

Steps for Creating a SAS Datasets			Scope
1	<b>LIBNAME</b> libref '<Path>;	Reference a SAS data library	Global
2	<b>FILENAME</b> fileref '<Path>;	Reference (Temp) an external file	Global
3	<b>DATA</b> 'SASDataSetName';	Name a SAS data set	
4	<b>INFILE</b> 'file name/fileref' <i>OBS=10;</i>	Identify an external file using INFILE statement <b>OBS</b> mention the <i>range till which data needs to be read</i> . Can be used in data and proc print. Used to <i>verify Data</i> reading without affecting RAM space much.	
5	<b>INPUT</b> <informats>;	Describe data	
6	<b>RUN;</b>	Execute the DATA step	
7	PROC PRINT Data=<DS>;	List the data	
8	<b>RUN;</b>	Execute the final program step	

## Column Style: [Standard Data + Well Ordered in Column]

1-----10-----20-----30-----40-----50-----60-----70-----80-----90

124	61	Mod	Male	Pradeep	United States
123	76	Ded	Female	Sruthi	India
142	89	Reg	Male	Sathyamurthy	United Kingdom

PROC PRINT DATA=DATASETNAME		Scope
<b>NOOBS</b> *used to avoid printing observation column while printing; <b>DOUBLE</b> *print double spacing in SAS Output and not in SAS Report; <b>(OBS=3)</b> * Print only the first 3 observation of the dataset in print;		
<b>Sum</b> <Col Name>;	Calculate the sum of the column	Local
<b>VAR</b> <Col Name>;	Mention the variable and its <b>order</b> of printing	Local
<b>Label</b> <Col Name>="";	Define label name for a column Can mention up to <b>256 char</b> <b>Can be defined in single or multiple lines</b>	Local
<b>Where</b> <column condi> <b>CONTAINS</b> 'str'; ? 'str'; <b>IN</b> ('str1','str2');	Defines the column condition =, ^=, >, <, >=, <= <b>CONTAINS</b> is string comparison <b>AND, OR</b> operator used along with col name each time <b>IN</b> operator is used as SQL style in comparison.	Local
<b>ID</b> <Col Names>;	Act as a primary key, <b>replace OBS</b> column without explicitly mention of NOOBS. ID used along with <b>Var</b> will <b>display</b> a <b>column twice</b> .	Local
<b>SUM</b> <Col Name>;	Will provide the total of the column specified.	Local
<b>BY</b> <Col Name>;	Col Name should be <b>same as one that is sorted before</b> using this. <b>Subset results</b> .	Local
<b>BY</b> <Col Name1>; <b>ID</b> <Col Name1>;	When ID used along with BY it will: <ol style="list-style-type: none"> <li><b>Supress OBS</b> column</li> <li>ID/BY variable name is printed in left col</li> <li>Each <b>ID/BY value is printed only once</b> at the start of each by group and on the line, that has group sub-total.</li> </ol>	Local
<b>By</b> <Col Name1>; <b>PAGEBY</b> <Col Name1>;	Mostly used along with sum-by-id. <b>Column used in PAGEBY should be same as one used in BY.</b> Used to <b>print each sub-total on a separate page</b> .	Local
<b>FORMAT</b> <Col Name>;	When defined <b>inside PROC it scopes within it</b> . To make it <b>permanent FORMAT or Labels need to be defined in DATA step</b>	Local/Global
<b>TITLE</b> 'str1';	Generally, <b>need to be defined outside a PROC step</b> . However, it can be used inside PROC too <b>TITLE is global</b> . Once defined will stay forever until title statement is modified, cancelled or end SAS session. <b>Cancel of title</b> is done by <b>title</b> ;	Global
<b>FOOTNOTE</b> 'str2';	Used to print note below a table/graph It is same as TITLE function, up to <b>10 footnotes can be defined</b> in SAS. <b>Cancel of footnote</b> is done by: <b>Footnote</b> ;	Global

<b>PROC SORT DATA=DATASETNAME</b> <b>OUT=DATASETNAME</b> *o/p SAS dataset		
by <Col Name>; by descending <col1>	Sorted by the column mentioned, sort takes place from right to left columns mentioned. If used with descending it will apply to <b>column which is immediately after it</b> , rest of the other columns will be sorted in ascending order.	Local
NOTSORTED;	To explicitly mention not to sort if the <b>values are equal</b> based on by condition.	Local

PROC FORMAT LIB=library			Scope
<b>LIBRARY/LIB</b> *Defines the SAS library that needs to be referred; <b>FMTLIB</b> *print all the user defined format present in the Library mentioned;			
1	<b>LIBNAME</b> <i>library</i> '<Path>;	Reference a SAS data library	Permanent
2	<b>PROC FORMAT LIB=library</b> <b>FMTLIB;</b>	Library can be the SAS library referred above or it can be a catalog like <i>library.catalog</i> . <b>FMTLIB</b> will list all the user defined format present in the library. <i>formats.sas7bcat</i> file is created in the path mentioned in library.	Permanent
3	<b>Value</b> <format-name>	Format name must begin with <b>\$ for Char</b> var Cannot be > 8 char in length Cannot be the name of existing SAS format Cannot end with a number Does not end with a period when defined	Permanent
	Range1='label1'	Range1= Actual Column Data Label1= Description of Range1 Numeric => 102='Manager' Character => 'A'='Good Performance' Range => low-<12='Not Teen Age'	Permanent
	Range2='label2';	Always the last Range must be ended with; which implies SAS that PROC FORMAT statement ends.	Permanent
4	<b>PROC FORMAT;</b>	This format will be created in the <i>work directory</i> which <i>means temporary</i> .	Temporary
	Value <format-name>	Scope within that SAS session only	Temporary
	Range1='label1'	Scope within that SAS session only	Temporary
	Range2='label2';	Scope within that SAS session only	Temporary
5	<b>PROC CATALOG;</b>	You can delete the user defined format	Permanent