

# %xurnm - Variable Renaming Utility

---

## Overview

The `%xurnm` macro provides functionality to rename all variables in a dataset by either adding a prefix or removing characters from the beginning of variable names. It handles special characters in variable names and maintains the dataset structure while performing bulk renaming operations.

## Version Information

- **Version:** 1.0
- **Last Updated:** 14JUL2022
- **Author(s):** Atorus Research

## Dependencies

- SAS version: SAS 9.4 V9
- No macro dependencies

## Parameters

Parameter	Required	Default	Description
inds	Yes	-	Name of the input dataset
mode	Yes	add	Working mode: 'add' to add prefix, 'remove' to remove characters
prefix	No*	_	Characters to add before variable names (*Required if mode=add)
rchar	No*	1	Number of characters to remove from start of variable names (*Required if mode=remove)
outds	No	&inds	Name of output dataset
debug	No	N	Whether to retain temporary datasets (Y/N)

## Return Values/Output

Creates a dataset containing:

- All variables from input dataset
- Renamed variables according to specified mode:
  - add: All variables prefixed with specified characters
  - remove: Specified number of characters removed from start of names

## Processing Details

### 1. Input Validation:

- Verifies required parameters

- Validates mode parameter (add/remove)
- Checks conditional requirements:
  - prefix required for add mode
  - rchar required for remove mode

## 2. Variable Processing:

- Extracts dataset metadata using PROC CONTENTS
- Maintains variable order using VARNUM
- Creates rename list handling special characters

## 3. Renaming Operation:

- Handles special characters using VALIDVARNAME syntax
- Processes all variables maintaining dataset structure
- Creates new dataset with renamed variables

# Examples

## Add Prefix to Variables

```
%xurnm(ds, mode=add, prefix=PRE_);
```

## Remove Characters from Variable Names

```
%xurnm(  
  inds=input_ds,  
  mode=remove,  
  rchar=2,  
  outds=output_ds  
);
```

## Debug Mode with Custom Output

```
%xurnm(  
  inds=source,  
  mode=add,  
  prefix=TMP_,  
  outds=renamed,  
  debug=Y  
);
```

# Common Issues and Solutions

Issue	Solution
-------	----------

Issue	Solution
Invalid variable names	Use valid SAS naming conventions for prefix
Special characters	Macro handles special chars using VALIDVARNAME
Name length exceeded	Ensure final names are $\leq 32$ characters

## Notes and Limitations

- Maximum SAS variable name length is 32 characters
- Handles variables with special characters
- Preserves variable order from input dataset
- Debug mode retains temporary datasets for troubleshooting
- Mode parameter is case-insensitive
- Cannot selectively rename variables (applies to all)
- Original dataset structure is preserved

## See Also

- `%xuload`: Dataset loading utility
- `%xusave`: Dataset saving utility
- `%xucont`: Dataset contents utility

## Change Log

Version	Date	Author	Changes
1.0	14JUL2022	Atorus Research	Initial version