

Table Lookups with Proc Format

Creating and using SAS formats

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Overview of talk

- **Formats in SAS**
- **Analytical scenario**
- **Structure and contents of the Format file**
- **Using a Data Set to Create a Format**
- **Display format contents**



What does the SAS FORMAT do?

- **Displaying Data Values**
- **Grouping Values**
- **Table Lookups**



Basics of SAS Formats

- **A date format: DATE9.**
 - Change 1346678.32 into: \$1,346,678.32
- **A currency format: DOLLAR13.2**
 - Change 17457 into: 18OCT2007

```
proc print data = temp;  
  format birthdate date9. wage dollar9.2;  
run;
```

```
Proc freq data=temp.anticoagulation;  
  table rx_ddddd/list nocum ;  
  format rx_ddddd year4.;  
run;
```



Table Lookup

Table look-up is a process where one or more data values are used to retrieve a value for another variable

Detail Table			
PhoneNum	ToAcronym	FromAcronym	SecretCode
312-9088	AFAIK	DQMOT	103
324-6674	BEG	TU	101
324-6674	BFN	SYS	101
312-5098	BTDT	IHU	102
312-9088	C&G	AFAIK	103
324-3452	GA	DQ	

Lookup Table

SecretCode	Name	PhoneNum
101	Belle	324-6674
102	Snow White	312-5098

Common Solutions

- **IF/THEN** statement
- **SAS merge**
- **SAS join**
- **FORMAT** statement, **PUT** function
- **Macro**

```
%Abstract_Drugs_NEW (drugfile=,  
                    ds_out=,  
                    alldin_file=,  
                    hsn_list=,  
                    hsn_file=,  
                    din_list=,  
                    din_file=,  
                    genname_file=,  
                    strt_dt=,  
                    end_dt=,  
                    );|
```



Analytical Scenario

Need to Identify specific records in the prescription claim files based on criteria in the din file

Din file

DIN	dsg_name	DRG_NAME	form_code	GEN_NAME
00000000	0000 TABLET	00000000	0000	00000000



Claim file

din	key_hsn	rx_qty_amt	rx_ddddd
00000000	0000000000	0	00000000



Looking Up Data Using Format

***Create anticoagulation drug file;**

```
data temp.anticoagulation_dispensed;
```

```
set extract.drug_claim;
```

```
where put(din, $anticoagfmt.) in
```

```
(‘WARFARIN’, ‘ACENOCOUMAROL’);
```

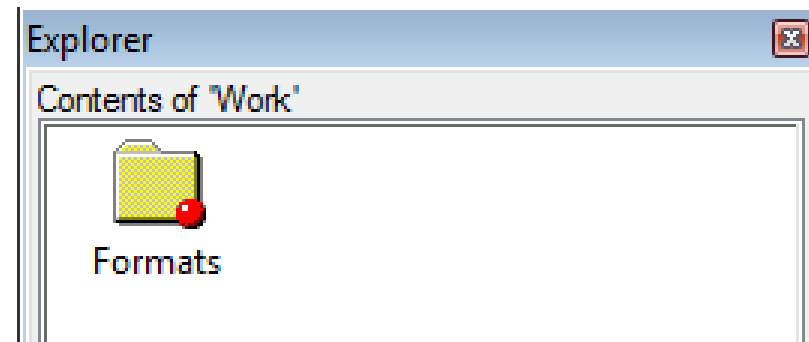
```
run;
```



User-Defined Formats

- Created using PROC FORMAT
- Stored in a special subsection of work
- Or in a LIBRARY (located by libname)

```
proc format;  
  value sexfmt  
    1="MALE"  
    2="FEMALE"  
    other="UNKNOWN" ;  
  
run;
```



User-Defined Formats

```
proc format library=work cntlout=fmtout;  
run;
```

	Format name	Starting value for format	Ending value for format	Format value label	Minimum length	Maximum length	Default length	For
1	SEXFMT	1	1	MALE	1	40	7	7
2	SEXFMT	2	2	FEMALE	1	40	7	7
3	SEXFMT	**OTHER**	**OTHER**	UNKNOW	1	40	7	7

Creating a Control Data set

- **fmtname**
- **start**
- **label**

```
data anticoagulation_fmt;  
  set alldin_anticoagulation (rename=  
    (din = start  
      gen_name = label));  
  retain fmtname '$anticoagfmt'  
          Type 'C';  
run;|
```

Using a Data Set to Create a Format

```
proc format library = libref.catalog  
    cntlin = control-data-set;  
run;
```



Creating Permanent Formats

- All formats are stored in catalogs
- Catalogs are referenced by *library.catalog*

```
libname library '/sas data/hqc_share/wenbin/myformats';
```

```
proc format library = libref.catalog;
```



SAS Search Order for Formats

- SAS supplied formats
- Followed by “WORK”
- Followed by “LIBRARY”
- Followed by any additional Formats catalogs

Specified in the FMTSEARCH option:

```
options fmtsearch=(fmt fmt.formats2)
```



Displaying Format Contents

```
proc catalog c=library.formats;
```

```
    contents ;
```

```
run;
```

```
proc format library=library.formats fmtlib;
```

```
    select $anticoagfmt;
```

```
run;
```



Key words

- **put (din, fmt.)**
- **fmtname start label**
- **library cntlin**
- **catalog contents**
- **library fmtlib**



Questions