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*My first Program;
/* There are three main steps in SAS
1.Data - Create a dataset that becomes the source for analysis
2.PROC - Analysis of the above dataset
3.OUTPUT - Shows/stores the result of above PROC step */

/* Syntax to generate dataset
DATA data_set_name;      #Name the data set.
INPUT var1,var2,var3;    #Define the variables in this data set.
NEW_VAR;                #Create new variables.
LABEL;                  #Assign labels to variables.
DATALINES;              #Enter the data.
RUN;
*/

DATA employee;
Input ID Name $ Age $ Salary;
ctc = Salary*12;
label ID = 'Employee ID' ctc = 'Annual Salary';
DATALINES;
1 KK 22 70000
2 AK 22 76000
3 NV 23 78700
4 AM 22 69000
5 PV 24 70000
;
run;

*PROC step : This involves invoking a SAS built-in procedure to analyse the data.;
/* Syntax for PROC
PROC procedure_name options; #The name of the proc.
RUN;
*/

PROC Means;
run;

*OUTPUT Step : The data from the data sets can be displayed with conditional output statements.;
/* Syntax
PROC PRINT DATA = data_set;
OPTIONS;
RUN;
*/

PROC Print data=employee;
where Salary > 70000;
run;

/*
SAS Statements

Statements can start anywhere and end anywhere. A semicolon at the end of the last line marks the end of the statement.

Many SAS statements can be on the same line, with each statement ending with a semicolon.

Space can be used to separate the components in a SAS program statement.

SAS keywords are not case sensitive.

Every SAS program must end with a RUN statement.

SAS Variable Names

Variables in SAS represent a column in the SAS data set. The variable names follow the below rules.

It can be maximum 32 characters long.

It can not include blanks.

It must start with the letters A through Z (not case sensitive) or an underscore (_).

Can include numbers but not as the first character.

Variable names are case insensitive.

SAS Data Set

The DATA statement marks the creation of a new SAS data set. The rules for DATA set creation are as below.

A single word after the DATA statement indicates a temporary data set name. Which means the data set gets erased at the end of the session.

The data set name can be prefixed with a library name which makes it a permanent data set. Which means the data set persists after the session is over.

If the SAS data set name is omitted then SAS creates a temporary data set with a name generated by SAS like - DATA1, DATA2 etc.

# Temporary data sets.
DATA TempData;
DATA abc;
DATA newdat;

# Permanent data sets.
DATA LIBRARY1.DATA1
DATA MYLIB.newdat;
*/

/*
SAS File Extensions

The SAS programs, data files and the results of the programs are saved with various extensions in windows.

*.sas - It represents the SAS code file which can be edited using the SAS Editor or any text editor.

*.log - It represents the SAS Log File it contains information such as errors, warnings, and data set details for a submitted SAS program.

*.mht / *.html -It represents the SAS Results file.

*.sas7bdat -It represents SAS Data File which contains a SAS data set including variable names, labels, and the results of calculations.

*/

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