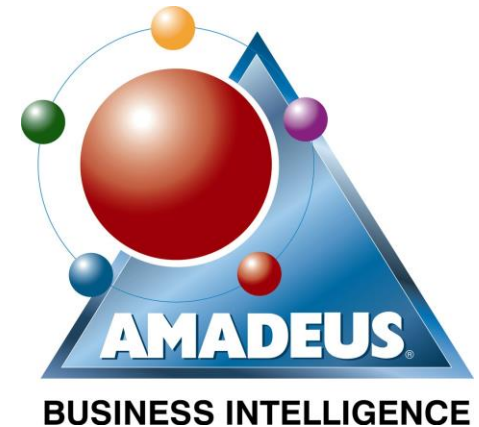




Proc Print to be Proud Of

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Introduction

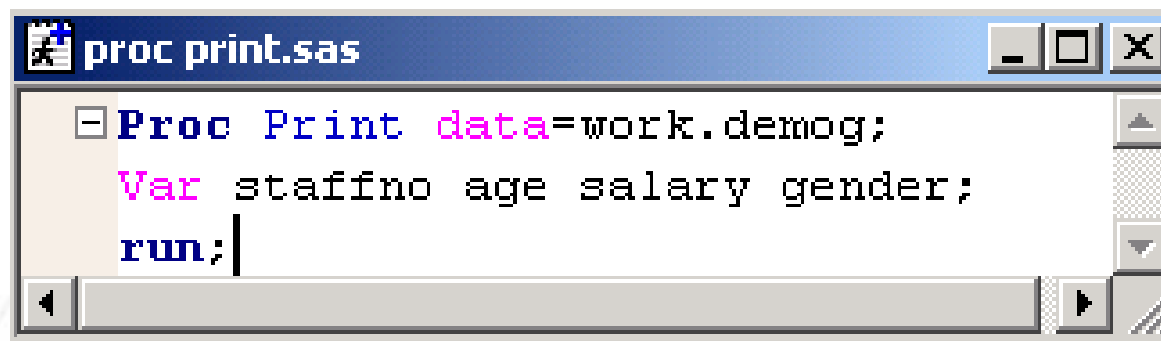
- **Overview**
- **Proc Print Statements**
- **Proc Print Options**
- **Direct Pathing**
- **Ods – Style Options**

Overview

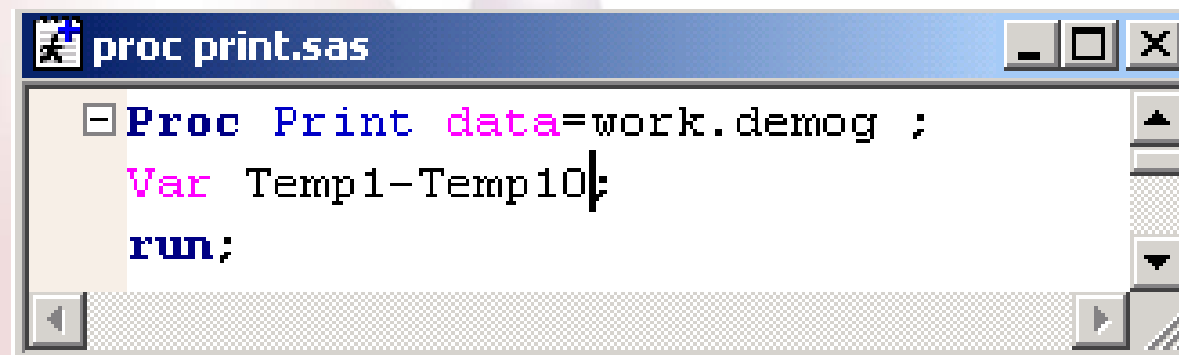
- Prints observations of a dataset
- Displays all or some of the variables
- Create a very simple report
- Use the proc print features to produce a more complex report

Proc Print Statements - VAR

- Selects variables that appear in the report and determines their order.



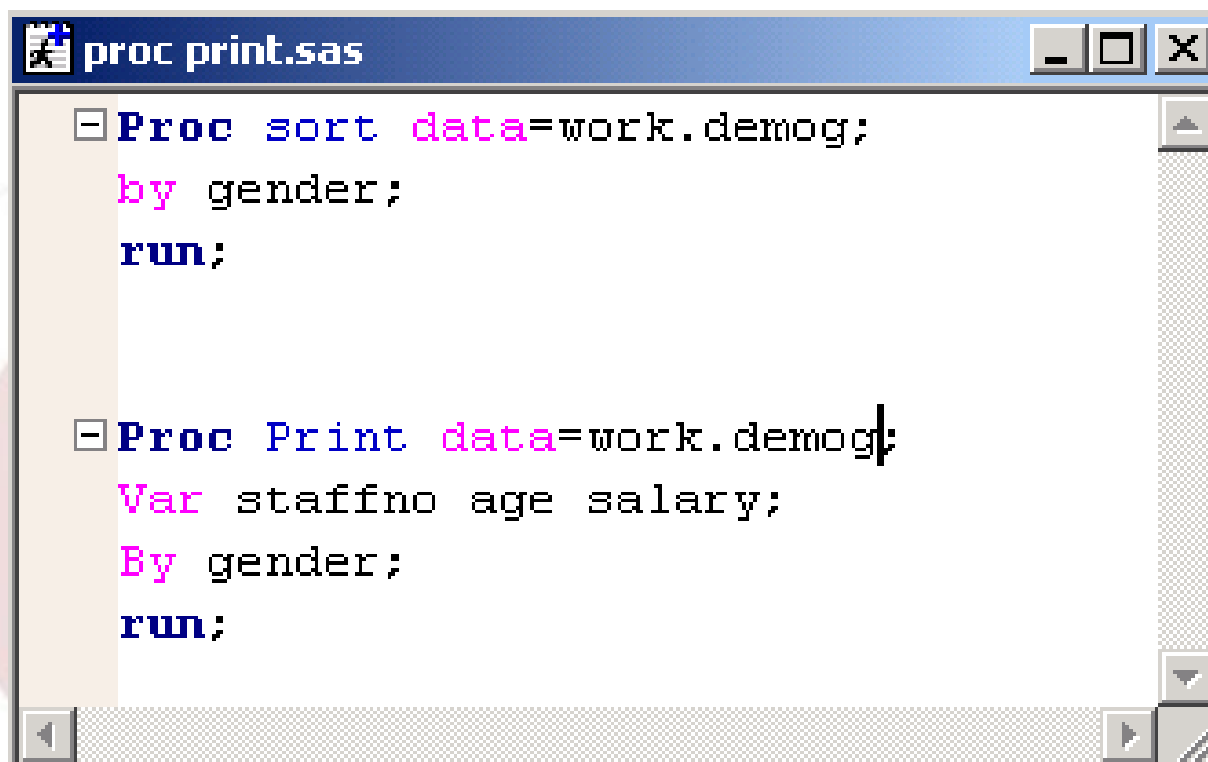
```
proc print.sas  
Proc Print data=work.demog;  
Var staffno age salary gender;  
run;
```



```
proc print.sas  
Proc Print data=work.demog ;  
Var Temp1-Temp10;  
run;
```

Proc Print Statements - BY

- Produces a separate section of the report for each BY group.



```
proc print.sas

- Proc sort data=work.demog;
  by gender;
  run;

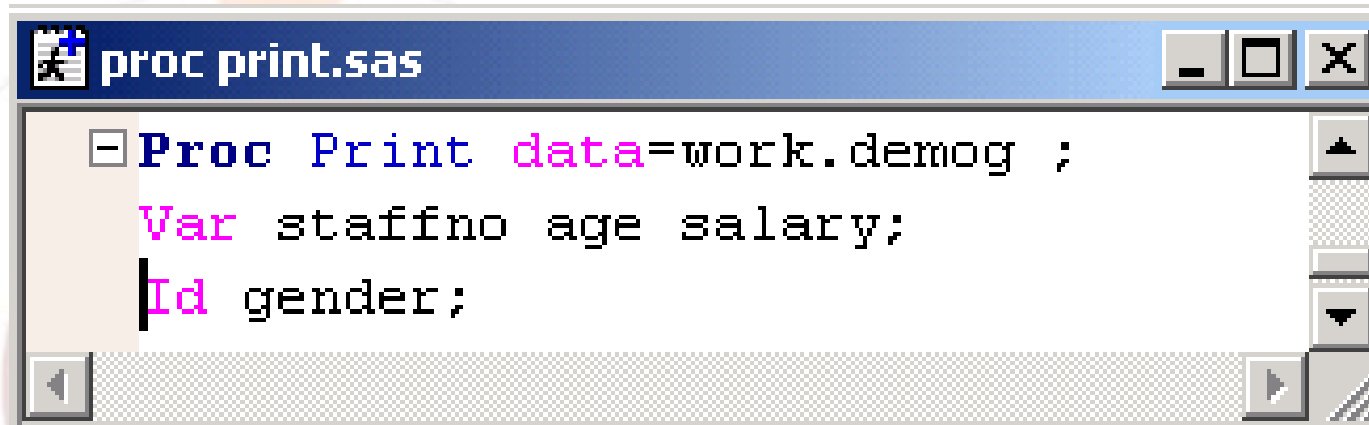
- Proc Print data=work.demog;
  Var staffno age salary;
  By gender;
  run;
```

Proc Print Statements – BY Output

----- gender=F -----			
Obs	staffno	age	salary
51	0051	61	25410.14
52	0052	21	25410.18
53	0053	45	15410.32
----- gender=M -----			
Obs	staffno	age	salary
54	0054	33	17610.44
55	0055	59	23023.33
56	0056	23	14060.82
57	0057	28	19050.35

Proc Print Statements - ID

- Identifies observations by using the formatted values of the variables that you list instead of by using observation numbers.



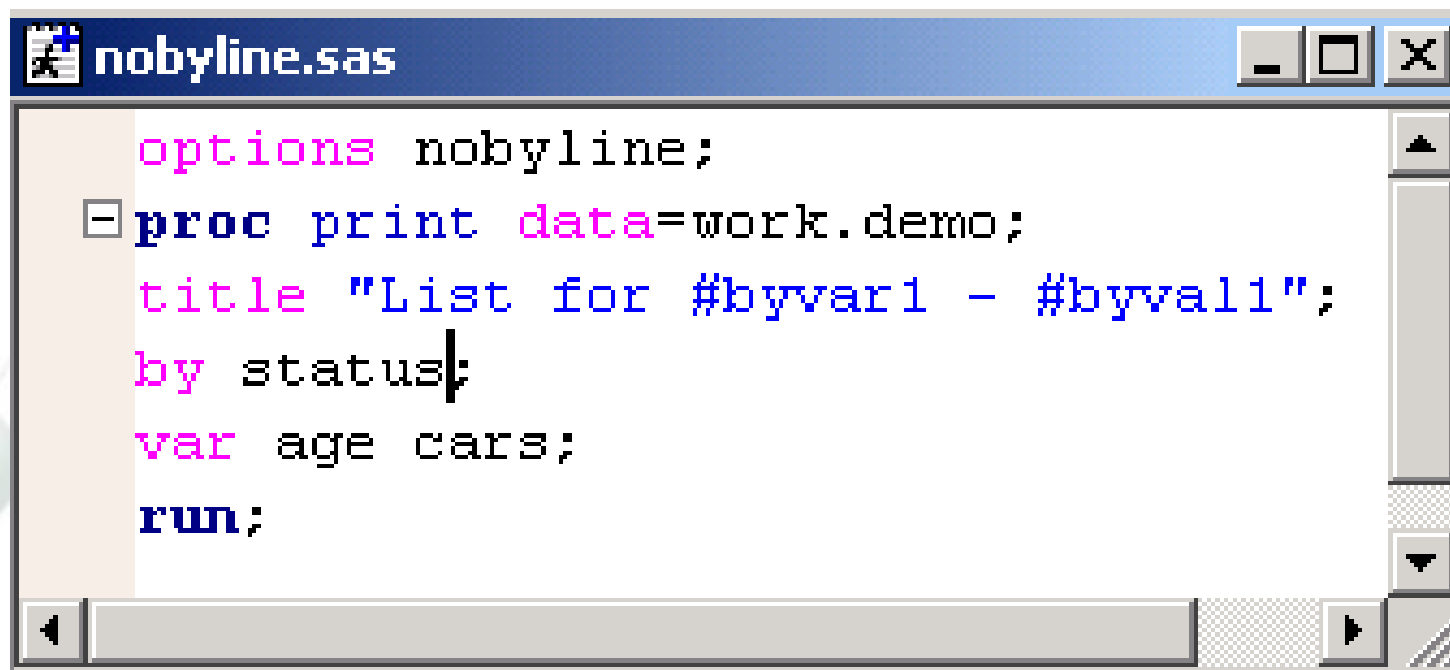
```
proc print data=work.demog ;  
  var staffno age salary;  
  id gender;
```

Proc Print Statements - ID and BY together

- Use Id and the by statement together and proc print uses a special layout for the report.

gender	staffno	age	salary
F	002	26	8870.23
	005	23	10512.63
	007	34	28512.66
	008	38	14840.27
	009	56	47520.38
	0010	52	23760.44
	0011	60	20592.16
	0012	56	13760.27
	0013	46	47520.92

Proc Print Statements - BY - Nobyline



```
options nobyline;  
proc print data=work.demo;  
  title "List for #byvar1 - #byval1";  
  by status;  
  var age cars;  
run;
```

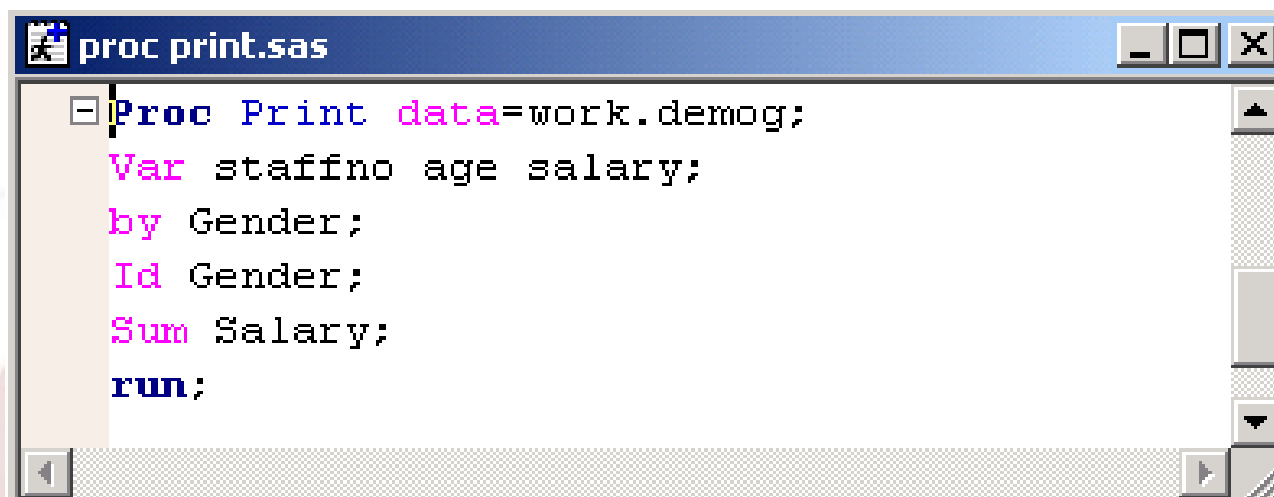
Proc Print Statements - BY – Nobyline Output

```
List for GENDER- M
Obs  STAFFNO  AGE  SALARY
1      44     23   1000.00

List for GENDER - F
Obs  STAFFNO  AGE  SALARY
2      54     29   5000.00
```

Proc Print Statements - SUM

- Totals values of numeric variables.



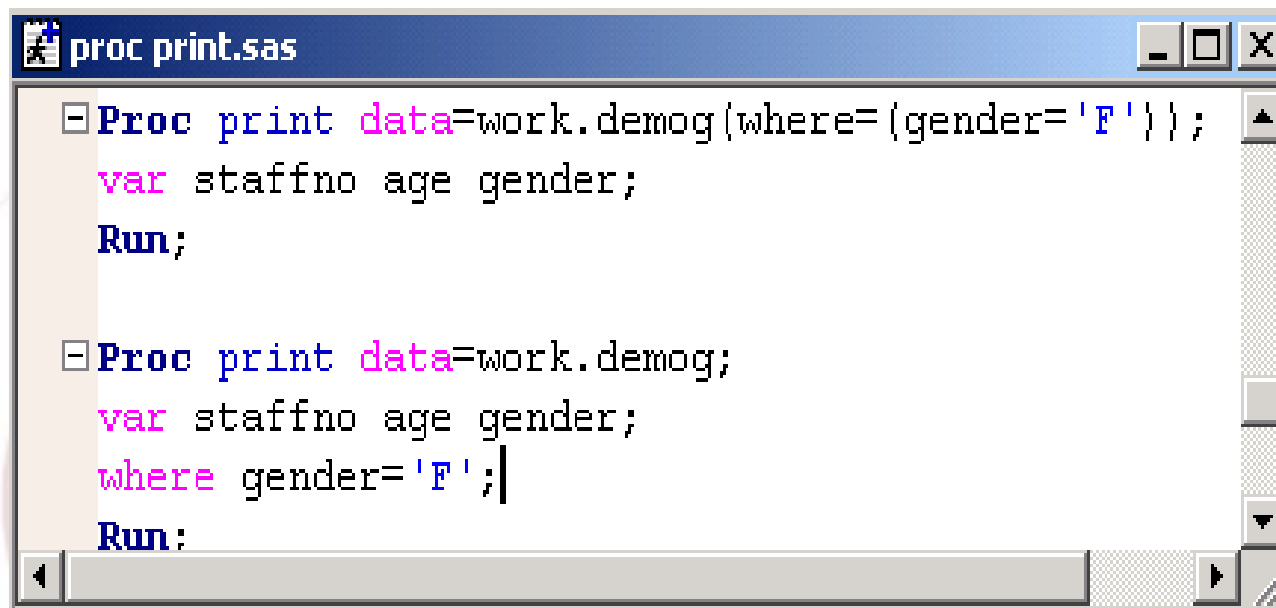
```
proc print.sas  
  Proc Print data=work.demog;  
    Var staffno age salary;  
    by Gender;  
    Id Gender;  
    Sum Salary;  
  run;
```

Proc Print Statements – SUM Output

gender	staffno	age	salary
M	0099	33	21500.34
	0100	46	26600.24
	0101	47	29200.18
	0102	52	35200.15
	0103	23	18600.95
	0104	64	41900.54
-----			-----
M			173002.40
			=====
			2202418.37

Proc Print Statements - WHERE

- The where statement or where option can be applied as a filter.

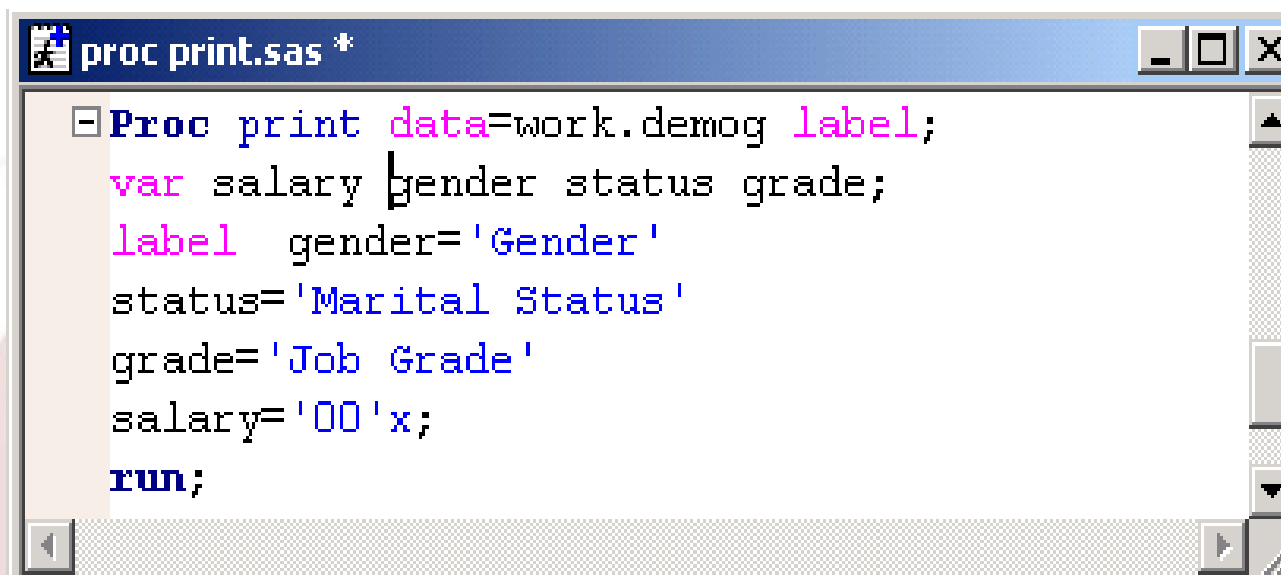


```
proc print.sas
❏ Proc print data=work.demog(where=(gender='F'));
  var staffno age gender;
  Run;

❏ Proc print data=work.demog;
  var staffno age gender;
  where gender='F';
  Run;
```

Proc Print Statements - LABEL

- One useful feature of the label statement is to create a blank label.



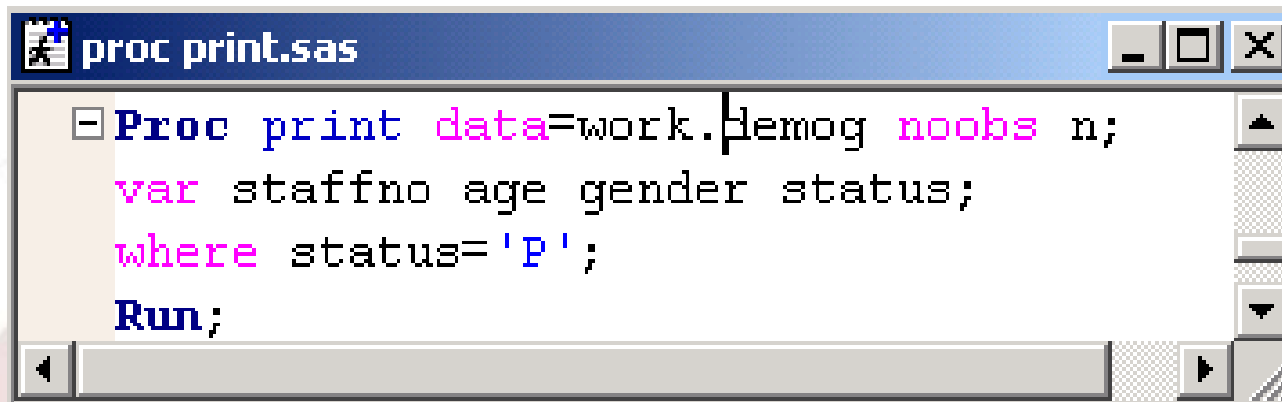
```
proc print data=work.demog label;  
var salary gender status grade;  
label gender='Gender'  
status='Marital Status'  
grade='Job Grade'  
salary='00'x;  
run;
```

Proc Print Statements – LABEL Output

Obs		Gender	Marital Status	Job Grade
50	14840.14	M	D	low
51	25410.14	F	M	high
52	25410.18	F	M	high
53	15410.32	F	M	high
54	17610.44	M	M	high
55	23023.33	M	W	high
56	14060.82	M	S	low
57	19050.35	M	M	high
58	13085.33	F	S	low
59	12050.38	F	S	low

Proc Print Options - NOOBS

- Suppress the automatically generated Obs variable from being printed.



```
Proc print data=work.demog noobs n;  
var staffno age gender status;  
where status='P';  
Run;
```

Proc Print Options – NOOBS OUTPUT

staffno	age	gender	status
005	23	F	P
0024	55	M	P
0030	25	F	P
0049	25	M	P
0071	46	M	P
0080	30	F	P
0091	50	M	P

N = 7

Proc Print Options - OBS

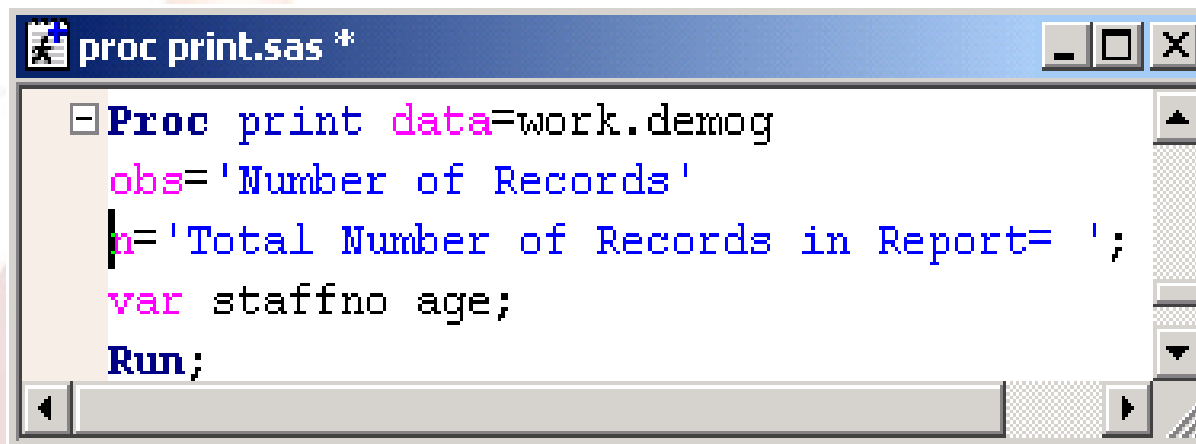
- Use **obs=** if you want a label for the Obs variable.

```
Proc print data=work.names  
obs='Number of Records';  
Run;
```

Number of Records	staf fno	age
49	0049	25
50	0050	41
51	0051	61
52	0052	21
53	0053	45

Proc Print Options – N=

- Print the number of observations in the data set, in BY groups, or both, and specify explanatory text to print with the number.



```
proc print data=work.demog  
  obs='Number of Records'  
  n='Total Number of Records in Report= '  
  var staffno age;  
run;
```

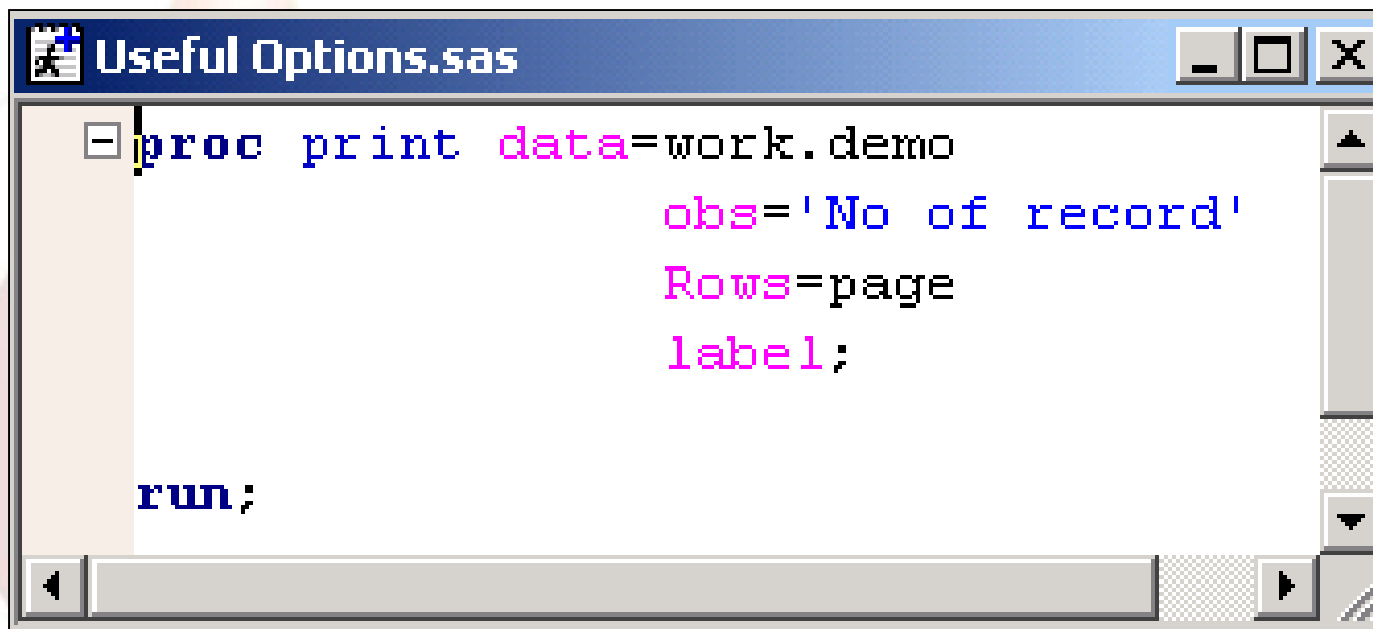
Proc Print Options – N= OUTPUT

Number of Records	staffno	age
97	0097	47
98	0098	22
99	0099	33
100	0100	46
101	0101	47
102	0102	52
103	0103	23
104	0104	64

Total Number of Records in Report= 104

Proc Print Options - ROWS=Page

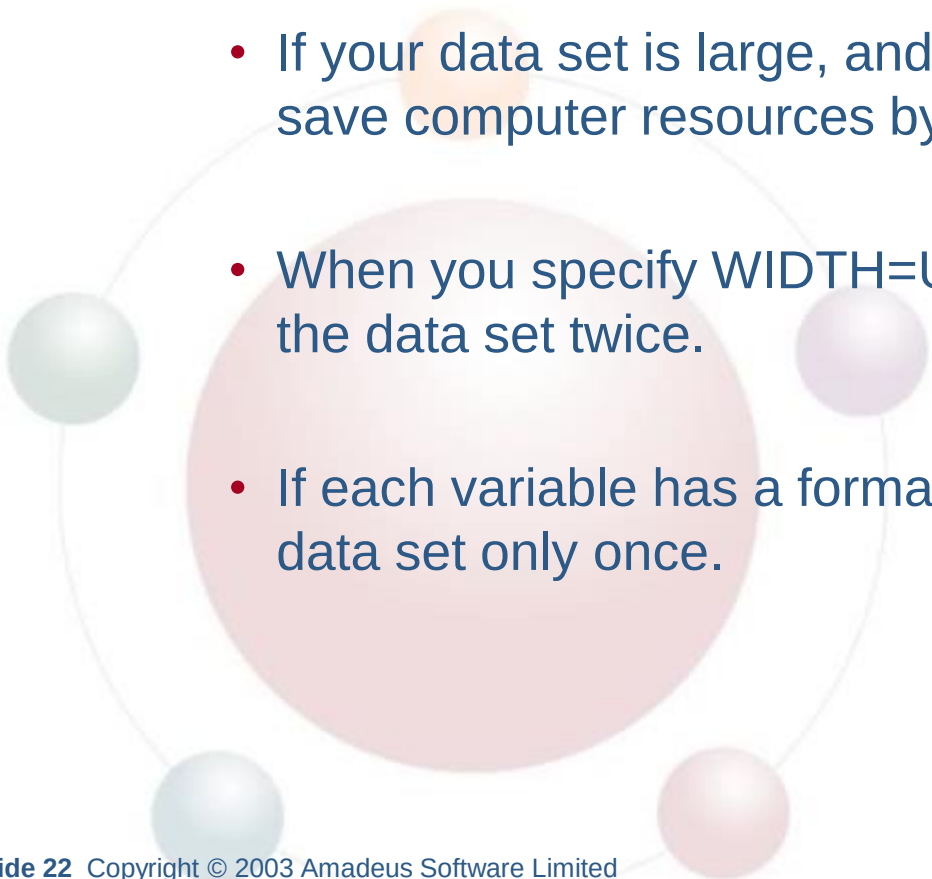
- The PAGE value can reduce the number of pages in the output if the data set contains large numbers of variables and observations.



```
proc print data=work.demo  
    obs='No of record'  
    Rows=page  
    label;  
  
run;
```

Proc Print Options - WIDTH

- **WIDTH=column-width**
 - **Determines the column width for each variable.**
 - If your data set is large, and you want a uniform report, you can save computer resources by using formats.
 - When you specify WIDTH=UNIFORM(BY), PROC PRINT reads the data set twice.
 - If each variable has a format applied PROC PRINT reads the data set only once.



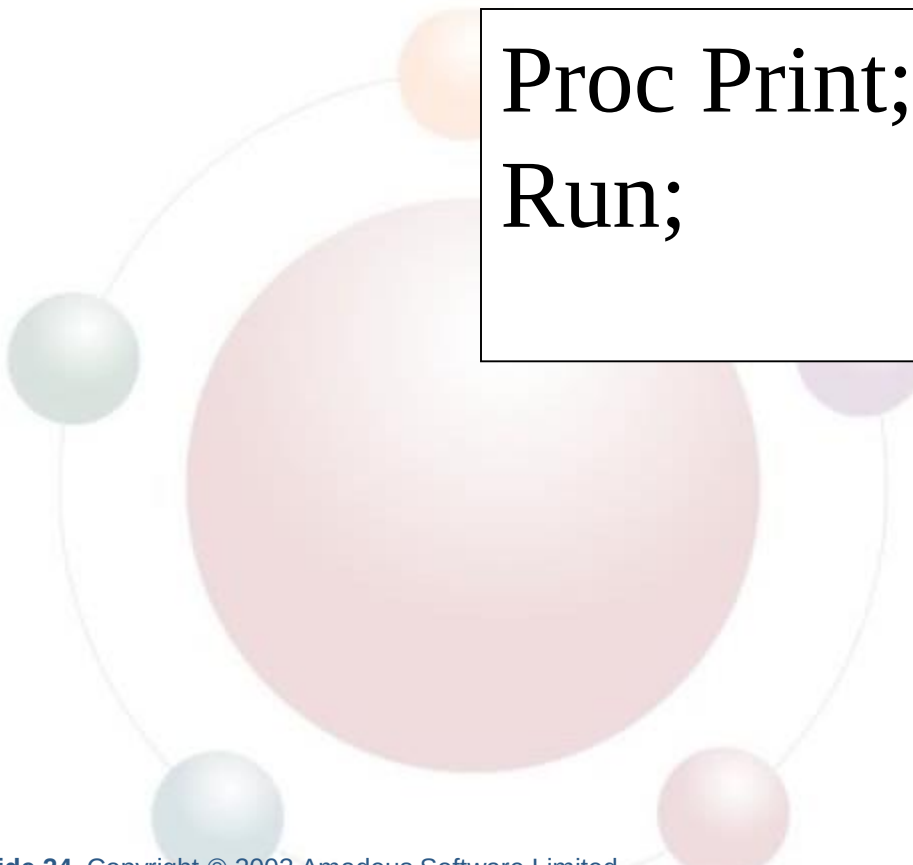
Direct Pathing

- **Proc Print displays the data set 'client' to the Listing window.**

```
proc print data="C:\temp\client";  
run;
```

Just Proc Print;Run

- **Print the last dataset that was created to the output window.**



```
Proc Print;  
Run;
```

ODS - Using the STYLE Option

```
F9.2 Using the STYLE option.sas *  
options nobyline;  
title "List for #byvar1 - #byval1";  
  
ods listing close;  
ods html bo style(header)={background=white foreground=blue}  
proc print data=work.demo  
    style(header)={background=white foreground=blue}  
    label;  
var gender grade / style(data)={foreground=blue};  
var salary / style(data)={foreground=red};  
by status;  
id status / style(data)={foreground=blue background=white};  
sum salary / style(total)={font_weight=bold};  
label gender='Gender' grade='Job Grade'  
    salary='Salary' status='Marital Status';  
run;
```

ODS - Using the STYLE Option Output

List for Marital Status - D

Marital Status	Gender	Job Grade	Salary
D	M	high	15840.72
	M	low	12560.36
	M	low	12672.26
	M	low	.
	M	low	14840.14
	M	high	21080.40
D			76993.88

Conclusion

- **Proc Print still has a lot to offer, and should not be overlooked.**
- **Good starting point for new users**
- **Easy to use reporting procedure**
- **Can use ODS styles to enhance report**

Contact Information

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