## 123 Summary

- 1. The PAGENO= system option specifies a beginning page number for the next page of output that SAS produces. Use PAGENO= to reset page numbering during a SAS session.
- 2. dlm should in the infile statement.
- 3. Proc content produces the descriptor portion of the data set.
- 4. SCAN function assigns the length of 200.
- 5. Prevent the page number NONUMBER.
- 6. Retain statement cannot use arrays {12}, correct way is retain a1-a12.

# 95 Summary

- 1. varsum list variables in the order from the data.
- 2. include can open SAS file.
- 3. dta can also be read in SAS with a warning in the log.
- 4. proc means contains mean, sd, min, max, count.
- 5. sum(of month{\*})

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- 1. MISSOVER option prevents SAS from loading a new record when the end of the current record is reached. If SAS reaches the end of the row w/t finding values for all fields, variables w/t values are set to missing.
- 2. Proc print data = myxls.'sheet1\$'n;
- 3. ods destination excel?
- 4. If a range of values are not mapped in a PROC FORMAT, the labels will be original values.
- 5. PROC MEANS produces N (counts), mean, standard deviation, max and min.
- 6. DATA dsname/debug; for invoking debugger
- 7. \_error\_ will be automatically dropped.
- 8. '04Jul2005'd the letter d here is to specify the SAS date format, which means the numeric days from 1960 Jan 1st.
- 9. Where = data set option do not perform any automatic conversion (numeric to character or opposite) in comparisons.

- 10. Proc contents data = work.\_all\_; or Proc contents data = \_all\_; nods turn off the description portion. List the contents of one or more SAS data sets and print the directory of the SAS library.
- 11. Proc format and macro generate a file stored in the catalog.
- 12. First.by-variable and last.by-variable.
- 13. Find function: position = find(string, 'substring', start position). I indicates that the search is case-insensitive; T indicates that the search ignores trailing blanks.
- 14. TRANWRD (string, 'old', 'new');
- 15. CHAR(string, position) to return the one length character on that position.
- 16. remove a label: label x = ';

# SAS key points

- 1. file command can save the file.
- 2. proc contents libref. all nods to suppress the descriptor portion of the data.
- 3. proc print noobs to suppress the observation number.
- 4. When ID and By specify the same variable, the obs column and by line are suppressed.
- 5. where like % or .
- 6. Sounds-like (=\*) operator selects obs that contain spelling variations.
- 7. dot cannot be omitted when specify the length/format of the variables.
- 8. On SAS data, d is required to convert the quoted string to a SAS date.
- 9. Compare where vs. subsetting if.
- 10. Define the length statement before the set statement for specifying the length.
- 11. Var statement will not work on proc freq statement.
- 12. A + B equals to retain A and sum(A,B).
- 13. Find function. I indicates case-sensitive, t indicates ignores trailing blanks.

#### SAS lab:

- 1. Libname libref engine 'path'; Libname libref clear;
- 2. Force table and column names read from Excel to adhere to recommended SAS naming conventions: Options validvarname = V7

### 3. Xlsx engine vs. proc import

Xlsx engine	Proc import
Read directly from Excel file	Create the copy of Excel file
Data is always current modified	Data must be re-imported if changed

4. %let statement defines the macro variable name and assign a value.

%let macro-variable = value

- 5. Macro variables can be referenced by using &, &variable-name, double quotations only.
- 6. In proc sort statement, 'noduprecs' removes adjacent rows that are entirely duplicated. Nodupkey option only keeps the first row for each unique value of columns listed in by statement.

## 7. Compilation vs. Execution

Compilation	Execution
Check syntax for errors	Read/ Write the data
Identify column attributes	Perform data
Establish new table metadata	Manipulation, Calculation

8. A new numeric column has a length of 8;

The length of a new character column is determined based on the length of the assigned string.

- 9. if-then; if-then do-end;
- 10. FOOTNOTE statement to add footnotes to the report.
- 11. Proc sort always before using by statement.
- 12. Proc export can export a SAS table to many file formats data.
- 13. ods excel/csv/pdf file = 'path'; ods excel/csv/pdf close;
- 14. Proc transpose to Turn obs into variables (Sorted data):

PROC TRANSPOSE data = old-dataset out = new-dataset;

BY variable-list; (Keep as variables which not transposed)

ID variable-list; (Specify a variable whose values name the transposed variables)

VAR variable-list; (Variable values need to be transposed)

15. nodupkey Delete observations with duplicate BY values.

16. (drop = abc:)

# 机经:

- 1. The SPLIT= option replaces the LABEL option in the PROC PRINT statement. (You do not need to use both SPLIT= and LABEL because SPLIT= implies that PROC PRINT use labels.) In the SPLIT= option, you specify an alphanumeric character that indicates where to split labels. To use the SPLIT= option, you need to do the following:
- 1) Define the split character as a part of the PROC PRINT statement.
- 2) Define the labels with a split character in the LABEL statement.
- 2. Cutoff year is a 100-year span start from  $1926 \sim 2025$ .
- 3. You cannot use the WHERE option to affect the output because PROC CONTENTS does not process any observations.
- 4. proc contents: nods to suppress the printing of individual files; nodetails to suppress the printing of detailed information.
- 5. Compress function returns a character string with specified characters removed from the original string.
- 6. definition of error and N.