It's Only Temporary

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ABSTRACT

Very often during an interactive SAS® session, it is necessary to create temporary external files. From release 6.11 of the SAS System we have the ability to create a flat file within the same directory that contains SAS data sets. There are benefits to using this new technique. This paper will show you how to define this file in the WORK directory and the benefits of its use.

INTRODUCTION

It is easy to create a permanent file using a LIBNAME statement for SAS data sets or a FILENAME statement for external files. However, each operating system has its own mechanism for creating a file that is temporary in nature. By definition, a temporary file, whether it is a SAS data set or an external file, is one that is deleted at the end of the SAS session. In the MVS operating system, this is true. When a file is defined with an ampersand as its first character (e.g., &MYTEMP) it is deleted at the end of a batch job or an interactive SAS session. For example, temporary files can be defined as follows:

```
LIBNAME      SASTEMP      '&TEMP';
                -or-
FILENAME     FLATEMP      '&TEMP';
```

Unfortunately, the personal computer (PC) operating systems do not react in the same manner. If a file is defined, as in the example above, the file would reside on the hard drive in the current directory. In the PC environment, space and memory are important, limited resources. Therefore, removal of unneeded files becomes extremely urgent. To remove these files would require manual intervention. You can use an X statement to issue an operating system command from within your SAS session (e.g., DELETE or ERASE). You can also use the X statement to invoke an application in which you can delete a file (e.g., windows explorer or file manager). Another choice is to delete the files after exiting your SAS session. With the release of version SAS 6.11, there is a way to create a temporary file that is automatically deleted when the interactive session is over.

METHODOLOGY

In previous versions of the SAS system, it was not possible to define both SAS data sets and ASCII files in the same directory. Now there is an easy way to do it.

FILENAME *fileref* CATALOG '*catalog*';

Above is a very general FILENAME statement. The words in upper case are required to remain the same. The *fileref* can be any valid file reference. The '*catalog*' must be in the form:

library.catalog.entry.entrytype

where library must be WORK and entrytype must be SOURCE. If this structure is adhered to, the temporary file will be created in the WORK directory. The most common temporary library is the WORK library. The WORK data library is a temporary SAS data library that is automatically defined by the SAS system upon invocation to store temporary files. As we all know, this data library is deleted at the end of a session during the file cleanup phase.

EXAMPLES OF USE

There are many reasons to create a temporary file. The two examples below show the most common reasons to do this.

Example 1

Quite often it is necessary to write the output from a procedure to an external file, read it back in to do some processing before it is ultimately written to the output window or directly to the printer. One such challenge is to count the number of pages that are produced in a report so that the total number of pages are included on each page. For example, if the report has 10 pages, it is desirable for each page to specify 1 of 10, 2 of 10, 3 of 10, etc. In order to accomplish this task, first the output must be directed to a temporary file. Then it is read into a DATA step where the pages are counted and then the total number of pages is placed into a macro variable. To achieve this, the output is sent to the external file by way of a PROC PRINTTO. The

following code is a template of what needs to be done for the scenario that has been defined.

```
filename tmp catalog 'work.temp.outlist.source';

proc printto print=tmp new;
run;
proc report data=work.pgdata;
        .
        .
   more SAS code
        .
        .
run;
proc printto;
run;
data _null_;
        .
        .
   more SAS code
        .
        .
run;
```

Example 2

In the previous example, the entire output from a procedure was placed in an external file. In this example, a DATA _NULL_ is used to manipulate data being read in from another SAS data set. Within this DATA step, a PUT statement is used to write out to an external file. Then the data is read back in and processed.

```
filename tmp catalog 'work.temp.outlist.source';

data _null_;
    set work.mydata;
    file tmp;
        .
        .
    put '%prt('memname $8,')';
        .
        .
run;
%include tmp;
```

CONCLUSION

The new options on the FILENAME statement give us great flexibility when working with external files. As shown above, the SAS System allows us to create an external file in the same WORK directory with SAS data sets. This makes the external file as temporary as temporary SAS data sets. This is a great benefit, especially if you are constrained by space.

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