

If Only "Page 1 of 1000"

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Abstract

There are many possible reasons why we are required to only present the first 1, the first 2, or the first N pages of summary tables, listings, and graphics. Those reports which could have more than 10 or even 1000 pages. This paper presents the SAS[®] macro called %page_1. This macro provides only the first N pages of those output files with appropriate page breaks. The paper contains an example and detailed information about the macro logic and is targeted at those who have responsibilities of efficient report production and report presentation. The macro was developed on the NT platform and can be applied to other operating systems.

Introduction

In clinical research studies analyses results are presented in the form of summary tables, listings and graphics. These output files vary in length from one page to one thousand pages or even more. Since there is no need to produce the hard copies for entire reports in the early stage of output review the first few pages of each report could well serve the demand of reviewers. Currently, most people use the method of opening each individual summary table, listing, or graphic and print the desired N pages. The SAS macro %page_1 has been developed to make this process less manual. The macro can go into each output file, grab the first N pages as specified by the user then provide printouts in their original format with appropriate page breaks . In addition, %page_1 is designed to print out the first N pages for multiple reports.

The Macro

```
%macro page_1(numpage=, fileid=, direct=, ext=);
  title;; footnote;;;
```

```
/****** Section 1 *****/
```

```
%let ext=%sysfunc(reverse(%upcase(&ext)));
%let fileid=%upcase(&fileid);
%let pagenum=%eval(&numpage+1);
  data ooo ;
    rc = filename('ydir', '&direct');
    dir_id = dopen('ydir');
    do i=1 to dnum(dir_id);
      fname = dread(dir_id,i);
      if reverse( upcase(left(reverse(fname))) ) = "&ext" )
&
          index(upcase(fname),"&fileid.") gt 0 then
        output;      end;      rc = dclose(dir_id);
run;
```

```
data rr; set ooo;
      name=scan(fname, -2);
keep name;
run;

/****** Section 2 *****/

macro p_1(file=) ;
  filename pge "&direct.\&file..lis";
  %let oo=repeat(" ", 125);
%do kk=1 %to &numpage;
data _null_ ; retain num;
  infile pge length=len missover ;
  input @1 o $varying200. len ;
  oc=scan(pcase(o), -3);
  ooc=(scan(upcase(o), -4);
  do i= 1 to &pagenum;
    oo=compress(put(i, 8.), " ");
    if compress(oc, " ")=oo & compress(ooc, " ")="PAGE"
then do; num=i; nn=i; end;
    end;
    if nn^=. Then
      dd=&oo||"Page"||" "||scan(upcase(o), -3) ||"
||"of"||" "|| scan(upcase(o), -1);
      else dd=o;
    if num=&kk;
      file print;
      put @1 dd $varying200. len;
run;
%end;
%mend p_1;
```

```
/****** Section 3 *****/
```

```
data _null_ ;
  set rr;
  call execute('%p_1(file='||name||')');
run;

%mend page_1;
```

The Parameters

%page_1 has four parameters:

&numpage : Specify the first N pages of the tables, listings, or graphics that the user users plan to display. If

&numpage=1 then %page_1 will print out only the first page of all reports.

&fileid : Identifier (wild card) used to determine those report tables that the user plan to include.

&direct : Location where the output files are stored.

&ext : File extension of the reports.

There are no default values for all four parameters.

The Logic Flow

%page_1 has 3 sections. Each section performs the following tasks.

Section1: The information of the directory where report files are saved is released.

The names of files specified by the user are stored in work.rr. This step set up the scope of the loop in the section2 and 3.

Section 2: DO loop iterates for each page of every single file. Within each iteration, the report files are read in as text files. On each page the dummy variable NUM is assigned as a value which is the same as the iteration number. All of the report files are expected to have “Page x of xxx” in the right up corner of all pages. This “Page x of xxx” is the unique key to link the original page number string with the newly defined string. The do loop “%do kk=1 %to &numpage;” controls the first N pages of the text files and reads them out one after another using “file print;”.

Section 2 contains macro %p_1.

Section 3: The sub-macro %p_1 is executed once for each report in the work.rr by

```
“call execute('%page_1(file=||name||)');”
```

For example if 10 report files are selected by users work.rr will have 10 observations under variable NAME and %p_1 will be executed 10 times for each file.

five pages of each listing could provide enough information for preliminary review.

By calling %page_1(numpage=5, fileid=l300, direct=c:\jiang\sugi, ext=lis), the first five pages of each listing will be printed out in the SAS output window. Tracking back to %page_1, SAS file work.rr has five observations: L300AE.LIS, L300ECG.LIS, L300LAB.LIS, L300PE, and L300VIT.LIS. Within %page_1 the subroutine macro %p_1 is executed five times once for each listing.

Conclusion

The macro %page_1 has been used in many clinical studies. There have been many suggestions that have gone into the development of the macro as well as many positive responses. The algorithms that appear in %page_1 can be applied to other new software design.

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Contact Information

Your comments and questions are valued and encouraged.

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Example:

Treatment Patient		ECG	Value	Stu	Day	Response	Abnormal	Description
Group	ID	Parameters		fy				
100 MG	01001/KCK	HEART RATE (BPM)	71	-15		NORMAL		
		HEART RATE (BPM)	81	30		NORMAL		
		PR INTERVAL (MSEC)	122	-15		NORMAL		
		PR INTERVAL (MSEC)	130	30		NORMAL		
		QRS INTERVAL (MSEC)	97	-15		NORMAL		
		QRS INTERVAL (MSEC)	99	30		NORMAL		
		QT INTERVAL (MSEC)	368	-15		NORMAL		
		QT INTERVAL (MSEC)	363	30		NORMAL		
		QTC INT. B. (MSEC)	400	-15		NORMAL		
		QTC INT. B. (MSEC)	421	30		NORMAL		
		QTC INT. F. (MSEC)	389	-15		NORMAL		
				NORMAL		

When the first draft of all these listings is generated there is no need to print out these files in their entirety. The first