

%xufmt - Create SAS Formats from Specification Codelists

Overview

The `%xufmt` macro creates SAS formats from codelists defined in SDTM or ADaM specifications. It generates bidirectional formats for terms, decoded values, and order numbers, enabling flexible data transformations and labeling.

Version Information

- **Version:** 1.0
- **Last Updated:** 13JUL2022
- **Author(s):** Atorus Research

Dependencies

- SAS version: SAS 9.4 V9
- Required files:
 - SDTM_spec_Codelists.csv or ADaM_spec_Codelists.csv
- No macro dependencies

Parameters

Parameter	Required	Default	Description
fmt	Yes	-	Space-separated list of codelist names to create formats for
filename	Yes	-	Source file name (SDTM_spec_Codelists.csv or ADaM_spec_Codelists.csv)
filepath	No	[project path]/final/specs	Path to the source file
debug	No	N	Whether to retain temporary datasets (Y/N)

Return Values/Output

Creates the following SAS formats for each codelist:

- **IDxx** formats where ID is the codelist name and xx is the conversion type:
 - OT: Order to Term
 - TO: Term to Order
 - OD: Order to Decoded value
 - DO: Decoded value to Order
 - DT: Decoded value to Term
 - TD: Term to Decoded value

Processing Details

1. Input Validation:

- Verifies required parameters
- Checks source file existence
- Validates codelist name lengths (≤ 29 characters)

2. Format Creation:

- Imports codelist metadata
- Checks for non-printable characters
- Creates bidirectional formats for all combinations
- Handles numeric and character conversions

3. Quality Control:

- Removes duplicate format entries
- Validates format uniqueness
- Compresses dots in format names
- Checks for non-printable characters

Examples

Basic Usage - Single Codelist

```
%xufmt(VSPARAM, ADaM_spec_Codelist.csv);
```

Multiple Codelists

```
%xufmt(RACE SEX, SDTM_spec_Codelist.csv);
```

Custom Path with Debug

```
%xufmt(  
    fmt=SEVERITY,  
    filename=SDTM_spec_Codelists.csv,  
    filepath=/path/to/specs,  
    debug=Y  
);
```

Common Issues and Solutions

Issue	Solution
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Issue	Solution
Invalid format names	Ensure codelist IDs are \leq 29 characters
Non-printable characters	Clean source data of special characters
Duplicate mappings	Check codelist for unique term/decoded value pairs

Notes and Limitations

- Maximum codelist name length is 29 characters
- Dots in codelist names are compressed
- Non-printable characters cause term exclusion
- Creates multiple format types per codelist
- Only creates formats for unique mappings
- Format names are automatically generated from codelist ID

See Also

- `%xuct`: For controlled terminology validation
- `%xupload`: Dataset loading with format handling
- `%xuploadcsv`: CSV file loading utility

Change Log

Version	Date	Author	Changes
1.0	13JUL2022	Atorus Research	Initial version