**Paper 87-26**

# A Macro to Center Text in a DATA _NULL_ Step
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Customized reports are a necessity in today's ever-changing work environment. PROC PRINT and PROC REPORT are frequently used to create customized reports. However, in some cases, PROC PRINT and PROC REPORT are not flexible enough to generate the desired result. Fortunately, you can also create customized reports using PUT statements in a DATA step.

DATA steps give us the greatest flexibility in designing customized reports, but usually require more work programmatically. When you use a DATA step to generate a report, you will probably not need to create a new SAS data set. In this case, you should name the data set the reserved name "_NULL_" to avoid creating an unnecessary SAS data set. A DATA step of this type is known as a "DATA _NULL_ step."

The %CENTER macro

The %CENTER macro will reduce some of the extra work required in a DATA _NULL_ step by automatically centering page text based on a given page size, and eliminating the need to "count columns."

The %CENTER macro simply replaces the position and text commands in a PUT statement, and automatically calculates where to place the text so that it is centered. The code for the %CENTER macro is as follows:

```
%LET LINESZ = 80;

%MACRO CENTER(text);

%LET pos = %EVAL((&linesz -
%LENGTH(&text))/2);
    @ &pos &text
%MEND CENTER;
```

The code calculates the position at which the text needs to be placed in order for it to be centered, given the page width (in columns). The first %LET statement sets the macro variable LINESZ to the page width, which is 80 in this example. It is up to the programmer to change LINESZ for different page widths, such as 132 and 256 as shown below. This allows SAS to automatically calculate where to place the text. This feature also allows you to change the page width quickly and easily, without having to recalculate how to center the text.

```
%LET LINESZ = 132;
/* Page width 132 columns */
%LET LINESZ = 256;
/* Page width 256 columns */
```

Using %CENTER

To use the %CENTER macro, the command should be of the following form:

```
%CENTER(text='Text to be centered')
```

Just call the macro and the work is done. Below is an example for using the %CENTER macro. Assume that RATES is an existing SAS data set with the variable COF.

```
%LET LINESZ = 80;
```

```
DATA _NULL_;
 SET RATES;
 FILE PRINT NOTITLE;

 PUT
  %center(text='Board of Governors') /
  %center(text='Federal Reserve') //
  %center(text="Rates as of &today") ///

  @10 'Cost of Funds'
  @30 cof percent8.2;
RUN;
```

Note that %CENTER works correctly even if the text to be centered includes macro variables, as in the third %CENTER call. The value of the macro variable &TODAY could be a date defined in any date format, and hence could have different character lengths (such as 04/15/99, April 4, 1999, 15 April 1999, etc.). The SAS macro processor resolves the macro variable &TODAY to whatever date format it may be, and then the macro %CENTER calculates the correct position.

### Note

Please note that this paper is designed for beginner SAS programmer audiences.  A more advanced feature using the DICTIONARY.TABLES can be used to automatically extract the system line size.

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