CLASS : 2

SAS Tutorial

PRESENTED BY : SHASHI KUMAR

Topic: SAS Variable

Numeric	Character
It can hold 0-9,integer number, decimal number	It can hold any character values, such as letter or number, special character and " " (blank)
Right align	Left align
Missing Value/Blank assign as **.** (**dot**)	Missing Value/Blank assign as " " (**Space**)
Default length is **8 bytes**	Default length is **8 bytes**
16-17 digit number when 8 bytes	8 bytes hold 8 character
Minimum length is **3 bytes**	Minimum length is **1 bytes**
Maximum length is infinite (depend on RAM Size)	Maximum length is 32767

Topic: SAS Naming Convention for Variable and Data set

1. Name can hold maximum **32** character.
2. Name should begin with _ (under score) or letter and seconds onwards letter can be _ (under score),letter or numeric.
3. Special Character not permitted except _ (under score).
4. SAS name is case insensitive ,it may be upper, lower or prop case.

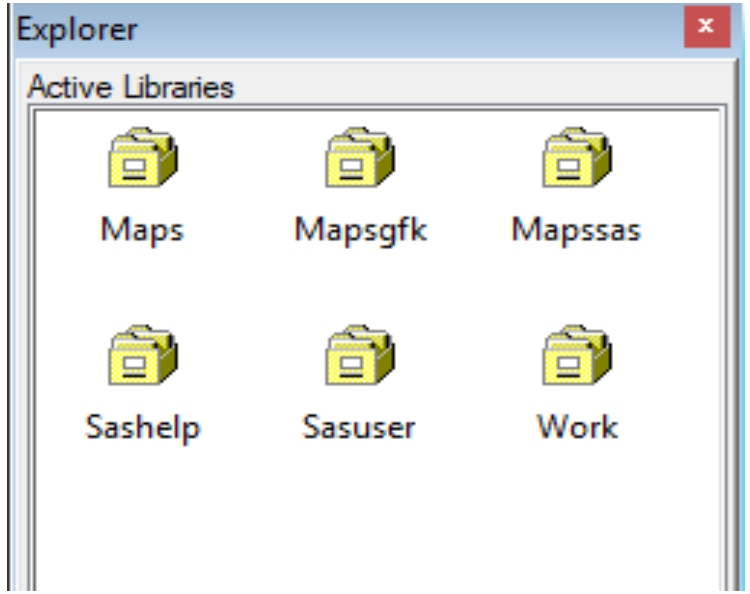
test	✓
test123	✓
_test	✓
@test	✗
4test	✗
Test&	✗
TEST	✓
_12test	✓

Library :

- SAS library is simply a collection of SAS files that are stored in the same folder or directory on your computer. Other files can be stored in the same folder or directory, but only the files that have SAS file extensions are recognized as part of the SAS library.
- Depending upon on your need SAS library is of two types :

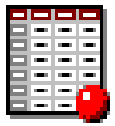
Work as Temp

All content deleted after SAS session



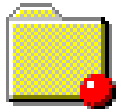
Sashelp or lib ref are permanent

Content retained even after SAS session



Dataset

View



Catalog

SAS pgm file

Library : Temporary to permanent

Syntax:

Libname <libref> <engine> path;

i.e. Libname sk “D:\Users\703215742\Desktop\SAS CLASS”;

This LIBNAME statement specifies ***sk*** as a reference to a SAS library. The EXCEL engine specifies the engine that supports the connection to the file type .XLSX.

Libname sk EXCEL “D:\Users\703215742\Desktop\SAS CLASS\file.xlsx”;

Libname sk “D:\Users\703215742\Desktop\SAS CLASS\file.xlsx”;

Access Tera Data in SAS:

libname sk teradata user="userid" password="password" mode=teradata server="servername“ connection=global dbmstemp=yes;

<libref> : - Naming Convention

1. Name can hold maximum **8** character.
2. Name should begin with _ (under score) or letter and seconds onwards letter can be _ (under score),letter or numeric.
3. Special Character not permitted except **_** (under score).
4. SAS name is case insensitive ,it may be upper, lower or prop case.

Library : Temporary to Permanent

Temporary to Permanent Library

```
Data one;
Set sashelp.class;
Run;
```

Dataset **one** is stored in temporary library "**Work**".
(All content deleted after SAS session)

```
Libname sk "D:\Users\7032xxxxx\Desktop\SAS CLASS";

Data sk.two;
Set sashelp.class;
Run;
```

Dataset **two** is stored in Permanent library "**sk**".
(Content retained even after SAS session)

Proc Print :-

Syntex:-

```
proc print data =input data <option>;
Var var1 var2…varn;
Id var1 var2 …varn;
run;
```

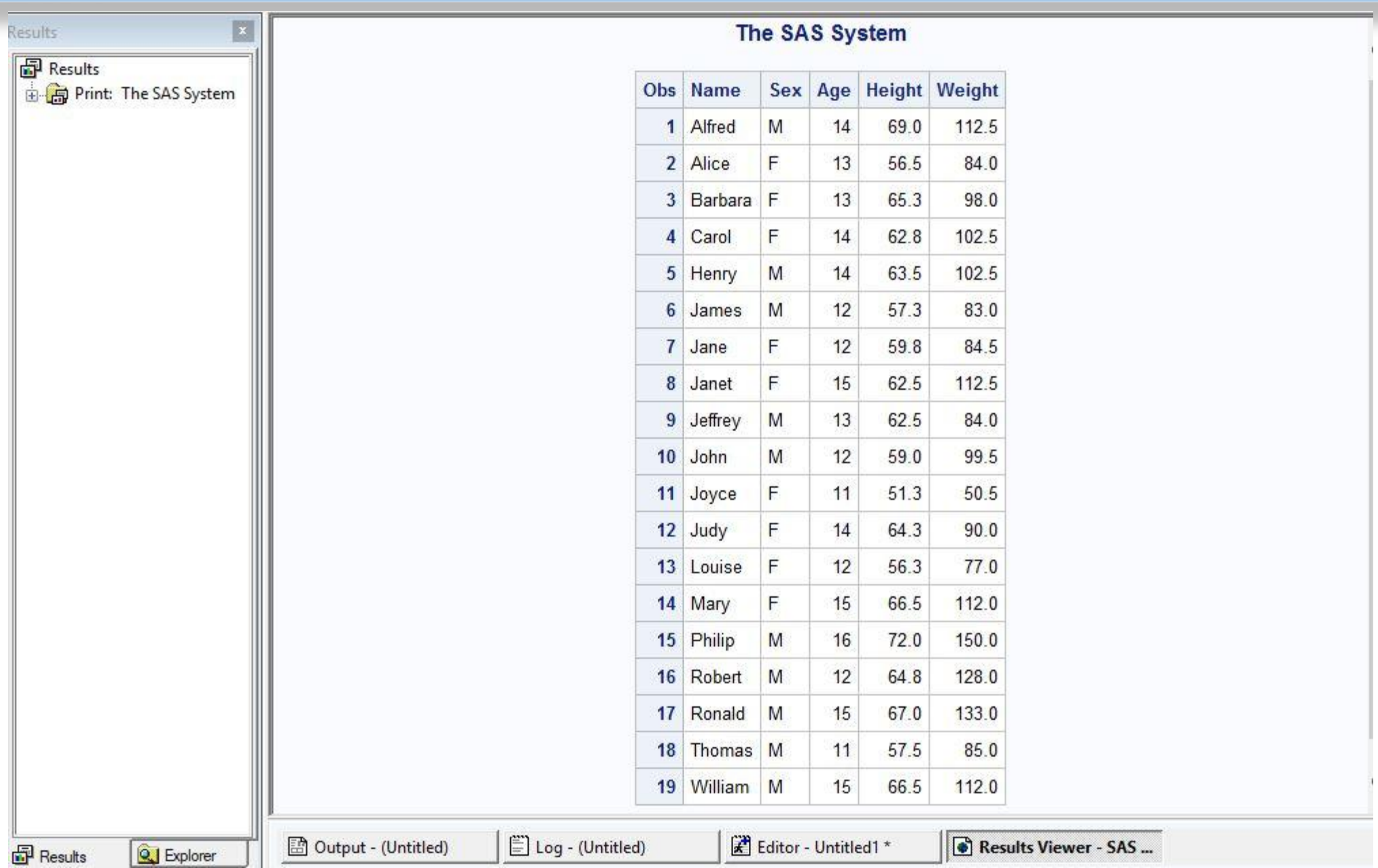
Var : It define the variables and observation in o/p window.
Id: It suppress the observation column and id variable comes the first variable in o/p window.

Options:-
Noobs:- It suppress the observation column in the proc print o/p.
Double:- It provides space between the observation.
Obs=n:- It give the first n observation from the dataset.

Examples:-

```
proc print data =sashelp.class;run;
proc print data =sashelp.class; var age sex;run;
proc print data =sashelp.class; id age;run;
proc print data =sashelp.class double ;run;
proc print data =sashelp.class (obs=10);run;
```

Proc Print :- `proc print data =sashelp.class;run;`



Obs	Name	Sex	Age	Height	Weight
1	Alfred	M	14	69.0	112.5
2	Alice	F	13	56.5	84.0
3	Barbara	F	13	65.3	98.0
4	Carol	F	14	62.8	102.5
5	Henry	M	14	63.5	102.5
6	James	M	12	57.3	83.0
7	Jane	F	12	59.8	84.5
8	Janet	F	15	62.5	112.5
9	Jeffrey	M	13	62.5	84.0
10	John	M	12	59.0	99.5
11	Joyce	F	11	51.3	50.5
12	Judy	F	14	64.3	90.0
13	Louise	F	12	56.3	77.0
14	Mary	F	15	66.5	112.0
15	Philip	M	16	72.0	150.0
16	Robert	M	12	64.8	128.0
17	Ronald	M	15	67.0	133.0
18	Thomas	M	11	57.5	85.0
19	William	M	15	66.5	112.0

Proc Contents:-

Syntax:-

proc contents data=input data <option>;**run**;

It display description portion of dataset by default by show the result in three parts.

1. Attributes
2. Engine/Host
3. List of Variables

Examples:-

proc contents data=sashelp.class; **run**;

proc contents data=sashelp.class varnum; **run**;

proc contents data=sashelp._all_; **run**;

proc contents data=sashelp.class nods; **run**;

Proc Contents:-

Data Set Name	SASHELP.CLASS	Observations	19
Member Type	DATA	Variables	5
Engine	V9	Indexes	0
Created	09/06/2017 21:55:32	Observation Length	40
Last Modified	09/06/2017 21:55:32	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label	Student Data		
Data Representation	WINDOWS_64		
Encoding	us-ascii ASCII (ANSI)		

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	1
First Data Page	1
Max Obs per Page	1632
Obs in First Data Page	19
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	C:\Program Files\SASHome\SASFoundation\9.4\core\sashelp\class.sas7bdat
Release Created	9.0401M5
Host Created	X64_SR12R2

Owner Name	BUILTIN\Administrators
File Size	128KB
File Size (bytes)	131072

Alphabetic List of Variables and Attributes			
#	Variable	Type	Len
3	Age	Num	8
4	Height	Num	8
1	Name	Char	8
2	Sex	Char	1
5	Weight	Num	8

Exercise:-

1. **Create Permanent Library**

```
Data one;
Set sashelp.class;
Run;
```

```
Libname sk "D:\Users\7032xxxxx\Desktop\SAS CLASS";

Data sk.two;
Set sashelp.class;
Run;
```

2. **proc print** data =sashelp.class;**run**;
3. **proc contents** data=sashelp.class; **run**;

Thank You ...

Presented By : Shashi Kumar