



## CHAPTER

## 4

# Data Set Options

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## Definition

*Data set options* specify actions that apply only to the SAS data set with which they appear. They let you perform such operations as

- renaming variables
- selecting only the first or last *n* observations for processing
- dropping variables from processing or from the output data set
- specifying a password for a SAS data set.

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## Syntax

Specify a data set option in parentheses after a SAS data set name. To specify several data set options, separate them with spaces.

```
(option-1=value-1 <...option-n=value-n>)
```

These examples show data set options in SAS statements:

- `data scores(keep=team game1 game2 game3);`
- `proc print data=new(drop=year);`
- `set old(rename=(date=Start_Date));`

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## Using Data Set Options

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### Using Data Set Options with Input or Output SAS Data Sets

Most SAS data set options can apply to either input or output SAS data sets in DATA steps or procedure (PROC) steps. If a data set option is associated with an input data set, the action applies to the data set that is being read. If the option appears in the DATA statement or after an output data set specification in a PROC step, SAS applies the action to the output data set. In the DATA step, data set options for output data sets must appear in the DATA statement, not in any OUTPUT statements that may be present.

Some data set options, such as COMPRESS=, are meaningful only when you create a SAS data set because they set attributes that exist for the life of the data set. To change or cancel most data set options, you must re-create the data set. You can change other options (such as PW= and LABEL=) with PROC DATASETS. For more information, see “The DATASETS Procedure” in the *SAS Procedures Guide*.

When data set options appear on both input and output data sets in the same DATA or PROC step, SAS applies data set options to input data sets before it evaluates programming statements or before it applies data set options to output data sets.

In some instances, data set options conflict when they are used in the same statement. For example, you cannot specify both the DROP= and KEEP= options for the same variable in the same statement.

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### How Data Set Options Interact with System Options

Many system options and data set options share the same name and have the same function. System options remain in effect for all DATA and PROC steps in a SAS job or session, unless they are respecified.

The data set option overrides the system option for the data set in the step in which it appears. In this example, the OBS= system option in the OPTIONS statement specifies that only the first 100 observations will be processed from any data set within the SAS job. The OBS= data set option in the SET statement, however, overrides the system option for data set TWO and specifies that only the first 5 observations will be read from data set TWO. The PROC PRINT step prints the data set FINAL. This data set contains the first 5 observations from data set TWO, followed by the first 100 observations from data set THREE:

```
options obs=100;

data final;
    set two(obs=5) three;
run;

proc print data=final;
run;
```

## Data Set Options by Category

**Table 4.1** Categories and Descriptions of Data Set Options

Category	Data Set Option	Description
Data Set Control	ALTER=	Assigns an alter password to a SAS file and enables access to a password-protected SAS file
	BUFNO=	Specifies the number of buffers for processing a SAS data set
	BUFSIZE=	Specifies a permanent buffer size for output SAS data sets
	CNTLLEV=	Specifies the level of shared access to SAS data sets
	COMPRESS=	Compresses observations in an output SAS data set
	DLDMGACTION=	Specifies what type of action to take when a SAS data set in a SAS data library is detected as damaged
	ENCRYPT=	Encrypts SAS data files
	GENMAX=	Requests generations for a data set and specifies the maximum number of versions
	GENNUM=	References a specific generation of a data set
	INDEX=	Defines indexes when a SAS data set is created
	LABEL=	Specifies a label for the data set
	OUTREP=	Specifies an operating environment's requirements vector for an output file
	PW=	Assigns a read, write, or alter password to a SAS file and enables access to a password-protected SAS file
	PWREQ=	Controls the pop up of a requestor window for a data set password
	READ=	Assigns a read password to a SAS file and enables access to a read-protected SAS file
	REPEMPTY=	Controls replacement of like-named temporary or permanent SAS data sets when the new one is empty.
	REPLACE=	Controls replacement of like-named temporary or permanent SAS data sets
	REUSE=	Specifies whether new observations are written to free space in compressed SAS data sets
	SORTEDBY=	Specifies how the data set is currently sorted
	TOBSNO=	Specifies the number of observations to be transmitted in each multi-observation exchange with a SAS server
	TRANTAB=	Specifies a translation table for character conversions
	TYPE=	Specifies the data set type for a specially structured SAS data set
	WRITE=	Assigns a write password to a SAS file and enables access to a write-protected SAS file

Category	Data Set Option	Description
Miscellaneous	FILECLOSE=	Specifies how a tape is positioned when a SAS file on the tape is closed
Observation Control	FIRSTOBS=	Causes processing to begin at a specified observation
	IN=	Creates a variable that indicates whether the data set contributed data to the current observation
	OBS=	Causes processing to end with the $n$ th observation
	POINTOBS=	Controls whether a compressed data set may be processed with random access (by observation number) rather than sequential access only
	WHERE=	Selects observations that meet the specified condition
User Control of SAS Index Usage	WHEREUP=	Specifies whether to evaluate added observations and modified observations against a WHERE expression
	IDXNAME=	Directs SAS to use a specific index to satisfy the conditions of a WHERE expression
Variable Control	IDXWHERE=	Overrides the SAS System decision about whether to use an index to satisfy the conditions of a WHERE expression
	DROP=	Excludes variables from processing or from output SAS data sets
	KEEP=	Specifies variables for processing or for writing to output SAS data sets
	RENAME=	Changes the name of a variable

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