



SAS Industry Orientation Program
Department of Statistics
University of Lucknow



SAS Programming Course

(March 16, 2024 – May 04, 2024)

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Disclaimer:



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The topics, thoughts, case studies etc. in the discussions are sole belongs to me and do not belong or represent organization where we work.

Agenda for today:

- Concept of Library
- Concept of Dataset
- Data Types in SAS



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Concept of Library : Introduction



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- A SAS data library is a collection of SAS files that are recognized as a unit by SAS.
- Every SAS file is stored in a SAS Library, which is a collection of SAS files such as SAS datasets.
- In some operating environments, a SAS library is a physical collection of files.
- In the Windows and UNIX environments, a SAS library is typically a group of SAS files in the same folder or directory.

Two types of SAS libraries are

- ❖ **Temporary library**
- ❖ **Permanent library**

Concept of Library : Types of Library



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❖ Permanent library

- A permanent SAS library is one that resides on the external storage medium of computer and is not deleted when the SAS session terminates.
- Permanent SAS libraries are stored until we delete them. The library is available for processing in subsequent SAS sessions.
- The libref tells SAS where to find or store the file.

❖ Temporary library

- A temporary library is one that exists only for the current SAS session or job. SAS files that are created during the session or job are held in a special workspace that might or might not be an external storage medium. This workspace is generally assigned the default libref work.
- Files in the temporary work library can be used in any data step or SAS procedure during the SAS session, but they are typically not available for subsequent SAS sessions.
- Files held in the work library are deleted at the end of the SAS session if it ends normally.

Concept of Library : How to Create Library?



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Libname statement - Tells SAS where the permanent data set is to be stored or is already stored.

Rules for naming a libref :

- Must be 8 characters or less
- Must begin with a letter or underscore.

Syntax :

Libname libref 'SAS-data-library' <options>

Example – Libname mydata 'c:/sasdata';

Explanation :

The libname statement above assigns the libref “mydata” to the SAS data library C:/sasdata in the windows environment.

Concept of Library : Examples



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❖ Permanent library

```
data libref. dataset2;  
    set dataset1;  
run;
```

❖ Temporary library

```
data dataset2;  
    set dataset1;  
run;
```

Concepts of Dataset



Data files organised in particular formats or structures known to the SAS system are referred to as SAS data set

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Name	Sex	Age	Weight
Jones	M	56	128.6
Wills	M	45	170.1



Data Types in SAS

Character Variable

- ❖ Contains any value like letters, numbers, special characters and blanks.
- ❖ Max length – 32, 767 bytes (one byte per character)

Numeric Variable

- ❖ Stored as floating-point numbers in 8 bytes by default
- ❖ Provides space for 16 or 17 significant digits.

SAS Date Values

- ❖ SAS stores date values as numeric.
- ❖ stored as the number of days between Jan 1, 1960 and a specific date.

Example

- ❖ 1/1/1959 is stored as –365, 1/1/1961 is stored as 366..

Note: Missing values are valid values. For character variables blank and for numeric variables period represents a missing value.



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Thank You.

Have a Question:

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