

Appending

Another way to combine SAS data sets is to append one data set to another using the APPEND procedure.

Differences between appending and concatenating:

- the DATA step creates an entirely new data set when concatenating
- PROC APPEND simply adds the observations of one data set to the end of a "master" (or BASE) data set.



Appending and Concatenating are similar, but there are some important difference between the two methods.

PROC APPEND

SAS does not create a new data set nor does it read the base data set when executing the APPEND procedure.

General form of the APPEND procedure:

```
PROC APPEND BASE=SAS-data-set  
  DATA=SAS-data-set;  
RUN;
```

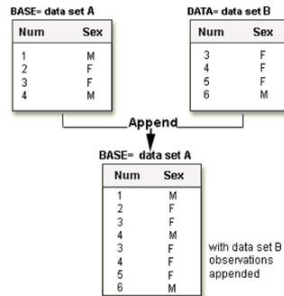
where

- **BASE=** names the data set to which observations are added
- **DATA=** names the data set containing observations that are added to the base data set. The data set specified with DATA= is the only data set that SAS actually reads.



For example, the following PROC APPEND statement appends the observations in data set B to the end of data set A:

```
proc append base=A
  data=B;
run;
```



Requirements for the APPEND Procedure

The requirements for appending one data set to another are as follows:

- Only two data sets can be used at a time in one step.
- The observations in the base data set are not read.
- The variable information in the descriptor portion of the base data set cannot change.



Notice that the final data set is the original data set with appended observations and that no new data set was created.

Using the FORCE Option with Unlike-Structured Data Sets

In order to use PROC APPEND with data sets that have unmatching variable definitions, you can use the FORCE option in the PROC APPEND statement.

General form of the APPEND procedure with the FORCE option:

```
PROC APPEND BASE=SAS-data-set  
  DATA=SAS-data-set FORCE;  
RUN;
```



The [FORCE option](#) is needed when the DATA= data set contains variables that meet any one of the following criteria:

(1) They are not in the BASE= data set.

If the BASE= data set contains a variable that is not in the DATA= data set

If the DATA= data set contains a variable that is not in the BASE= data set

(2) They are variables of a different type (for example, character or numeric).

(3) They are longer than the variables in the BASE= data set.



(1) They are not in the BASE= data set.

If the BASE= data set contains a variable that is [not in the DATA= data set](#), the observations are appended, but the observations from the DATA= data set have a missing value for the variable that was not present in the DATA= data set.

If the DATA= data set contains a variable that is not in the BASE= data set, the variable is dropped from the output.

(2) They are variables of a different type (for example, character or numeric).

If the [type](#) of a variable in the DATA= data set is different than in the BASE= data set, SAS replaces all values for the variable in the DATA= data set with missing values and keeps the variable type of the variable specified in the BASE= data set.

(3) If the [length](#) of a variable is longer in the DATA= data set than in the BASE= data set,

SAS truncates values from the DATA= data set to fit them into the length that is specified in the BASE= data set.