Chapters 2, 4 MODIFYING DEFAULT SAS OUTPUT

A default SAS output contains

* a title ‘The SAS System’,
* a header with date, time, and page number,
* a column Obs with observation numbers.

Example. Consider the following SAS code.

data exercise;

input id $ age actlevel $ gender $;

cards;

2810 61 MOD F

2804 38 HIGH F

2807 42 LOW M

2816 26 HIGH M

2833 32 MOD F

2823 29 HIGH M

;

proc print data=exercise;

run;

A complete SAS output looks like this:

observation # default title time and date page #

The SAS System 23:07 Monday, January 29, 2018 1

Obs id age actlevel gender

1 2810 61 MOD F

2 2804 38 HIGH F

3 2807 42 LOW M

4 2816 26 HIGH M

5 2833 32 MOD F

6 2823 29 HIGH M

OPTIONS STATEMENT

To modify these system settings, an **OPTIONS statement** is used. The syntax of this statement is OPTIONS *options*;

where *options* are:

* nonumber (suppresses page number)
* nodate (suppresses date and time)
* pageno=*n* (changes beginning page number to *n*)
* pagesize=*n* (sets page length to *n* lines, )
* linesize=*n* (sets page width to *n* characters, )
* firstobs=*n* (sets the first observation to be processed to *n*)
* obs=*n* (sets the last observation to be processed to *n*)

Example. In the exercise example, add the options statement

options nonumber nodate firstobs=2 obs=5;

proc print data=exercise;

run;

These options specify that page number, time and date are not to be displayed, the first printed observation to be #2, and the last printed observation to be #5. The complete SAS output becomes

| **Obs** | **id** | **age** | **actlevel** | **gender** |
| --- | --- | --- | --- | --- |
| **2** | 2804 | 38 | HIGH | F |
| **3** | 2807 | 42 | LOW | M |
| **4** | 2816 | 26 | HIGH | M |
| **5** | 2833 | 32 | MOD | F |

* Note that the OPTIONS statement is **global** in the sense that the specified options remain in effect until they are modified or until the SAS session ends.
* To override the options nonumber and nodate in a previously specified OPTIONS statement, use the statement OPTIONS number date;

REMOVING THE OBS COLUMN

To remove the Obs column, specify the **NOOBS option** in the PROC PRINT statement. This is a temporary option valid only for the

Example. In the exercise example, after the DATA step, type

options nonumber nodate;

proc print noobs;

run;

The complete SAS outcome does not contain page number, time, date, and the observation number column.

The SAS System

id age actlevel gender

2810 61 MOD F

2804 38 HIGH F

2807 42 LOW M

2816 26 HIGH M

2833 32 MOD F

2823 29 HIGH M

GENERATING DOUBLE-SPACED LAYOUT

To create double-spaced SAS output, specify the DOUBLE options in the PROC PRINT statement.

Example. In the exercise example, after the DATA step, type

options nonumber nodate;

proc print noobs double;

run;

The complete SAS output looks like this:

The SAS System

id age actlevel gender

2810 61 MOD F

2804 38 HIGH F

2807 42 LOW M

2816 26 HIGH M

2833 32 MOD F

2823 29 HIGH M

LABEL STATEMENT

If a variable label was not defined permanently in the DATA step, it is possible to specify it temporarily in the PROC PRINT step. The LABEL statement has the syntax

proc print label;

label *variable*='variable label';

run;

Example. In the exercise example, after the DATA step, type

options nonumber nodate;

proc print noobs label;

label actlevel='Activity Level';

run;

The output is

The SAS System

Activity

id age Level gender

2810 61 MOD F

2804 38 HIGH F

2807 42 LOW M

2816 26 HIGH M

2833 32 MOD F

2823 29 HIGH M

TITLE STATEMENT

The **TITLE statement** is used to specify up to 10 lines of titles for SAS output.

This is a **global** statement, that is, custom-made titles remain in effect until modified or the SAS session is terminated. The syntax is

title<*n*> 'Text';

where *n* is the number from 1 to 10 that specifies the title line, that is title<*n*> can be title1, …, title10. Specifying title is equivalent to title1.

* Titles are centered by default.
* To remove the default SAS title ‘The SAS System’, type title;

or customize the title by typing title 'Text';

* To specify titles for lines 1 and 3, for example, type

title1 'Text';

title3 'Text';

The second line of SAS output is left blank.

Example. In the exercise example, after the DATA step, type

title;

options nonumber nodate;

proc print noobs;

run;

The complete SAS output is

Activity

id age Level gender

2810 61 MOD F

2804 38 HIGH F

2807 42 LOW M

2816 26 HIGH M

2833 32 MOD F

2823 29 HIGH M

Example. In the exercise example, after the DATA step, type

title 'Exercise Example';

options nonumber nodate;

proc print noobs;

run;

The complete SAS output is

Exercise Example

id age actlevel gender

2810 61 MOD F

2804 38 HIGH F

2807 42 LOW M

2816 26 HIGH M

2833 32 MOD F

2823 29 HIGH M

Example. In the exercise example, after the DATA step, type

title1 'Exercise Example';

title3 'Data Set';

options nonumber nodate;

proc print noobs;

run;

The complete SAS output is

Exercise Example

Data Set

id age actlevel gender

2810 61 MOD F

2804 38 HIGH F

2807 42 LOW M

2816 26 HIGH M

2833 32 MOD F

2823 29 HIGH M

FOOTNOTE STATEMENT

Similarly to the TITLE statement, a FOOTNOTE statement may be used. There is no default footnote in SAS output. A footnote may be added using the syntax

footnote<*n*> 'Text';

where *n* is the number from 1 to 10 that specifies the footnote line, that is footnote<*n*> can be footnote1, …, footnote10. Specifying footnote is equivalent to footnote1.

* Footnotes are centered by default.
* To override a previously defined footnote, type footnote;
* To specify footnotes for lines 1 and 3, for example, type footnote1 'Text';

footnote3 'Text'; The second footnote line is left blank.

Example. In the exercise example, after the DATA step, type

title;

footnote 'SAS listing output';

options nonumber nodate pagesize=20;

proc print noobs;

run;

Note that it is wise to limit page length to 15 lines. Otherwise, the footnote line is way below the output (at the bottom of the page). The output is

id age actlevel gender

2810 61 MOD F

2804 38 HIGH F

2807 42 LOW M

2816 26 HIGH M

2833 32 MOD F

2823 29 HIGH M

SAS listing output