

%xtorder

Overview

The **%xtorder** macro creates a global macro variable containing the sort order for a dataset based on metadata specifications. It automatically determines whether to use SDTM or ADaM metadata and extracts the key variables that define the dataset's sort order.

Version Information

- Version: 1.0
- Last Updated: 20JUL2022
- Author: Atorus Research

Dependencies

- SAS Version: SAS 9.4 V9
- Required Files:
 - SDTM or ADaM specification metadata file (CSV format)
 - For SDTM: **SDTM_spec_Datasets.csv**
 - For ADaM: **ADAM_spec_Datasets.csv**
- No macro dependencies

Parameters

- **dsname** (required): Name of the dataset to look for in the metadata file.
- **filename** (optional): Name of the CSV metadata file. If not specified, automatically determined based on dataset name:
 - SDTM for 2-character domains, SUPP--, RELREC, or AP-- datasets
 - ADaM for all other datasets
- **filepath** (optional): Path to the metadata file. Default: **[project path]/final/specs.**
- **debug** (optional): Flag to retain temporary datasets. Default: N.

Return Values/Output

- Creates a global macro variable **[dsname]SORTSTRING** containing:
 - Space-separated list of key variables defining the dataset's sort order
 - Extracted from the "Key Variables" column in metadata
- Log messages for processing status and any errors

Processing Details

1. Parameter validation:

- Checks for required parameters
- Determines appropriate metadata file
- Verifies file existence

2. Metadata processing:

- Imports metadata specification
- Filters for specified dataset
- Extracts key variables information

3. Sort string creation:

- Processes "Key Variables" column
- Converts comma-separated list to space-separated
- Creates global macro variable

Examples

```
/* Basic usage - get sort order for ADSL */
%xtorder(ADSL);
%put &ADSLSORTSTRING; /* Example output: STUDYID USUBJID */

/* Get sort order for SDTM domain */
%xtorder(DM);
%put &DMSORTSTRING; /* Example output: STUDYID USUBJID */

/* Use custom metadata file */
%xtorder(ADAE,
        filename=study_spec_Datasets.csv,
        filepath=/path/to/specs);

/* Keep temporary datasets for debugging */
%xtorder(ADLB, debug=Y);
```

Common Issues and Solutions

1. Missing Metadata File

- Error: "input [filename] file was not found in [filepath]"
- Solution: Verify metadata file exists and path is correct

2. Dataset Not in Metadata

- Error: "[dsname] does not exist in [filename]"
- Solution: Verify dataset name and metadata content

3. Missing Key Variables

- Issue: Empty SORTSTRING created
- Solution: Check "Key Variables" column in metadata

4. Erroneous assumption the ADaM metadata is being used when it is not.

- Occurs when: used for the "spit" datasets (LBSA, LBPD, LBCHEM, etc.) the macro assumes it is ADaM dataset, because the name exceeds two characters (SUPPXX datasets and RELREC are

- special cases and are accounted for)
- Solution: explicitly specify SDTM metadata file name in corresponding macro parameter.

Notes and Limitations

1. Metadata file must follow standard structure with required columns:

- dataset
- "Key Variables"

2. The macro assumes:

- Key variables are listed in the correct order
- Variables are comma-separated in metadata
- Variable names are valid SAS names

3. The resulting sort string:

- Has commas replaced with spaces
- Contains no leading/trailing spaces
- Preserves the order specified in metadata

4. No validation is performed on:

- Existence of key variables in dataset
- Validity of variable names
- Duplicate variables in sort order

See Also

- `%xtmeta`: Creates dataset structure from metadata
- `%xtcore`: Uses metadata for core variable processing
- `%xdalign`: Aligns datasets with metadata specifications

Change Log

Version 1.0 (20JUL2022)

- Initial release
- Automatic metadata file selection
- Support for SDTM and ADaM specifications
- Basic sort string generation