SAS Tips and Tricks

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SAS Tips and Tricks

- End of File processing when subsetting a dataset.
  - Read an entire file and perform some processing after the last record is read.
  - Problems may result from improper placement of the end of file processing code

End of File Processing and Subsetting Records

Obs	Sex	VarA
1	M	10
2	F	5
3	M	20
4	F	15
5	M	15
6	F	5
7	M	12
8	F	20

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```
Data _null_;
   set test end=end1;
   retain total 0;
   total = total + VarA;
   if end1 then put total=;
run;
```

End of File Processing and Subsetting Records

total=102

NOTE: There were 8 observations read from the data set WORK.TEST.

NOTE: DATA statement used (Total process time):

    real time   0.00 seconds
    cpu time   0.00 seconds

End of File Processing and Subsetting Records

```
Data _null_;
  set test end=end1;
  if sex = 'F';
  retain total 0;
  total = total + varA;
  if end1 then put total=;
run;
```

total=45

NOTE: There were 8 observations read from the data set WORK.TEST.

NOTE: DATA statement used (Total process time):

real time	0.00 seconds
cpu time	0.00 seconds

```
Data _null_;
  set test end=end1;
  if sex = 'M';
  retain total 0;
  total = total + varA;
  if end1 then put total=;
run;
```

End of File Processing and Subsetting Records

NOTE: There were 8 observations read from the data set WORK.TEST.

NOTE: DATA statement used (Total process time):

    real time   0.00 seconds

    cpu time   0.00 seconds

End of File Processing and Subsetting Records

Obs	Sex	VarA
1	M	10
2	F	5
3	M	20
4	F	15
5	M	15
6	F	5
7	M	12
8	F	20

- **The problem occurs when the last record is deleted by the SUBSETTING IF.**

- **When a record is deleted by a subsetting if SAS stops processing and returns to the next iteration of the data step.**

End of File Processing and Subsetting Records

```
Data _null_;
   set test end=end1;
   where sex = 'M';
   retain total 0;
   total = total + varA;
   if end1 then put total=;
run;
```

End of File Processing and Subsetting Records

total=57

NOTE: There were 4 observations read from the data set WORK.TEST.

NOTE: DATA statement used (Total process time):

real time	0.00 seconds
cpu time	0.00 seconds

Data _null_;

if end1 then put total=;

set test end=end1;

if sex = 'M';

retain total **0**;

total = total + varA;

run;

End of File Processing and Subsetting Records

total=57

NOTE: There were 8 observations read from the data set WORK.TEST.

NOTE: DATA statement used (Total process time):

real time	0.00 seconds
cpu time	0.00 seconds

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```
Data _null_;
if end1 then put total=;
Infile 'c:\sastests\test' recfm=f lrecl=4 end=end1;
input @1 sex  $1.
        @3 VarA 2.;
if sex = 'M';
retain total 0;
total = total + varA;
run;
```

End of File Processing and Subsetting Records

total=57

NOTE: 8 records were read from the infile 'c:\sastests\test1'.

NOTE: DATA statement used (Total process time):

    real time   0.00 seconds

    cpu time   0.00 seconds

End of File Processing and Subsetting Records

FileA			FileB	
ID	**VarA**		**ID**	**VarB**
1	10		1	5
2	15		2	8
3	12		4	25
5	20		5	11

End of File Processing and Subsetting Records

```
Data FileAB(keep=ID varA varB)
     sums(keep=SumvarA SumvarB);
retain SumvarA SumvarB 0;
merge FileA(in=inA) FileB(in=inB) end=end1;
by ID;
if inA & inB;
SumvarA = SumvarA + VarA;
SumvarB = SumvarB + VarB;
output FileAB;
if end1 then output sums;
Run;
```

End of File Processing and Subsetting Records

NOTE: There were 4 observations read from the data set WORK.FILEA.

NOTE: There were 4 observations read from the data set WORK.FILEB.

NOTE: The data set WORK.FILEAB has 3 observations and 3 variables.

NOTE: The data set WORK.SUMS has 1 observations and 2 variables.

NOTE: DATA statement used (Total process time):

    real time   0.01 seconds

    cpu time   0.01 seconds

End of File Processing and Subsetting Records

FileA				FileB	
ID	VarA			ID	VarB
1	10			1	5
2	15			2	8
3	12			4	25
5	20			5	11
				6	20

End of File Processing and Subsetting Records

NOTE: There were 4 observations read from the data set WORK.FILEA.

NOTE: There were 5 observations read from the data set WORK.FILEB.

NOTE: The data set WORK.FILEAB has 3 observations and 3 variables.

NOTE: The data set WORK.SUMS has 0 observations and 2 variables.

NOTE: DATA statement used (Total process time):

    real time   0.01 seconds
    cpu time   0.01 seconds

End of File Processing and Subsetting Records

```
Data FileAB(keep=ID varA varB)
      sums(keep=SumvarA SumvarB);
   retain SumvarA SumvarB 0;
   if end1 then output sums;
   merge FileA(in=inA) FileB(in=inB) end=end1;
   by ID;
   if inA & inB;
   SumvarA = SumvarA + VarA;
   SumvarB = SumvarB + VarB;
   output FileAB;
Run;
```

End of File Processing and Subsetting Records

NOTE: There were 4 observations read from the data set WORK.FILEA.

NOTE: There were 5 observations read from the data set WORK.FILEB.

NOTE: The data set WORK.FILEAB has 3 observations and 3 variables.

NOTE: The data set WORK.SUMS has 1 observations and 2 variables.

NOTE: DATA statement used (Total process time):

    real time   0.01 seconds

    cpu time   0.01 seconds

Summary

- **Improper placement of the end of file processing code may result in the code not being executed.**

- **The problem does not occur when using a WHERE Statement.**

- **Placing the end of file processing code before the set statement works.**

- **With the MERGE statement placing the end of file processing code before the merge statement works.**

Questions / Comments

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