Chapter Overview

You can create new columns from existing data. For example, you may want to know the cost per square foot for each house in the HOUSES table. This information does not exist in the HOUSES table. However, by using SAS/ASSIST software, you can create a new column that contains this data in a new table. New columns cannot be added to existing tables.

This chapter shows you how to determine the cost per square foot for each house in the HOUSES table, and how to store that information in a new column in a new table.

Additional Information

For additional information about defining columns, refer to the SAS Language Reference Dictionary.

Defining a New Column

Instructions

1 To define a new column, follow this selection path:

Tasks ▶ Data Management ▶ Subset/Copy

The Subset or Copy a Table window appears.
When you define a new column, use **Subset/Copy** because the existing table is copied and the newly defined column is created to generate the output table.

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 22.

3 If other report selections exist (for example, column names are listed for **Define new columns**), follow this selection path to clear these selections:

   - File ➤ New

4 Select **Output data** from the Subset or Copy a Table window. The Output Table or View window appears.
An output table enables you to store the data with the new column separate from the original data.

5 In the Table/View field, type HOUSCOST as the name of the output table in which you want to store the data with the new column. See “SAS Tables” on page 117 for details on naming SAS tables.

Note: Use Replace if existing to replace the data in a table or view of the same name. Otherwise, you get an error message that the table already exists and you must enter a new table name.

6 You can store the data temporarily or permanently. For this example, store the data temporarily.

   □ If you want to store the data only for the length of the SAS session, select Temporary. The data is stored in a temporary table called WORK.HOUSCOST, which is deleted when you end the SAS session.

   □ If you want to store the 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 HOUSCOST is stored in SASUSER, and remains there until you delete it.

7 You can store the data with the new column either as a table or as a view. For this example, store the data as a table.

8 Select OK. The Subset or Copy a Table window reappears.

9 Select Define new columns from the Subset or Copy a Table window. The Define or Modify a Column window appears.
10 In the Column field, type FOOTCOST as the name of the new column. See “SAS Tables” on page 117 for details on naming columns.

11 Select Numeric as the type of the column.

A column can be character or numeric. If a column is defined as character, it can contain letters, numbers, special characters, and symbols, but it cannot be used in arithmetic calculations. If a column is defined as numeric, it can contain only numbers, decimal points, plus signs, and minus signs, and it can be used in arithmetic calculations.

12 In the Label field, type Cost per Square Foot. A label can be up to 40 characters, and it can be printed instead of, or in addition to, the column name in certain tasks.

13 Select Format. The Select Numeric Format window appears.
Defining a New Column

Display 9.4  Select Numeric Format Window

A format is a pattern that the SAS System uses to determine how a column value should be displayed. The SAS System provides a set of standard formats and also enables you to define your own custom formats. For example, the DOLLARw.d default format displays the amount 1200 as $1,200. For more information on formats, refer to SAS Language Reference: Dictionary.

14 Select the DOLLARw.d format. The Specify Format Widths window appears with the default definition for the selected format.
Select **OK** to accept the defaults of 10 for the format width and 0 for the number of digits to the right of the decimal point. The Define or Modify a Column window reappears.

Select **initialize** from the Define or Modify a Column window. The Enter Numeric Expression window appears. This window enables you to define (initialize) the new column.
Defining a New Column

Instructions 107

Display 9.6  Enter Numeric Expression

For this example, you can determine the cost per square foot by building the arithmetic expression of price divided by square feet (PRICE/SQFEET). The cost per square foot is calculated for each house and stored in the new column called FOOTCOST. You can build the expression by using one of the methods listed below.

- You can type the expression directly by using EDIT THE EXPRESSION.
- You can build the expression by using items in the window. If you use the items in this window, the items available for selection are highlighted while you are building the expression.

17 To build the expression by using the items in the window, select column from the Enter Numeric Expression window. Select the PRICE column. For more information on selecting columns, refer to “Selecting a Column” on page 23.

18 Select the division symbol (/).

19 Select column again, and then select the SQFEET column the same way you selected the PRICE column in step 17. The Enter Numeric Expression window reappears.

20 Select ok. The Define or Modify a Column window reappears with the new column defined.
Display 9.7  Definition of the FOOTCOST Column

Select OK. The Define New Columns window appears with information about the new column.

Display 9.8  Define New Columns Window

Select OK again. The Subset or Copy a Table window reappears.

To copy the data into the new table and generate the new column, follow this selection path:

Run ➤ Submit

The data from the HOUSES table is copied into the HOUSCOST table, and the new column FOOTCOST is created. The new table is shown in a tabular format.
Display 9.9  HOUSCOST Table

22 When you finish looking at the new table, follow this selection path to return to the Subset or Copy a Data Set window:

File ➤ Close

Exiting This Task

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 24.