

# **SAS**

# **PROC FORMAT**

**By Becky Leung**

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# What does the FORMAT Procedure do?

- Define your own informats and formats for variables.

You can also:

- print the parts of the catalog that contain informats or formats,
- store descriptions of informats or formats in a SAS data set
- use a SAS data set to create formats or informats

# What are Formats and Informats?

- tell SAS the data's:
  - Type
  - Form
- SAS provides informats and formats for reading and writing variables.
- A thorough description of informats and formats that SAS provides, see the sections on formats and informats in SAS Language Reference: Dictionary.

# Informats vs. Formats

- **Informats** determine how raw data values are read and stored.
- **Formats** determine how variable values are printed.

*raw data value*

\$1,544.32



read with  
COMMA9.2  
informat



*converted value*

1544.32



printed using  
DOLLAR9.2  
format



*printed value*

\$1,544.32

# What can Informats do?

- Convert a number to a character string (eg. Convert 1 to YES)
- Convert a character string to a different character string (eg. Convert 'YES' to 'OUI')
- Convert a character string to a number (eg. Convert YES to 1)
- Convert a number to another number (convert 0 through 9 to 1, 10 through 100 to 2, and so on)

# Formats

- Print numeric values as character values (eg. Print 1 as MALE and 2 as FEMALE)
- Print one character string as a different character string (eg. Print YES as OUI)
- Print numeric values using a template (eg. Print 7807624132 as 780-762-4132)

# THE SYNTAX

**PROC FORMAT** <option(s)>;

**EXCLUDE** entry(s);

**INVALUE** <\$>name <(informat-option(s))>

value-range-set(s);

**PICTURE** name <(format-option(s))>

value-range-set-1 <(picture-1-option(s) )>

<...value-range-set-n <(picture-n-option(s))>>;

**SELECT** entry(s);

**VALUE** <\$>name <(format-option(s))>

value-range-set(s);



# <*option(s)*>

- Specify a SAS data set from which PROC FORMAT builds an informat or format   CNTLIN=
- Create a SAS data set that stores information about informats or formats   CNTLOUT=
- Print information about informats or formats   FMTLIB
- Specify a SAS catalog that will contain the informats or formats that you are creating in the PROC FORMAT step   LIBRARY=
- Specify the number of characters of the informatted or formatted value that appear in PROC FORMAT output   MAXLABELN=
- Specify the number of characters of the start and end values that appear in the PROC FORMAT output   MAXSELEN=
- Prevent a new informat or format from replacing an existing one of the same name   NOREPLACE
- Print information about each format and informat on a separate page   PAGE

# EXCLUDE

- Excludes entries from processing by the FMTLIB and CNTLOUT= options.entry(s)

# EXCLUDE - EXAMPLE

```
libname library 'c:\sas\newformat';  
proc format lib=library fmtlib;  
  exclude $routes;  
run;
```

# INVALU

- Creates an informat for reading and converting raw data values.

## NOTE:

- If you are creating a character informat, then use a dollar sign (\$) as the first character.

# INVALUE - EXAMPLE

- invaluel \$gender 'F'='1'  
          'M'='2';
- invaluel trial 'A'-'M'=1  
          'N'-'Z'=2  
          1-3000=3;
- invaluel check 1-4=\_same\_  
          99=.  
          other=\_error\_;

# SELECT

- Selects entries for processing by the FMTLIB and CNTLOUT= options.

# SELECT - EXAMPLE

```
libname library 'c:\sas\newformat';  
proc format lib=library fmtlib;  
  select $routes;  
run;
```

# VALUE

- Creates a format that specifies character strings to use to print variable values.

## NOTE:

If you are creating a character format, then use a dollar sign (\$) as the first character.



# VALUE - Example

```
Proc format;
```

```
value $agegroup
```

```
low -< 65 = '1'
```

```
65 -< 70 = '2'
```

```
70 -< 75 = '3'
```

```
other = ' '
```

```
value $ agegroupcode
```

```
'1' = 'Low'
```

```
'2' = 'Medium'
```

```
'3' = 'High'
```

```
;
```

```
run;
```

# VALUE - Example

value one (multilabel)

1='ONE'

1='UNO'

1='UN';

value agefmt (multilabel)

15-29='below 30 years'

30-50='between 30 and 50'

51-high='over 50 years'

15-19='15 to 19'

20-25='20 to 25'

25-39='25 to 39'

40-55='40 to 55'

56-high='56 and above';

# REFERENCES

[www.support.sas.com](http://www.support.sas.com)

**THANK YOU**