**CHAPTER****8****Sorting Data**

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**Chapter Overview**

Sorting data enables you to categorize your data and arrange it in a particular order. For example, if you are sorting data on houses for sale, you can sort the data by a particular value, such as by the number of square feet. You can arrange the data in ascending or descending order, such as from the smallest house to the largest house. You can sort by a number such as by the price of a house, or by a characteristic such as in alphabetical order by the style of the house.

This chapter shows you how to sort the data in the HOUSES table in ascending order by style and then descending order by square footage. The sorted data are stored in a temporary table called WORK.STYLE. When sorted, the houses are in order alphabetically by style. If more than one house has the same style, the largest house is listed first.

The original order of the houses in the HOUSES table is shown in the following display as viewed using **Edit/Browse** on the **Data Management** menu.

Display 8.1 Unsorted Houses Table

Obs	style	sqfeet	bedrooms	baths	street
1	RANGH	1250	2	1	Sheppard Avenue
2	SPLIT	1190	1	1	Rand Street
3	CONDO	1400	2	1.5	Market Street
4	TWOSTORY	1810	4	3	Garris Street
5	RANGH	1500	3	3	Kemble Avenue
6	SPLIT	1615	4	3	West Drive
7	SPLIT	1305	3	1.5	Graham Avenue
8	CONDO	1390	3	2.5	Hampshire Avenue
9	TWOSTORY	1040	2	1	Sanders Road
10	CONDO	2105	4	2.5	Jeans Avenue
11	RANGH	1535	3	3	State Highway
12	TWOSTORY	1240	2	1	Fairbanks Circle
13	RANGH	720	1	1	Nicholson Drive
14	TWOSTORY	1745	4	2.5	Highland Road
15	CONDO	1860	2	2	Arcata Avenue

Refer to Chapter 7, “Editing and Browsing Data,” on page 73 for information about editing and browsing.

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## Additional Information

For additional information about sorting data, refer to the PROC SORT chapter in the *SAS Procedures Guide*.

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## Sorting Data

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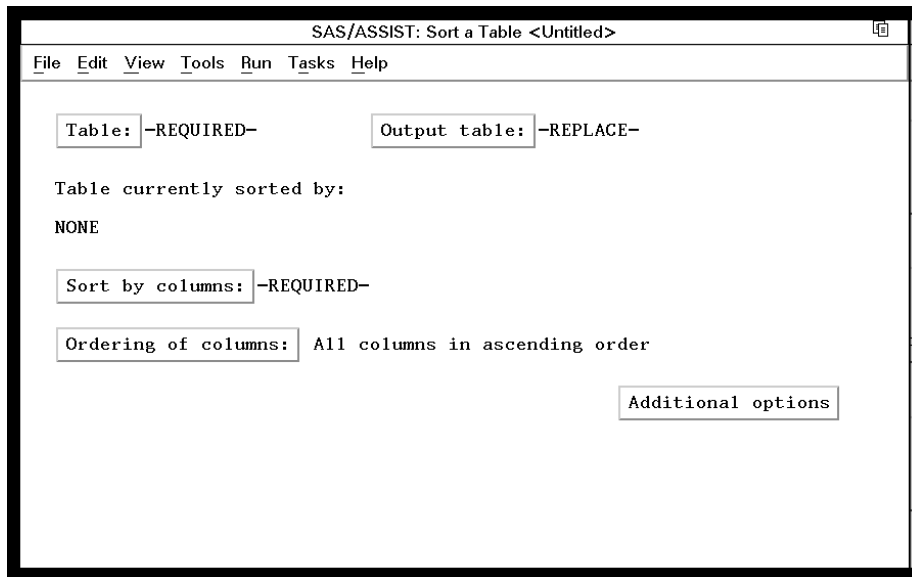
### Instructions

- 1 To sort your data, follow this selection path:

Tasks ► Data Management ► Sort...

The Sort a Table window appears.

Display 8.2 Sort a Table Window



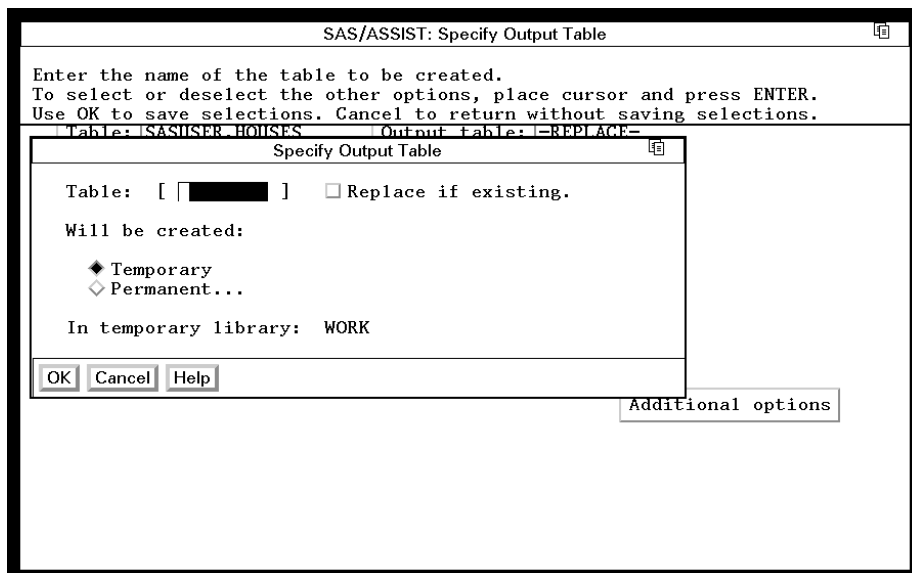
- 2 If the active table is SASUSER.HOUSES, continue to the next step. Otherwise, select **Table**, and then select the SASUSER.HOUSES table. For more information on selecting tables, see “Selecting a Table” on page 24.
- 3 If other report selections exist (for example, column name is listed for **Sort by columns**), follow this selection path to clear these selections:



Select **no** in the Save Changes dialog box.

- 4 Select **output table** from the Sort a Table window. The Specify Output Table window appears.

Display 8.3 Specify Output Table Window



An output table enables you to store the sorted table separately from the original table. If you do not select an output table, the sorted table overwrites the original table.

- 5 In the **Table** field, type **STYLE** as the name of the output table in which you want to store the sorted data. See “SAS Tables” on page 113 for details on assigning names to tables.

*Note:* **Replace if existing** enables you to replace the data in an existing table with the newly sorted data. If the STYLE table already exists, you can use this item to store the newly sorted data in place of whatever was currently stored in the STYLE table. Otherwise, you get an error message stating that the STYLE table already exists. You can either enter another name for the table or select **Replace if existing** to replace the existing data.  $\triangle$

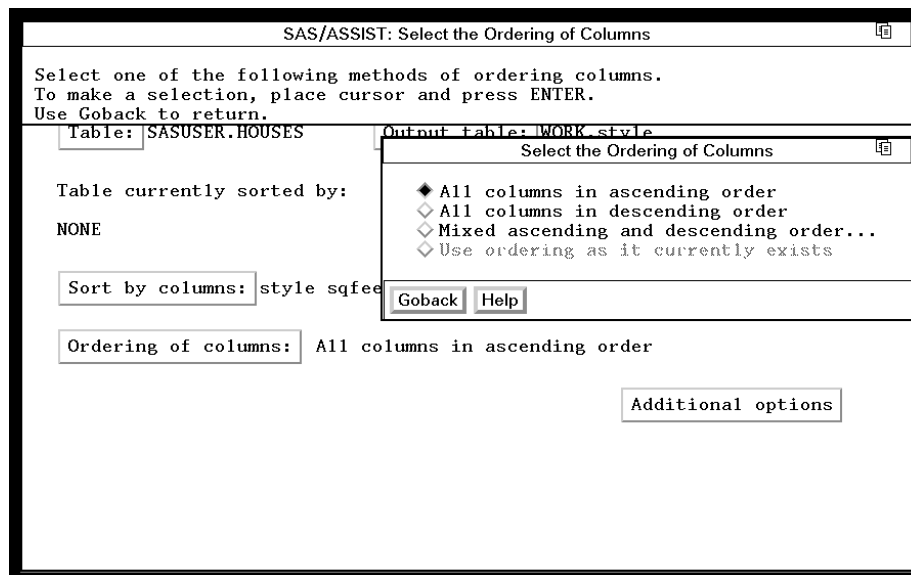
- 6 You can store the data temporarily or permanently. For this example, store the data temporarily.
  - To store the sorted data only for the length of the SAS session, select **Temporary**. The sorted data are stored in a temporary table called WORK.STYLE, which is deleted when you end the SAS session.
  - To store the sorted data permanently, select **Permanent**. A list of existing librefs appears.

Select the libref for the location where you want to store the data, for example, the SASUSER libref. The table STYLE is stored in the library whose libref is SASUSER, and remains there until you delete it.

A *libref* specifies the SAS data library in which you want to store the sorted data. Refer to “SAS Data Libraries” on page 115 for more information about librefs.

- 7 Select **OK** at the bottom of the window. The Sort a Table window reappears.
- 8 Select **Sort by columns** from the Sort a Table window. Select the STYLE column first and the SQFEET column second. For more information on selecting columns, refer to “Selecting a Column” on page 25.
- 9 Select **Ordering of columns** from the Sort a Table window. The Select the Ordering of Columns window appears.

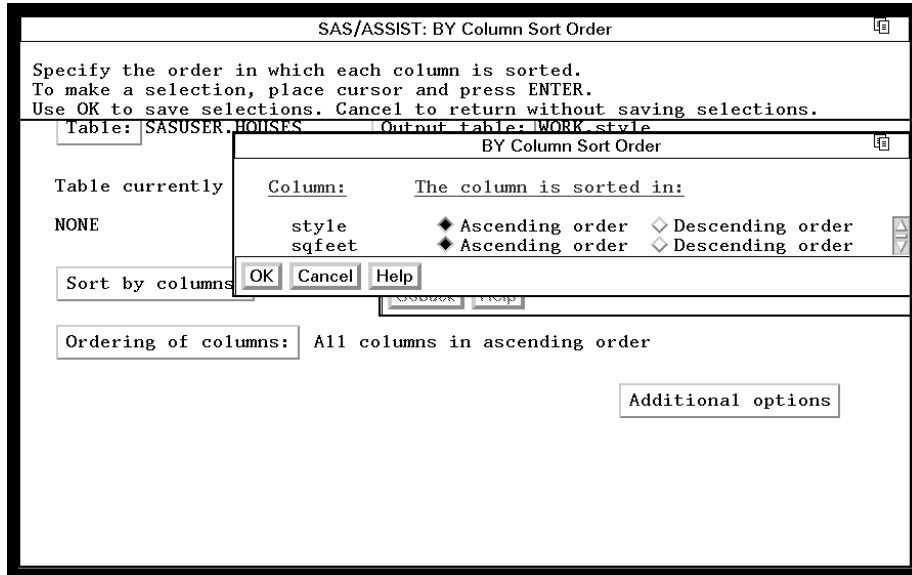
**Display 8.4** Select the Ordering of Columns Window



You can choose to order the data in ascending, descending, or mixed order.

- 10 Select **Mixed ascending and descending order....** The BY Column Sort Order window appears.

**Display 8.5** BY Column Sort Order Window

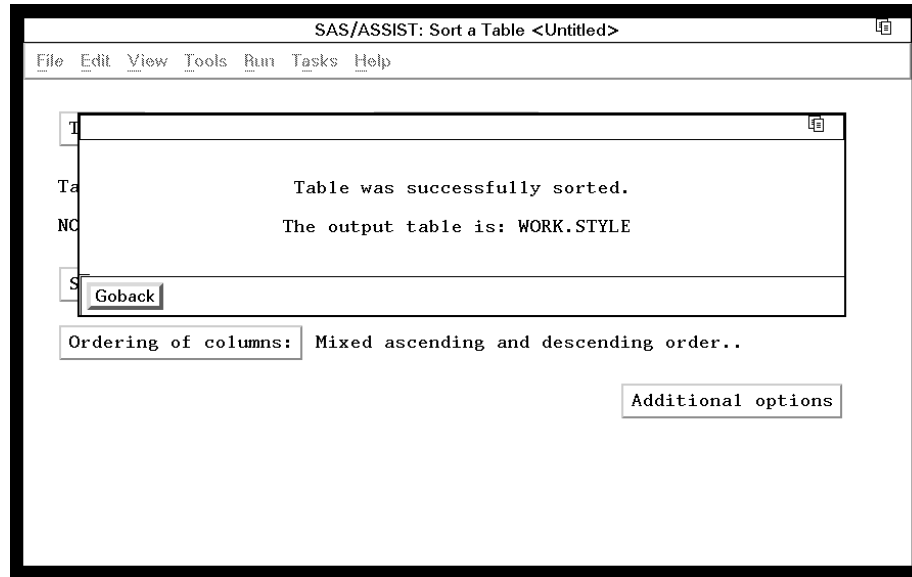


- 11 For the STYLE column, select **Ascending order**. For the SQFEET column, select **Descending order**.
- 12 Select **OK**. The Sort a Table window reappears.
- 13 Follow this selection path:

**Run** ► **Submit**

The table is sorted according to the specifications that you indicated. A message appears that indicates that the table was successfully sorted.

Display 8.6 Successful Sort Message



14 Select **Goback** to return to the Sort a Table window

15 To see how the table has been sorted, edit or browse the WORK.STYLE table in a tabular format. The sorted table is shown in the following display.

Refer to Chapter 7, “Editing and Browsing Data,” on page 73 for more information about editing and browsing data.

Display 8.7 Sorted Houses Table

Obs	style	sqfeet	bedrooms	baths	street
1	CONDO	2105	4	2.5	Jeans Avenue
2	CONDO	1860	2	2	Arcata Avenue
3	CONDO	1400	2	1.5	Market Street
4	CONDO	1390	3	2.5	Hampshire Avenue
5	RANCH	1535	3	3	State Highway
6	RANCH	1500	3	3	Kemble Avenue
7	RANCH	1250	2	1	Sheppard Avenue
8	RANCH	720	1	3	Nicholson Drive
9	SPLIT	1615	4	3	West Drive
10	SPLIT	1305	3	1.5	Graham Avenue
11	SPLIT	1190	1	1	Rand Street
12	TWOSTORY	1810	4	3	Garris Street
13	TWOSTORY	1745	4	2.5	Highland Road
14	TWOSTORY	1240	2	1	Fairbanks Circle
15	TWOSTORY	1040	2	1	Sanders Road

The styles of houses are listed alphabetically. Houses with a style of CONDO are first in the table. Within each style, the houses are listed from largest to smallest.

## Exiting This Task

When you are finished looking at your sorted table, follow this selection path:

**File** ► **Close**

When you are ready to return to the WorkPlace menu or move on to another task, follow the directions in “Exiting a Task” on page 26.





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