponding variable, as defined in the Design Studio.
    - **Range Top**: Convert to the maximum allowable value for the corresponding variable, as defined in the Design Studio.
    - **Range Middle**: Convert to the midpoint of the allowable range for the corresponding variable, as defined in the Design Studio.
    - **Specified Values**: Convert to the values specified in the boxes to the right. The default specified values for SAS will be enabled when the Specified Values radio button is selected.
- **Data Set Name**: Specify a name for data set in SAS. For example, if you enter “Baseline_Responses”, then this is referenced as “<libname>.Baseline_Responses” when running commands in SAS. The maximum length allowed is 32 characters; the first character must be a letter or an underscore character, and subsequent characters can be letters, digits, and underscores. The default data set name is set to “Interview”.

After you have finished updating and reviewing your options, click *OK*.

Click the *Save* button to (re-)create your files for export. Data, variable names, and labels will be included for all Standard Version interviews.

Changing Special Code Values

To change how QDS™ special values are exported, select the *Specified Values* option from the *Special Value Recodes* box. Default values are listed in the boxes to the right; however, they can be changed to any other SAS special missing value.



Export Limits

SAS XML files format imposes the following maximum lengths:

- **Variable names**: 32 characters
- **Variable labels**: 256 characters (Chinese, Japanese, and Korean: 128 characters)
- **Value labels**: Unlimited
- **Text responses**: 32,767 characters.

Read SAS XML Files into SAS

The following SAS commands show an example of how to import the XML files into v8 or higher of the SAS software:

```
/*SAS commands using SAS XML Libname Engine to create a data set */
/* from the exported data and map files */
filename qdsm 'C:\Users\User\Documents\Survey\HealthSurvey_Map.xml';
filename qdsd 'C:\Users\User\Documents\Survey\Health Survey.xml';

libname qdsd xmlv2 xmlmap=qdsm;/* “xmlmap” name needs to match name of map file*/
run;
libname qdsout v9'c:\Users\User\Documents\Survey\';
proc copy in=qdsd out=qdsout;/*“in” name needs to match name of data file*/
run;
```

Create SAS Format Catalog and Apply to SAS Dataset

```
/* To create a Format Library, import the myfile_Fmt file*/
libname labs xmlv2 'C:\Users\User\Documents\Survey\Health Survey_Fmt.XML';

/* Save "labs" dataset as a SAS format catalog and apply it to qdsd.interview */
libname library 'c:\Users\User\Documents\Survey';
proc format library=library cntlin=labs.vlabels;
run;

/* Assign formats to data file */
```

```
data final;
set qdsout.interview; /*note: the default name of the dataset is "interview"*/
FORMAT
<contents of SAS file>;
run;
```

SAS XML Versus Transport File Formats

Data files exported to SAS XML format are generally the same as data exported to the SAS Transport file format, with the following exceptions:

- XML files are compatible with SAS v8 and higher and support variables names up to 32 characters.
- For Date variables that are “Year-Month Only” where the respondent entered a month, the composite variable is exported as “Month-Year”—e.g., Feb1999—and is displayed in SAS XML file format as 01Feb1999, instead of a date 60 years in the future.
- For Date variables that are “Full Date” or “Year-Month Only” and either day, or both month and day, are missing, the composite variable is exported as a missing value, “.”, instead of as a date 60 years in the future.
- For Date and Time variables that contain special codes, the composite variable is exported as a missing value, “.” Rather than a numeric value, such as 2097 or 28Sep1965. These responses can also be output as “.D” or “.R”, by using the appropriate recode option before exporting.
- The naming of value labels in the <filename>_Fmt file is similar to the approach used in the Design Studio when generating the Codebook values .CSV file where the label name matches the name of the first variable in the survey that contains the specific set of values.
- The SAS file is very similar to the .SAS file that’s generated by the SAS Format Library Program option; however, each variable is on its own line with the corresponding format name.