

Chapter 2

The Data Table

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Chapter 2

The Data Table

Introduction

The Analyst data table provides a spreadsheet view of your data set, where rows correspond to observations and columns correspond to variables. You can type data directly into the table as well as display data from SAS data sets, data views, and other sources. You can also customize the appearance of the data table by rearranging rows and columns, changing column formats, and applying filters.

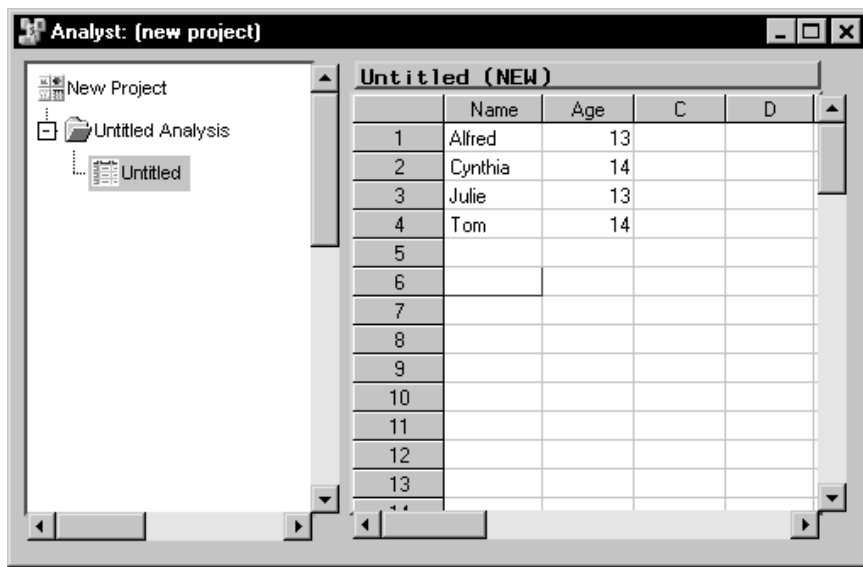


Figure 2.1. The Data Table

You can enter data into the data table by typing values directly into table cells. In a new table, the first value you enter in a column determines the column type. That is, if the first value you type is numeric, then the column is defined as numeric and no longer permits charac-

ter values. Once you have entered data into the data table, you can immediately generate graphics and perform analyses. However, you must save the new table as a data set before you can subset, sort, and transform your data.

Bringing in Data

Opening Local Files

The Analyst Application supports many different file formats, including SAS data sets, Excel spreadsheets, Lotus spreadsheets, SPSS portable files, and delimited files. You can open data files from your operating system's directories or folders and bring them into the data table by selecting **File** → **Open . . .**

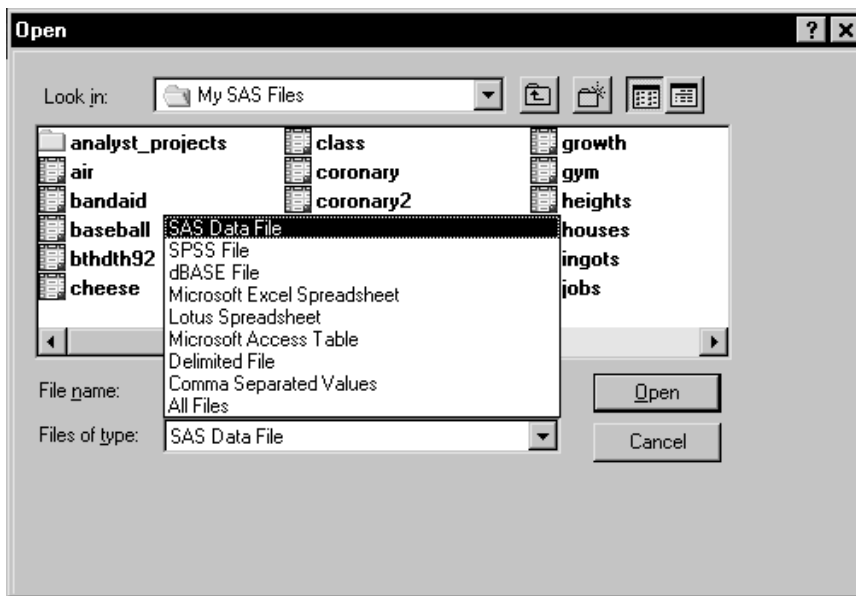


Figure 2.2. Open Dialog

In the Open dialog, select a file and click **Open** to bring the contents of the file into the data table. Non-SAS files opened into Analyst are converted into SAS data sets. The source files are not altered.

Opening Microsoft Excel Spreadsheets

The Analyst Application enables you to open spreadsheets from many Excel formats including Excel 4, Excel 5, Excel 7, and Excel 97. To bring a Microsoft Excel spreadsheet into the data table, you must ensure that rows correspond to observations and that columns correspond to variables. In addition, you can include variable names in the first row of the spreadsheet.

To open a Microsoft Excel spreadsheet in Analyst, follow these steps:

1. Select **File** → **Open** . . .
2. Click on the arrow next to **Files of type:** and select **Microsoft Excel Spreadsheet** from the list.



Figure 2.3. Open Dialog with Microsoft Excel Spreadsheet Selected

3. Go to the directory in which the spreadsheet is stored, select the file, and click **Open**.

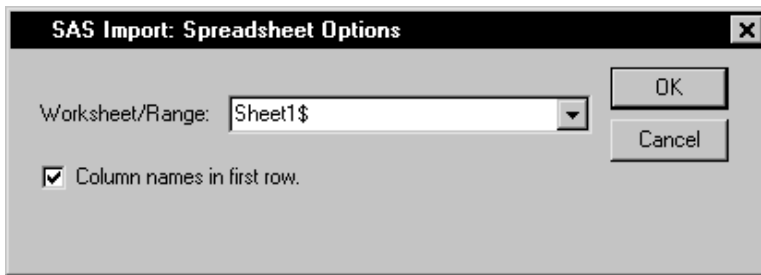


Figure 2.4. SAS Import: Spreadsheet Options Window

Figure 2.4 displays the SAS Import: Spreadsheet Options window. You can select from a list of worksheets and named ranges. Named ranges are predefined names that represent a range, such as a range of cells. The **Column names in first row** option indicates that the first row of the spreadsheet contains column names.

4. Click on the arrow next to **Worksheet/Range:** and select the worksheet or named range.
5. If the first row of the spreadsheet does not contain variable names, deselect **Column names in first row**.
6. Click **OK** to open the spreadsheet into the data table.

The screenshot shows the SAS Analyst application window titled 'Analyst: [new project]'. On the left is a project tree with 'New Project', 'student Analysis', and 'student'. The main window displays a data table titled 'student (Browse)'. The table has the following data:

	name	sex	age	height	weight
1	Alice	F	13	56.5	84
2	Becka	F	13	65.3	98
3	Gail	F	14	64.3	90
4	Karen	F	12	56.3	77
5	Kathy	F	12	59.8	84.5
6	Mary	F	15	66.5	112
7	Sandy	F	11	51.3	50.5
8	Sharon	F	15	62.5	112.5
9	Tammy	F	14	62.8	102.5
10	Alfred	M	14	69	112.5
11	Duke	M	14	63.5	102.5
12	Guido	M	15	67	133
13	James	M	12	57.3	83
14	Jeffrey	M	13	62.5	84
15	John	M	12	59	99.5
16	Philip	M	16	72	150
17	Robert	M	12	64.8	128
18	Thomas	M	11	57.5	85
19	William	M	15	66.5	112

Figure 2.5. Data Table with Data from a Microsoft Excel Spreadsheet

Opening Delimited Files

The Analyst Application also provides access to data contained in delimited text files. Text files typically contain variable names on the first line and observations on following lines. Each variable name and data value is separated by a comma, semicolon, tab, or other delimiter. Figure 2.6 displays a text file that contains data with values separated by commas.

```
name,sex,age,height,weight
Alice,F,13,56.5,84
Becka,F,13,65.3,98
Gail,F,14,64.3,90
Karen,F,12,56.3,77
Kathy,F,12,59.8,84.5
Mary,F,15,66.5,112
Sandy,F,11,51.3,50.5
Sharon,F,15,62.5,112.5
Tammy,F,14,62.8,102.5
Alfred,M,14,69,112.5
Duke,M,14,63.5,102.5
Guido,M,15,67,133
James,M,12,57.3,83
Jeffrey,M,13,62.5,84
John,M,12,59,99.5
Philip,M,16,72,150
Robert,M,12,64.8,128
Thomas,M,11,57.5,85
William,M,15,66.5,112
```

Figure 2.6. Delimited File with Comma-Separated Values

To open data from a text file, follow these steps:

1. Select **File** → **Open . . .**
2. Click on the arrow next to **Files of type:** and select **Delimited File** from the list.
3. Go to the directory in which the text file is stored, select the file, and click **Open**.

Once you have selected a text file to open, you can specify how the file is delimited in the SAS Import: Delimited File Options window.

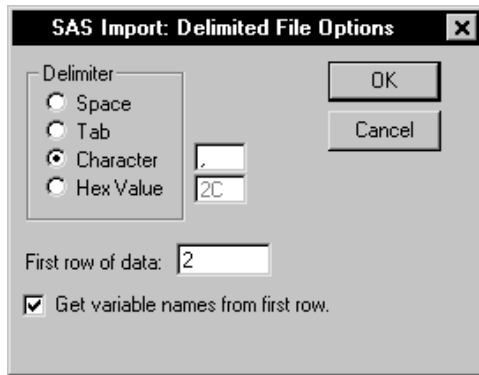


Figure 2.7. Delimited File Options Window

4. Select the type of delimiter in the **Delimiter** box. If the text file is not space- or tab-delimited, you can specify a custom delimiter such as the comma, colon, or semicolon by selecting **Character** and typing the delimiter in the field.
5. Specify the row number that contains the first row of data. The default row number is 2, which is appropriate for files that contain variable names in the first row.
6. Select **Get variable names from first row** if the first row of the file contains variable names.
7. Click **OK** to open the data into the data table.

Opening SPSS Portable Files

To open an SPSS portable file into Analyst, follow these steps:

1. Select **File** → **Open . . .**
2. Click on the arrow next to **Files of type:** and select **SPSS File** from the list.
3. Go to the directory in which the SPSS file is stored and select the file.
4. Click **Open** to open the data into the data table.

Opening SAS Files

You can bring SAS data sets or data views into the Analyst data table by selecting **File** → **Open By SAS Name . . .**

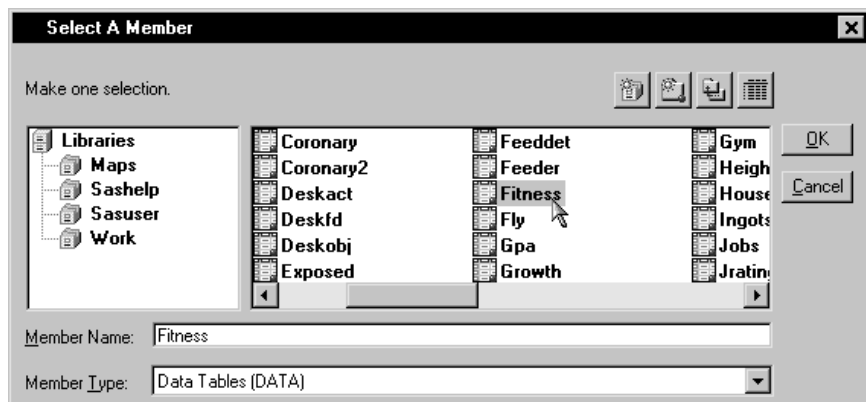


Figure 2.8. Select A Member Dialog

Select a SAS library from the list of **Libraries** and select a member. Click **OK** to bring the contents of the SAS data set or data view into the data table.

Using the Query Window

You can use the Query window to reduce the number of variables that you load into the data table. You can also use the Query window to bring more than one data set into the data table, as well as write SQL queries to filter the data.

Opening a New Query

You can use the Query window to bring selected columns of data from one or more SAS data sets into the data table. The Query window opens a view of the data set that cannot be edited. You can, however, save the view as a SAS data set that you can edit. To save the view as a SAS data set, select **File** → **Save As By SAS Name . . .**

Select **File** → **Open With New Query . . .** to open the SQL QUERY TABLES window. Select one or more tables to use in your query and click on the right arrow.

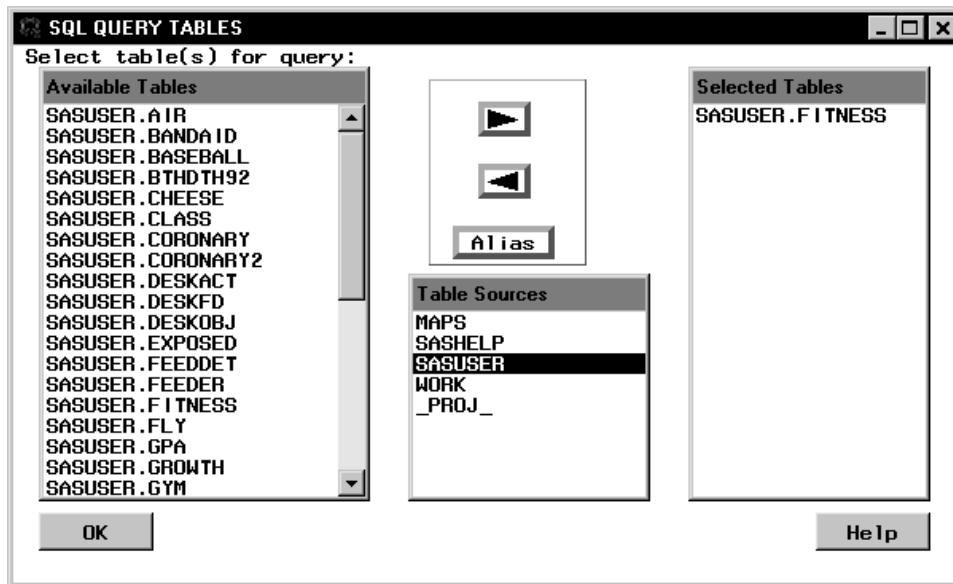


Figure 2.9. SQL QUERY TABLES Window

Click **OK** to display the SQL QUERY COLUMNS window. Select the columns that you want to include in the query and click on the right arrow.

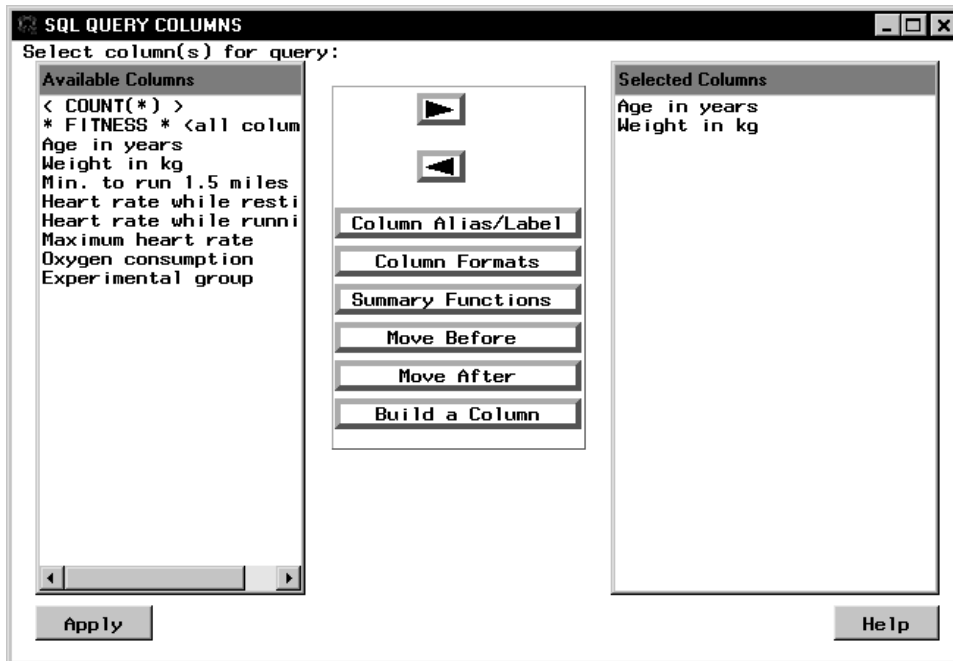


Figure 2.10. SQL QUERY COLUMNS Window

Select **File** → **Close** to exit the Query window and open the data view into the Analyst data table.

The query is added as a node to your project tree, and the selected columns are brought into the data table. The name of the query node is generated by Analyst in the form `QUERYnnnn`.

Caution: If you select the Analyst window while in the Query window, the resulting query is not returned to Analyst.

Saving and Opening an Existing Query

Once you have used the Query window to create views of SAS data, you can bring these views into Analyst.

To create a query to use later, prepare your query in the Query window, and select **File** → **Save Query** → **Save as QUERY to Include later** in the SQL QUERY COLUMNS window. Select the SAS library, catalog, and library member name.

To open a saved query in Analyst, select **File** → **Open With Existing Query** ... The Open with Existing Query window searches for saved queries in all available SAS libraries.

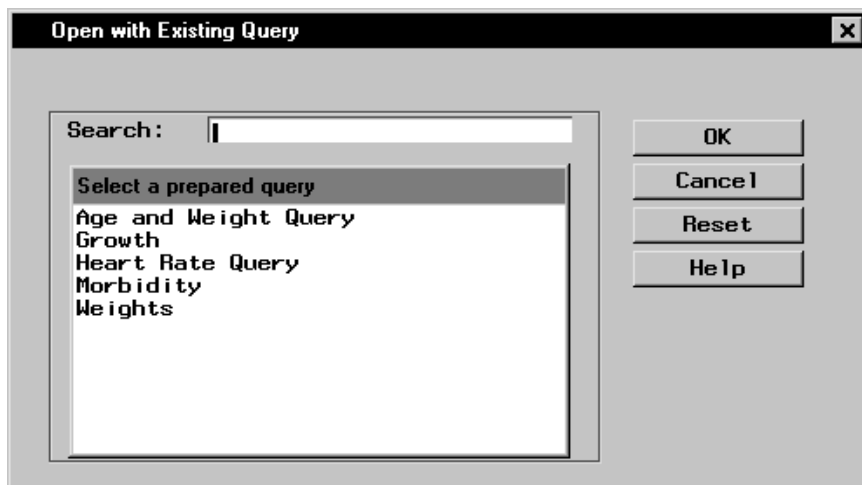


Figure 2.11. Open with Existing Query Window

You can also use the Query window to apply an SQL query to your data. Refer to the Query window documentation for more information.

Modifying Tables

When you have brought your data into the Analyst data table, you can change the organization and apply calculations to the data. You must be in Edit or Shared Edit mode to make modifications to the data table.

Viewing and Editing Data

To prevent changes to a table while you are viewing it, select **Edit** → **Mode** → **Browse**.

To make changes to the table, select **Edit** → **Mode** → **Edit**. While you are in Edit mode, no one else is able to make changes to the table.

To allow more than one person to make concurrent changes to the table, select **Edit** → **Mode** → **Shared Edit**. The record you are editing is locked while you are editing it, but other users can make changes to other records in the table.

When you are in Edit or Shared Edit mode, you can make changes to the data table by selecting a cell and typing in it.

Working with Columns

You can perform several operations on data table columns by selecting items from a pop-up menu. To display the pop-up menu for a column, select the column and click the right mouse button.

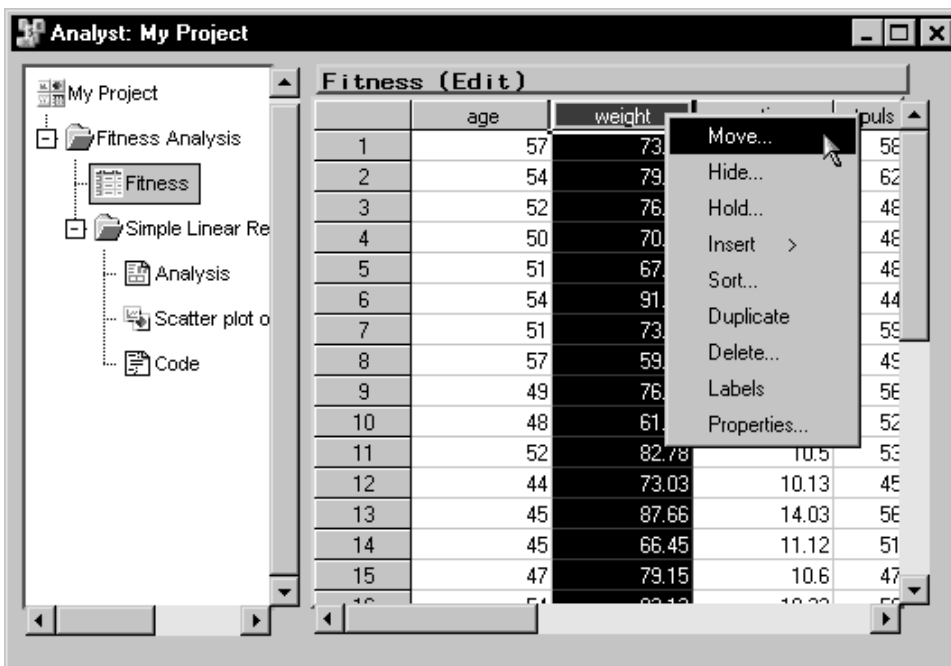


Figure 2.12. Column Pop-up Menu

These items are also available from the **View**, **Edit**, and **Data** menus.

Moving Columns

You can move columns by selecting one or more columns and selecting **Move . . .** from the pop-up menu to display the Move Columns dialog.

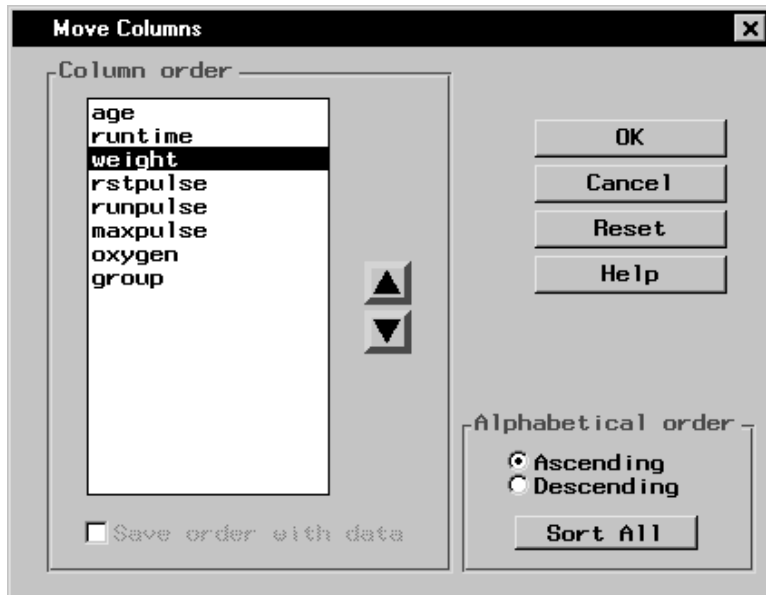


Figure 2.13. Move Columns Dialog

To move a column, select it in the **Column order** list, then click on the arrows to move it to the appropriate spot. Sort the columns by selecting **Ascending** and **Descending** under the **Alphabetical order** heading. Click on the **Sort All** button to sort the columns.

Select **Save order with data** to save this order with the data file. You must be in Edit mode to save the order with the data file.

Click **OK** when the columns are in the desired order.

Hiding Columns

To hide a column or columns from displaying in the data table, select the columns and select **Hide . . .** from the pop-up menu to display the Hide Columns dialog. Hidden columns are still used in an analysis unless you specify that they be excluded.

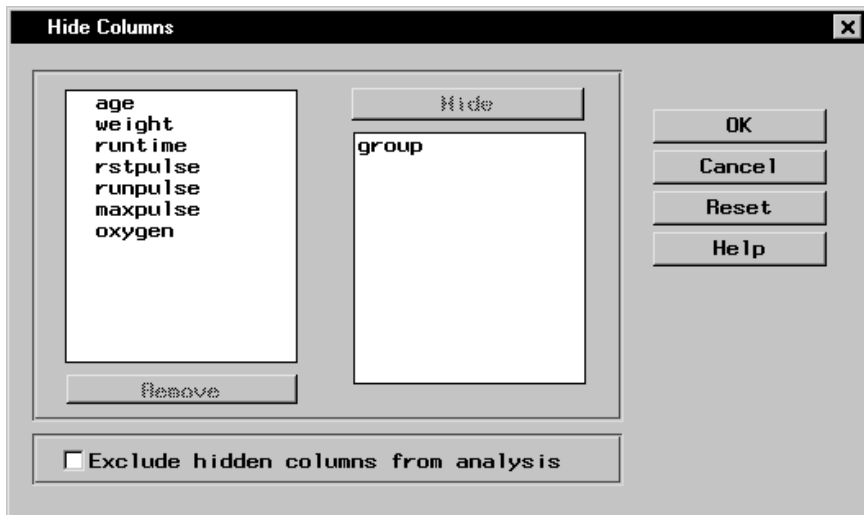


Figure 2.14. Hide Columns Dialog

To hide columns, select the desired columns and click on the **Hide** button.

To unhide columns, select the desired columns and click on the **Remove** button.

Select **Exclude hidden columns from analysis** to specify that the hidden columns be unavailable for Analyst tasks.

Holding Columns

To hold a column and all the columns to the left of it in place while you scroll through the columns in the data table, select a column, and select **Hold ...** from the pop-up menu to display the Hold Columns dialog.

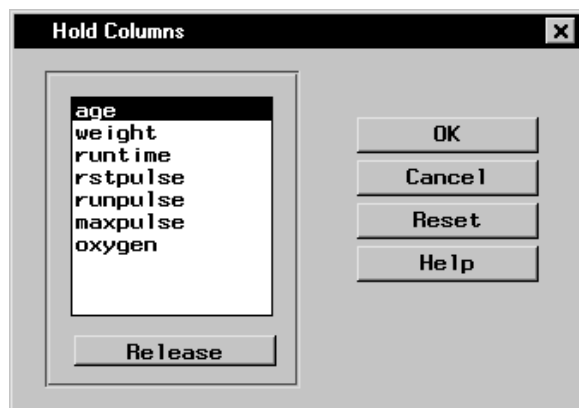


Figure 2.15. Hold Columns Dialog

Select a column from the column list and click **OK** to hold it.

Select a held column from the column list and click on the **Release** button to release it.

Inserting Columns

To insert one or more columns, select a column and select **Insert** from the pop-up menu. Then select the column type **Character** or **Numeric**. The new column is inserted to the left of the selected column. If you select more than one column, columns equal to the number you have selected are inserted to the left of the first column. If no column is selected, the new column is added to the end of the table.

You must be in Edit mode to insert columns.

Sorting Columns

Select a column and select **Sort . . .** from the pop-up menu to display the Sort dialog. Sort the rows in the data table by the selected column's values.

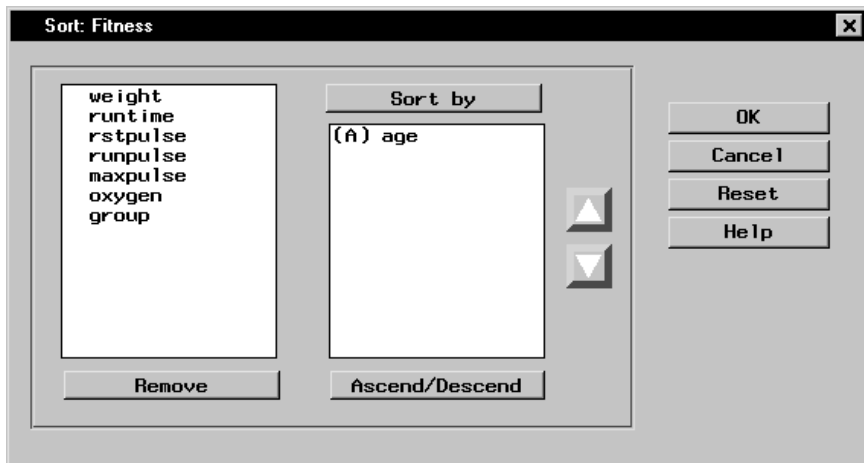


Figure 2.16. Sort Dialog

Select columns from the candidate list and click on the **Sort by** button to specify the column values to use in sorting.

Use the up and down arrows next to the **Sort by** list to specify the desired column sort order.

Select a variable in the **Sort by** list and click on the **Ascend/Descend** button to sort the rows in the data table in ascending or descending alphabetical order of column values. The rows are sorted in ascending order by default. You must be in Edit mode to sort columns.

Duplicating Columns

To duplicate one or more columns, select a column and select **Duplicate** from the pop-up menu. The duplicated column is inserted to the left of the selected column. If you select more than one column, each column is duplicated to the left of the first selected column.

You must be in Edit mode to duplicate columns.

Deleting Columns

To delete a column, select the column and select **Delete . . .** from the pop-up menu to display the Delete Items dialog.

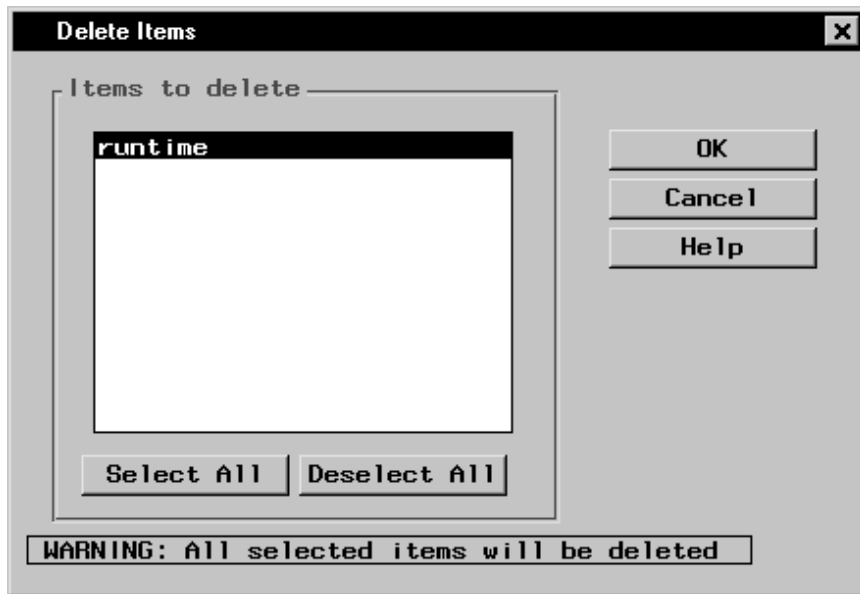


Figure 2.17. Delete Items Dialog

Select the columns that you want to delete and click **OK**. To avoid deleting any columns, deselect all columns or click on the **Cancel** button.

You must be in Edit mode to delete columns.

Displaying Variable Labels

You can switch between displaying variable names as column headings in the data table and displaying labels as column headings in the data table by selecting a column and selecting **Labels** from the pop-up menu.

Column Properties

Select a column and select **Properties . . .** from the pop-up menu to display the Column Properties dialog.

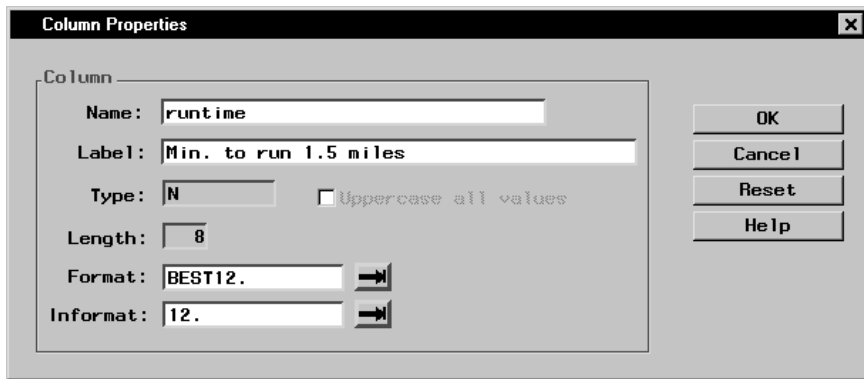


Figure 2.18. Column Properties Dialog

The Column Properties dialog displays the name, label, type (numeric or character), length, format, and informat of the selected column. If the data table is in edit mode, you can change the name, label, format and informat for the variable that the column represents. Otherwise, you can only view the information.

Working with Rows

You can add, duplicate, and delete rows. To display the pop-up menu for a row, select the row and click the right mouse button.

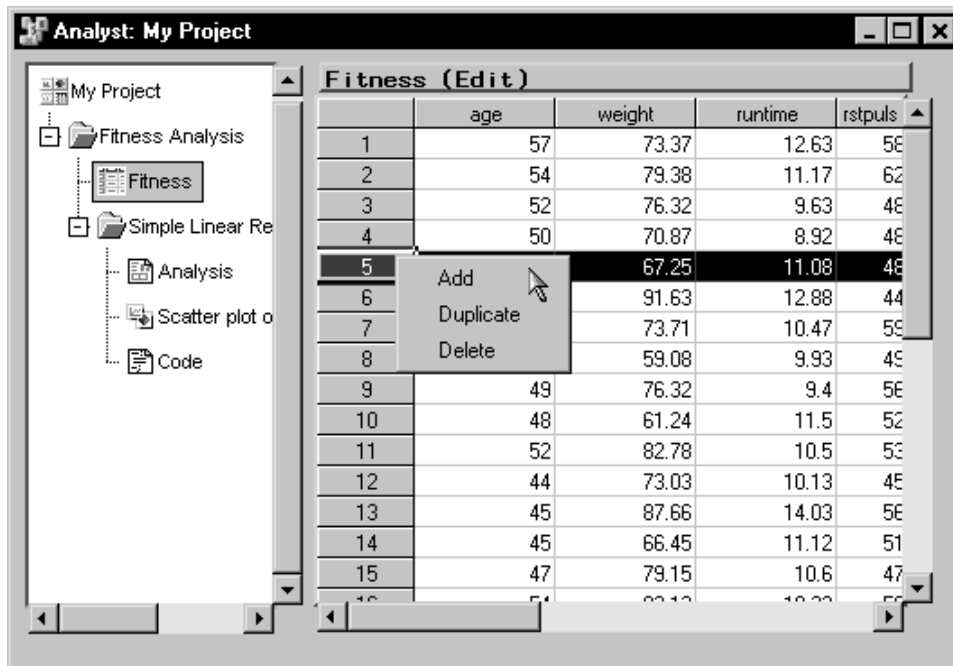


Figure 2.19. Row Pop-up Menu

These items are also available from the **Edit** menu.

Adding a Row

To add a row to the end of the table, select a row and select **Add** from the pop-up menu.

You must be in Edit or Shared Edit mode to add a row.

Duplicating a Row

To duplicate a row, select the row, and select **Duplicate** from the pop-up menu.

You must be in Edit or Shared Edit mode to duplicate a row.

Deleting a Row

To delete a row, select the row, and select **Delete** from the pop-up menu.

You must be in Edit or Shared Edit mode to delete a row.

Typing in Data Values

You can change the data in a cell by selecting the cell and typing in the new value.

The Data Menu

From the **Data** menu, you can filter, sort, summarize, concatenate, merge, transpose, and apply calculations to your data.

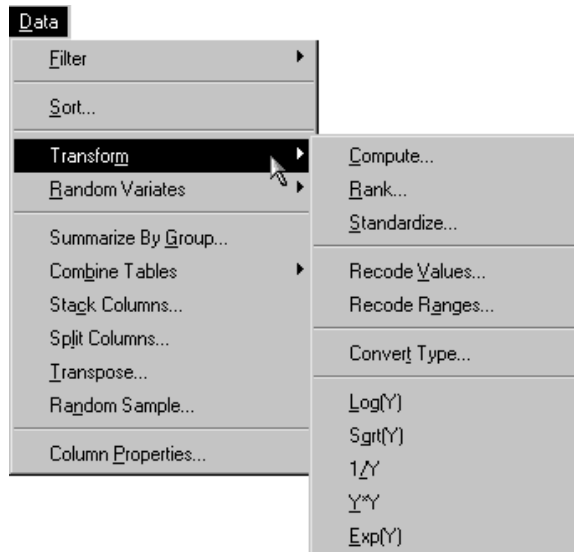


Figure 2.20. Data Menu

The following topics describe a few important **Data** menu tasks. Two other important **Data** menu tasks, stacking columns and recoding values, are described and used in Chapter 16. **Data** menu tasks not described in this book include ranking and standardizing data, converting the values of a variable from numeric to character or character to numeric, producing a summary data set, transposing a data set, taking a random sample, and creating a new column that is a square, square root, reciprocal, or exponential of an existing column. Consult the Analyst online help for more information about these tasks.

Computing New Variables

You can specify an expression for creating a new column in the data table. Select **Data** → **Transform** → **Compute ...** to display the Compute dialog.

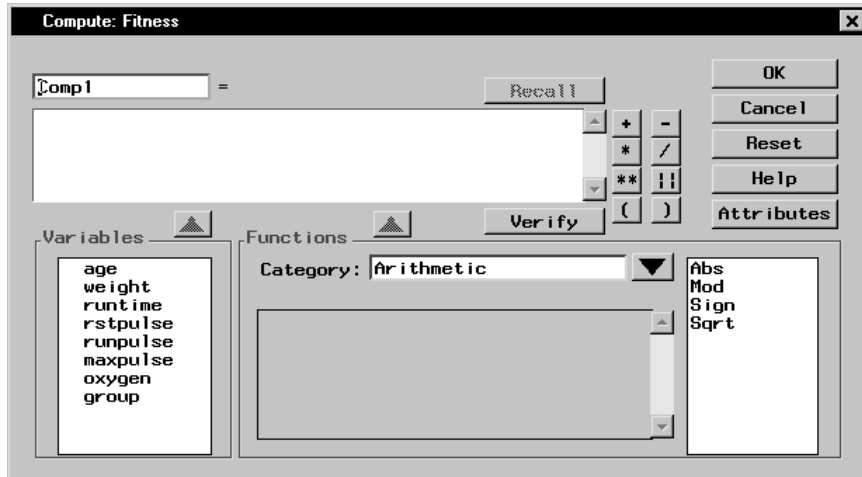


Figure 2.21. Compute Dialog

Type the expression in the box under the new column name, or use a combination of typing and selecting variables, functions, and operators. A numeric column is created by default.

Click on an operator at the right of the expression box to add it to the expression. You can also type in an operator.

To add a variable to the expression, double-click on the variable name or select it and click on the arrow above the **Variables** list. You can also type in a variable name.

Functions are organized into categories. Select a category by clicking on the arrow next to the **Category:** field. Review information about a function by selecting it. This information appears in the box to the left of the function list. Add a function to the expression by double-clicking on it or selecting the function and clicking on the arrow above the **Functions** box. You can also type in any SAS function. The functions displayed are a subset of all SAS functions.

By default, the column name is $\text{Comp}N$, where N is the lowest number that produces a unique name. Replace the default column name by typing in one of your choosing.

The **Attributes** button displays the Column Attributes dialog, in which you can specify the name, label, and other attributes for your computed column. If you want to create a column with character values, use this dialog to set the variable type to character. Numeric is the default variable type.

Click on the **Verify** button to make sure your expression is valid. Function parameters are not verified, and the variable type is not taken into account.

If you have already used the Compute dialog to add a column to the current data table, click on the **Recall** button to fill the expression box and the Column Attributes dialog with the most recent expression and attributes.

Recoding Ranges

In performing an analysis, you may want to work with a particular factor as a classification variable rather than as a continuous variable. Recoding ranges enables you to create a new variable with discrete levels based on the ranges of values of an existing variable.

Select **Data** → **Transform** → **Recode Ranges . . .** to designate the column whose ranges you want to use.

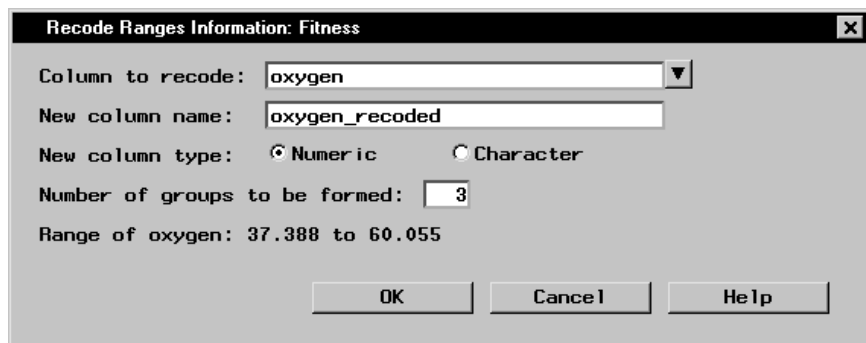


Figure 2.22. Recode Ranges Information Dialog

Click on the arrow next to **Column to recode:** to select a numeric column from the current data table.

Specify the name of the new column that will contain the new data values. The new column has a default name, which you can type over with a name of your choosing.

The new column type can be character or numeric. If you select **Character**, you can use a character string to correspond to each range.

You must specify the number of groups that the current range will be divided into.

To help you decide how many groups to form, the range of the existing column is displayed at the bottom of this dialog.

After you have selected a column to recode and the number of groups that you want the new variable to have, click **OK** to display a dialog in which you can specify the recoding to be performed.

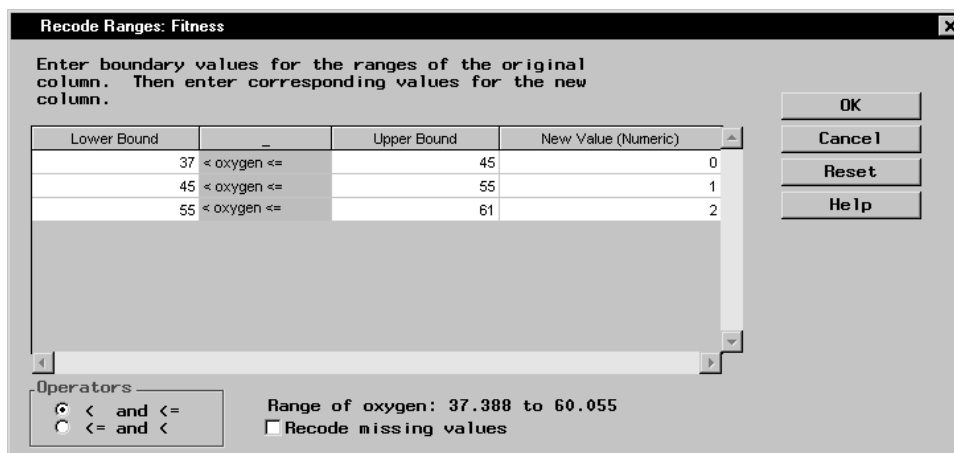


Figure 2.23. Recode Ranges Dialog

Use this dialog to substitute new values for the original ranges of the column specified in the Recode Ranges Information dialog. The number of rows in the table corresponds to the number of groups.

The **Lower Bound** is the lower boundary of a range. The **Upper Bound** is the upper boundary of a range. The upper boundary is automatically transferred to the next range's lower boundary. Only the first $N - 1$ cells of the **Upper Bound** need to be filled in.

Type in a character or numeric value to correspond to the range. If you do not type in a value, a missing value (blank) is assigned to the range.

Under **Operators**, you can control what happens to column values that fall on a range boundary. The first option groups these values with smaller values; the second option groups these values with larger values.

If you select **Recode missing values** and the lowest lower bound is left blank, missing values are placed in the lowest new group. If you don't select **Recode missing values**, missing values remain missing.

The range of the existing column is displayed at the bottom of this dialog.

Computing Log Transformations

Select a column and select **Data** → **Transform** → **Log(Y)** to calculate the natural logarithm of the values in the selected column. A new column containing the logarithm of each value is created. Other transformations, such as exponentiating and taking a square root, are also available from the **Transform** item in the **Data** menu.

Generating Random Variates

To generate random variates, select **Data** → **Random Variates**, and then select the distribution to be used for generating the random variates.

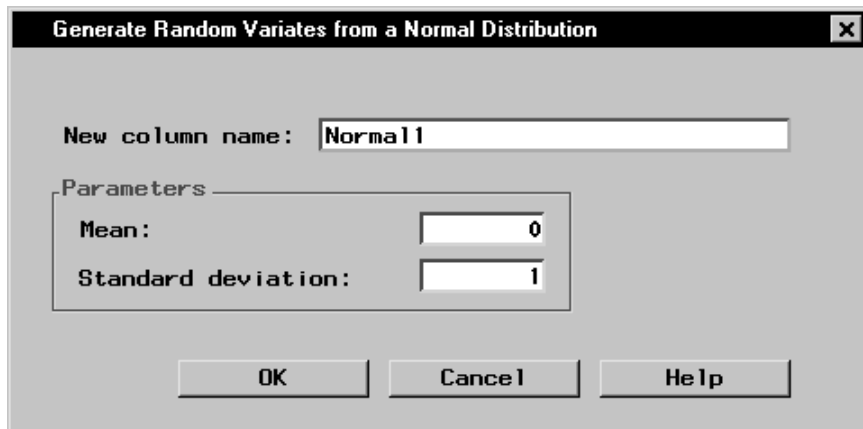


Figure 2.24. Generate Random Variates from a Normal Distribution Dialog

You can leave the new column name as the default or specify a new column name in the **New column name:** field.

Enter a value for each parameter. Click **OK** to create a column with the specified distribution.

Combining Tables

You can concatenate the rows or merge the columns from two or more tables.

Concatenating Tables by Rows

To vertically join tables by concatenating their rows, select **Data** → **Combine Tables** → **Concatenate By Rows . . .**

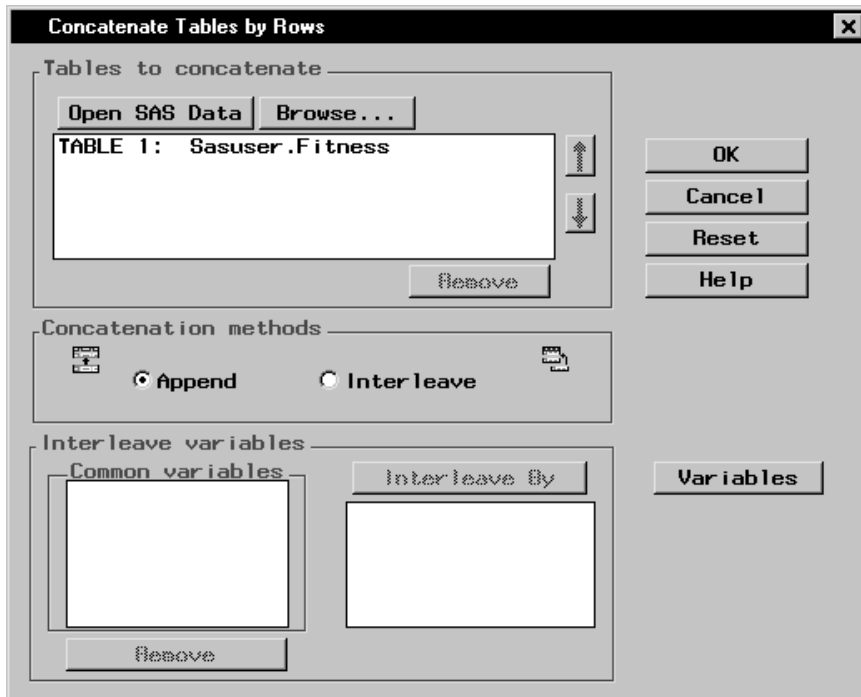


Figure 2.25. Concatenate Tables by Rows Dialog

Click on the **Open SAS Data** button to open SAS data tables. Click on the **Browse** button to select a file from your operating system's directory.

To change the order of the tables that you are appending, select a table and click on the up or down arrow to move the table one level up or one level down in the list.

To remove a table from the list, select the table and click on the **Remove** button.

Select **Append** to append the tables that you have selected. If you have chosen to append the tables, you can change the order of tables in the list. When you append tables, the rows of the first table are followed by the rows of the succeeding tables.

Select **Interleave** to interleave the rows of the tables.

Common variables among the tables you have chosen to concatenate are listed in the **Common variables** list. Select a common variable and click on the **Interleave By** button to add it to the list of variables to interleave by. When you interleave table rows, the rows of the table are combined and ordered according to the common variables that you have selected.

Select a variable and click on the **Remove** button to remove it from the list of **Interleave By** variables.

Click on the **Variables** button to choose the variables that you want to keep in your concatenation. By default, when you concatenate by rows, the resulting table contains only the common variables.

Merging Tables by Columns

To join tables horizontally by merging their columns, select **Data** → **Combine Tables** → **Merge By Columns** . . .

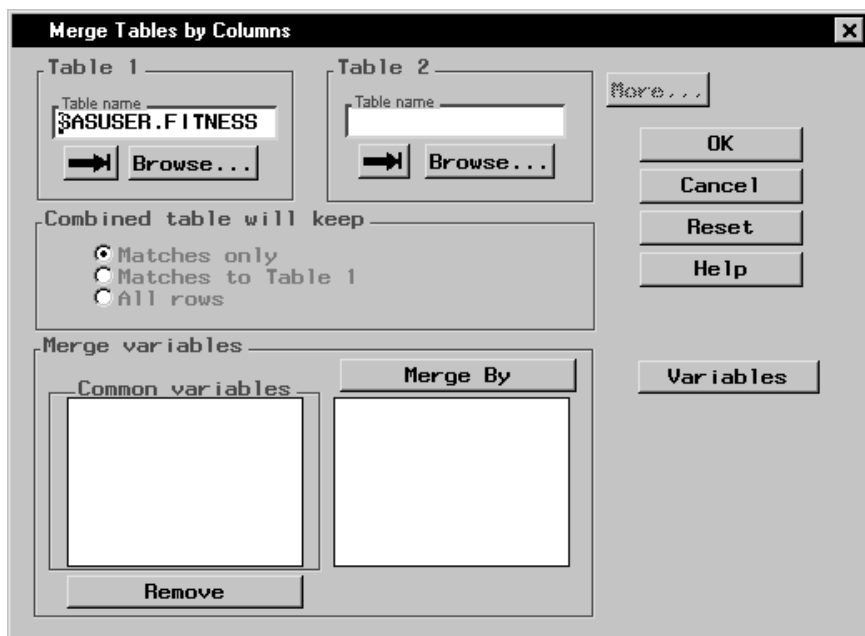


Figure 2.26. Merge Tables by Columns Dialog

In the Merge Tables by Columns dialog, you can select data tables to merge and the variables you will keep in the merged table. You can merge up to six tables. Type the name of the table in the **Table name** field, click on the arrow to select a SAS data table, or click on the **Browse** button to select a file from a directory.

Click on the **More** button to merge more than two tables.

You can choose whether the new combined table displays only matching rows, rows that match those in **Table 1**, or all rows.

Common variables among the tables you have chosen to combine are listed in the **Common variables** list.

Select a common variable and click on the **Merge By** button to add it to the list of variables to combine the tables by.

Select a variable and click on the **Remove** button to remove it from the list of **Merge By** variables.

Click on the **Variables** button to choose the variables that you want to keep in your merged table. By default, when you merge by columns, the resulting table contains all the variables.

Splitting Columns

You can split selected columns to output a new column whenever the value of a variable changes. Select **Data** → **Split Columns** . . . to display the Split Columns dialog.

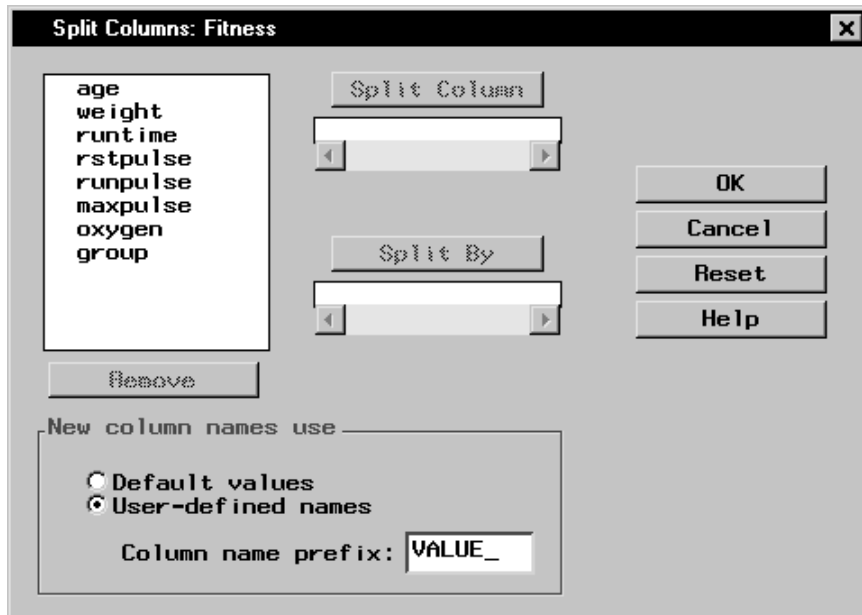


Figure 2.27. Split Columns Dialog

Select a column from the candidate list and click on the **Split Column** button to designate a column to split.

Select a variable from the candidate list and click on the **Split By** button to designate a variable to split the first column by.

You can use the default names or type in new names for the split column if the type of the **Split By** column is character. Numeric columns do not have default names.

Subsetting Data

You can view a subset of your data by selecting **Data** → **Filter** → **Subset Data** . . . In the Subset dialog, you can apply a Where clause to your data.

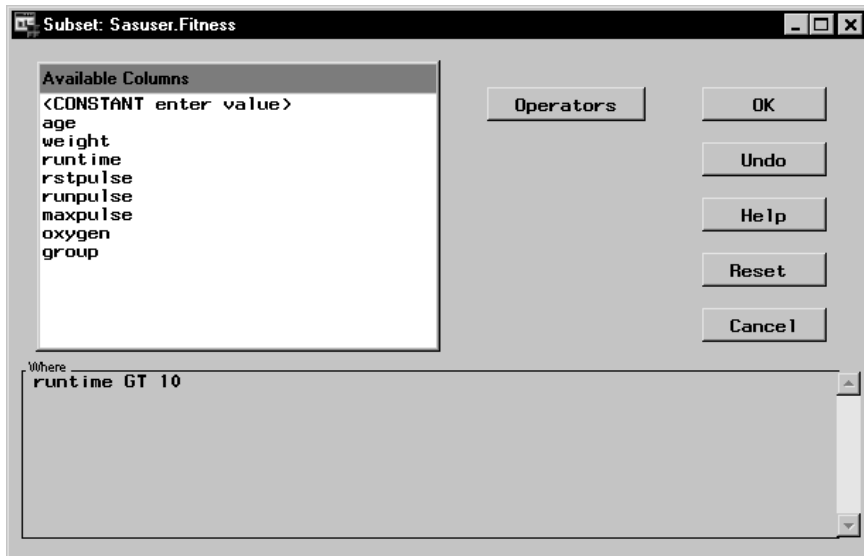


Figure 2.28. Subset Dialog

All subsequent analyses are run on the subset of the data.

Select **Data** → **Filter** → **None** if you do not want to subset your data, or if you want to remove an existing subset. **None** is the default.

To save the subsetted data, select **File** → **Save As . . .** If you select **File** → **Save**, the entire data set, and not just the subset, is saved.

Example: Modifying a Data Table

In this example, you combine selected columns from two data sets and edit them in a new data table. This example assumes that you have no data set loaded in the Analyst data table. If you do, select **File** → **New** before starting the example.

Each data set contains the results of taste tests of breakfast cereal. Each cereal is rated by several judges, on a scale of 1 to 5. After you concatenate the two data sets, you split the rating column by sample number.

Open Data Sets for Editing

To select the data sets and bring them into a new Analyst data table, follow these steps:

1. Select **Tools** → **Sample Data** . . .
2. Select JRating1 and JRating2.
3. Click **OK** to create the sample data sets in your Sasuser directory.
4. Select **Data** → **Combine Tables** → **Concatenate By Rows** . . .
5. Click on the **Open SAS Data** button. Select Sasuser from the list of **Libraries**. Select Jrating1 from the list of members. Click **OK**.
6. In the Concatenate Tables by Rows dialog, click on the **Open SAS Data** button again. Select Sasuser from the list of **Libraries**. Select Jrating2 from the list of members. Click **OK**.

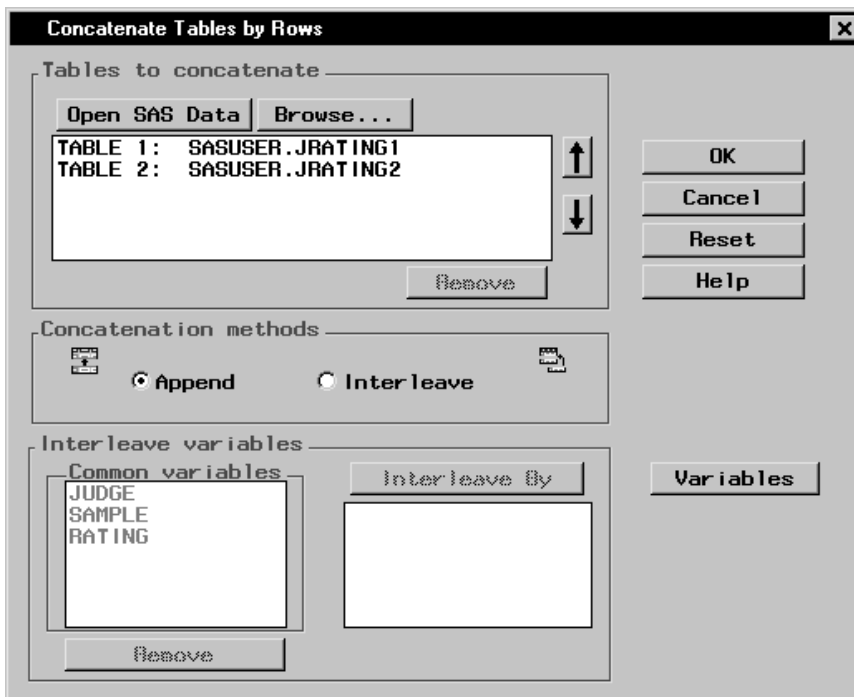


Figure 2.29. Concatenate Tables by Rows Dialog

7. Select **Interleave**.
8. Select **JUDGE** and **SAMPLE** from the list of **Common variables** and click on the **Interleave By** button to use **JUDGE** and **SAMPLE** as the variables by which the rows of the data tables will be combined.

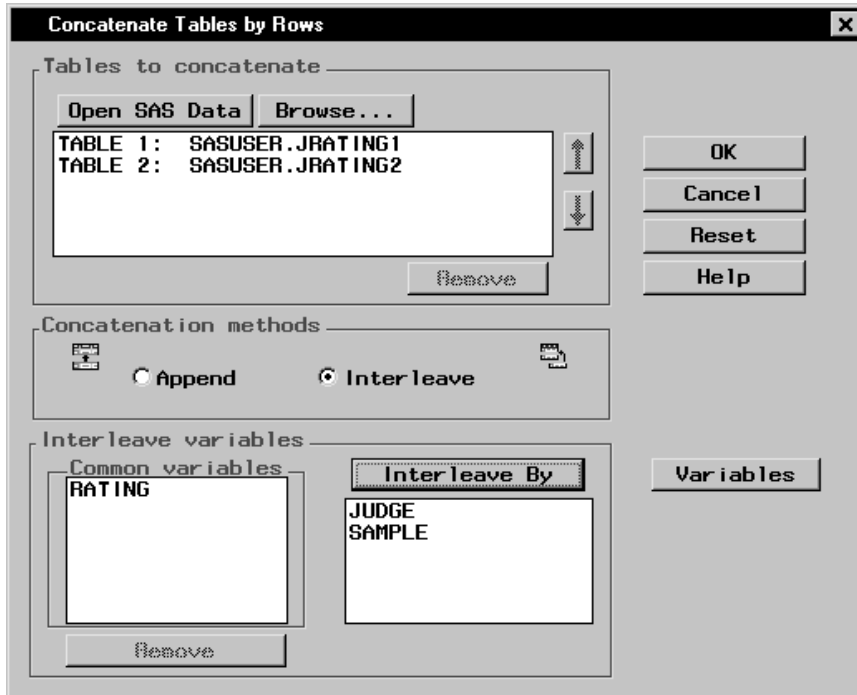


Figure 2.30. Interleave by Common Variables

9. Click on the **Variables** button to select the columns to include in the new data table.

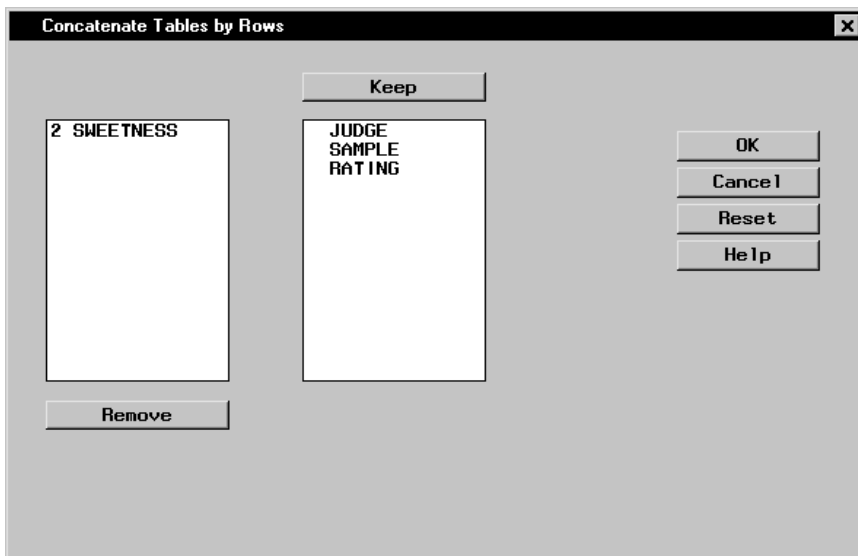


Figure 2.31. Selected Columns for New Data Table

Only those columns common to both data tables are kept by default, as shown in the **Keep** list. The column **SWEETNESS** is not kept as part of the resulting table. The number preceding the column name **SWEETNESS** represents the data table to which this variable belongs.

10. Click **OK** to return to the Concatenate Tables by Rows dialog. Click **OK** again to display the new combined data table in a results window.

	Judge	Sample	Rating
1	A23	1	5
2	A23	2	4
3	A23	3	4
4	A23	4	2
5	B37	1	4
6	B37	2	3
7	B37	3	3
8	B37	4	1
9	C12	1	5
10	C12	2	4
11	C12	3	2
12	C12	4	3
13	D77	1	3
14	D77	2	5
15	D77	3	4

Figure 2.32. Combined Table

- To modify the combined table, you need to open it in the Analyst data table. Close the results window. Select the **Combined Table** node in the project tree and click the right mouse button to display the pop-up menu. Select **Open**.

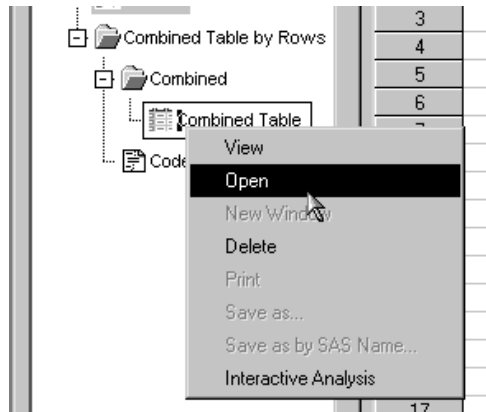


Figure 2.33. Opening the Combined Table

- By default, data tables are opened in Browse mode. Select **Edit** → **Mode** → **Edit** to change the mode from Browse to Edit.

Modify the Data

In the data table you can modify the data by splitting columns so that a new column is generated when the value of a variable changes. You can also subdivide data into ranges.

To subdivide the data into ranges and split the columns according to sample number, follow these steps:

- Divide the taste test results into three categories: good, mediocre, and bad. Select **Data** → **Transform** → **Recode Ranges . . .**
- Click on the arrow next to **Column to recode:** and select **Rating**. Type **taste_test** in the **New column name:** field. Change **New column type:** to **Character**. Type **3** in the **Number of groups to be formed:** field to designate three taste test ranges.

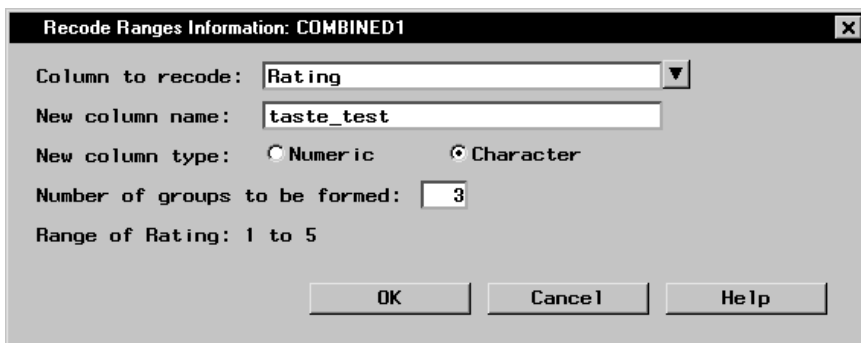


Figure 2.34. Recode Ranges Information Dialog

Click **OK** to specify the new ranges.

- In the first row, type **0** in the **Lower Bound** column and **2** in the **Upper Bound** column. Type **bad** in the **New Value** column.

4. When you press the Enter key, the upper bound value of the previous row is automatically filled in as the lower bound of the current row. Type **3** in the **Upper Bound** column and **mediocre** in the **New Value** column.
5. Move your cursor to the third row. Type **5** in the **Upper Bound** column and **good** in the **New Value** column.

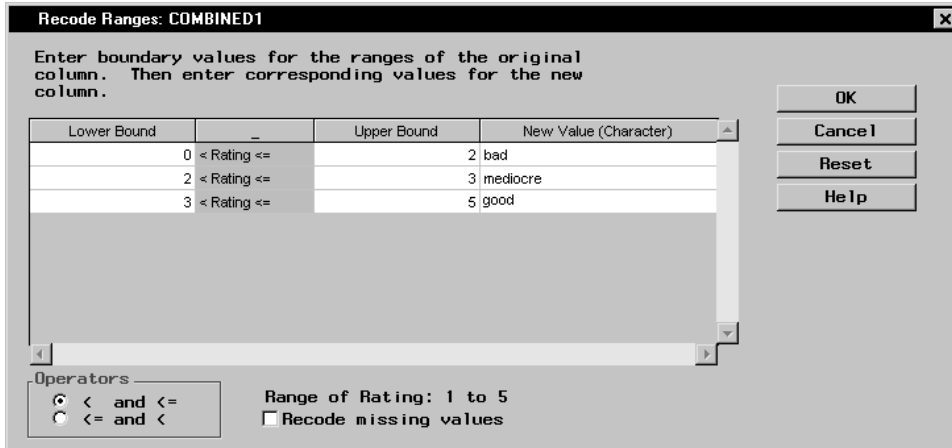
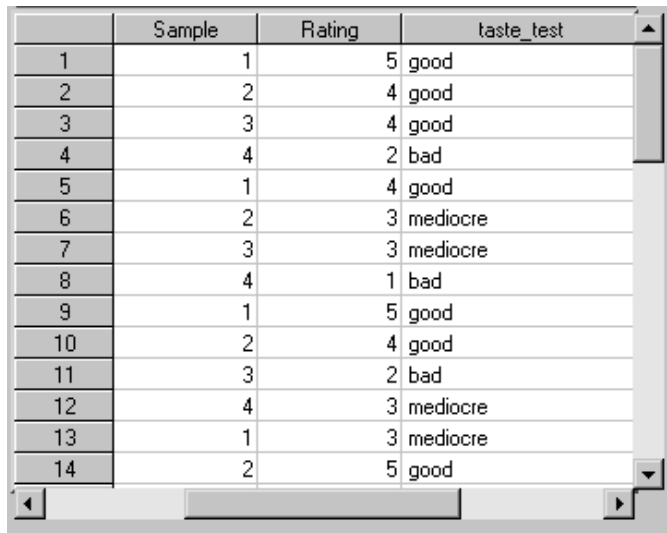


Figure 2.35. Boundary Values

6. Click **OK** to save your new boundary values.

In the new table, the new ranges are displayed in the **taste_test** column.



	Sample	Rating	taste_test
1	1	5	good
2	2	4	good
3	3	4	good
4	4	2	bad
5	1	4	good
6	2	3	mediocre
7	3	3	mediocre
8	4	1	bad
9	1	5	good
10	2	4	good
11	3	2	bad
12	4	3	mediocre
13	1	3	mediocre
14	2	5	good

Figure 2.36. Table with taste_test Column

7. Remove the **Rating** column by selecting the column and selecting **Delete ...** from the pop-up menu. Click **OK** in the Delete Items dialog.

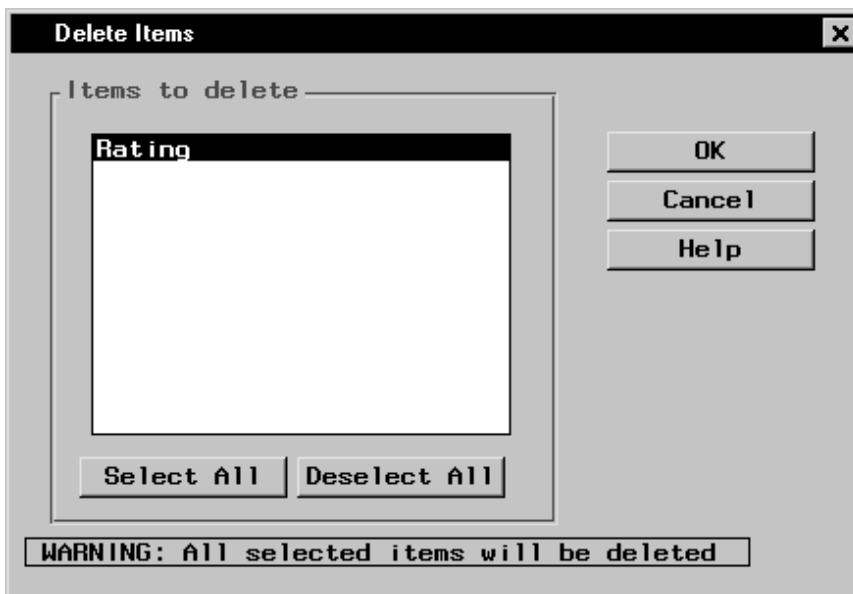


Figure 2.37. Delete Rating Column

8. You are going to split the `taste_test` column by the `Sample` column so that a taste test for each sample is displayed by judge. Select **Data** → **Split Columns** . . .
9. In the Split Columns dialog, select `taste_test` from the list and click on the **Split Column** button. Select `Sample` from the list and click on the **Split By** button.
10. Select **User-defined names** for the column names. Type `Sample_` in the **Column name prefix:** field.

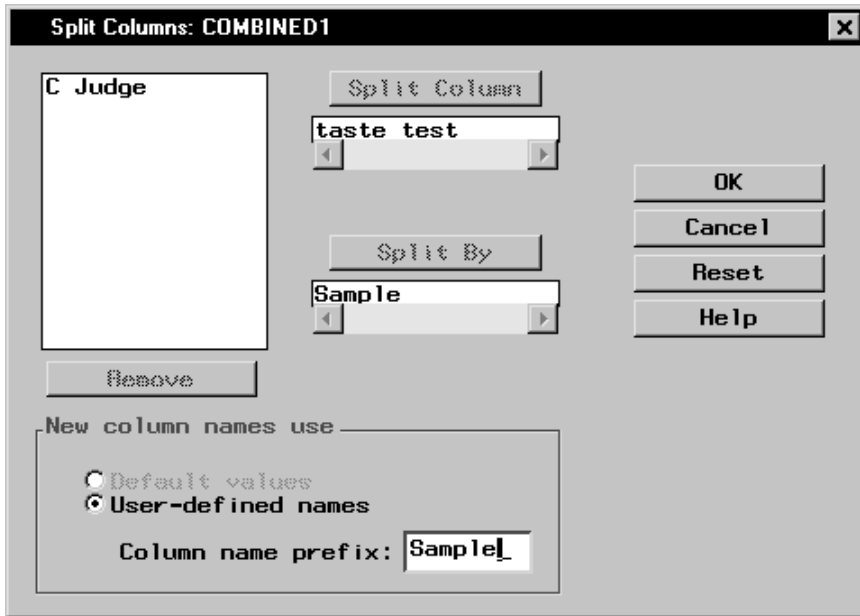


Figure 2.38. Taste_test Column Split by Sample

11. Click **OK**. The resulting table displays the results of the taste test by each participating judge.

	Judge	Sample_1	Sample_2	Sample_3	Sample_4
1	A23	good	good	good	bad
2	B37	good	mediocre	mediocre	bad
3	C12	good	good	bad	mediocre
4	D77	mediocre	good	good	bad
5	E48	good	good	mediocre	mediocre
6	R22	good	good	mediocre	bad
7	S69	good	mediocre	bad	bad
8	T15	mediocre	good	mediocre	mediocre
9	U86	good	mediocre	mediocre	bad
10	V03	good	mediocre	good	mediocre
11	W91	mediocre	bad	mediocre	bad
12	X08	good	good	good	bad

Figure 2.39. Split Columns Table

Saving and Exporting Data

Saving Data

To save changes made to the current data set, select **File** → **Save**.

Saving Data to a SAS Library

Select **File** → **Save As By SAS Name . . .** to save the current table as a SAS data set.

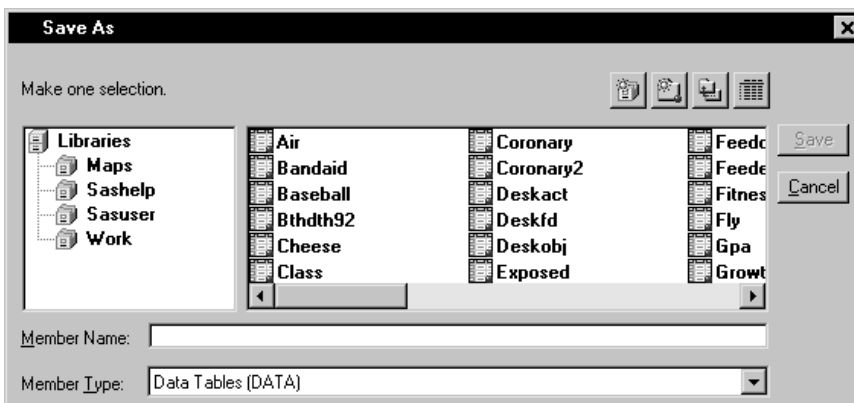


Figure 2.40. Save As Dialog

Select a library from the list of **Libraries**. Select an existing data set from the member list or type a member name for the new data set in the field next to **Member Name:**. Click on the **Save** button to save the data set. The new data set is automatically opened into Analyst.

Reserved Names

The following names are reserved by Analyst and should not be used to refer to tables.

The `_proj_` libref points to the current project library where project files are stored. This libref is dynamically assigned each time a project is opened.

A `_tmp_` libref is assigned by Analyst as needed. `_tmp_` is also used as the stem of names for temporary data sets used by Analyst, for example, `_tmp_0439`.

Exporting Data to Different File Formats

You can save files to any export format that is supported by SAS Software on your platform. For example, you can export a SAS data table to an Excel spreadsheet. Select **File** → **Save As . . .** to export a data table to a different format.

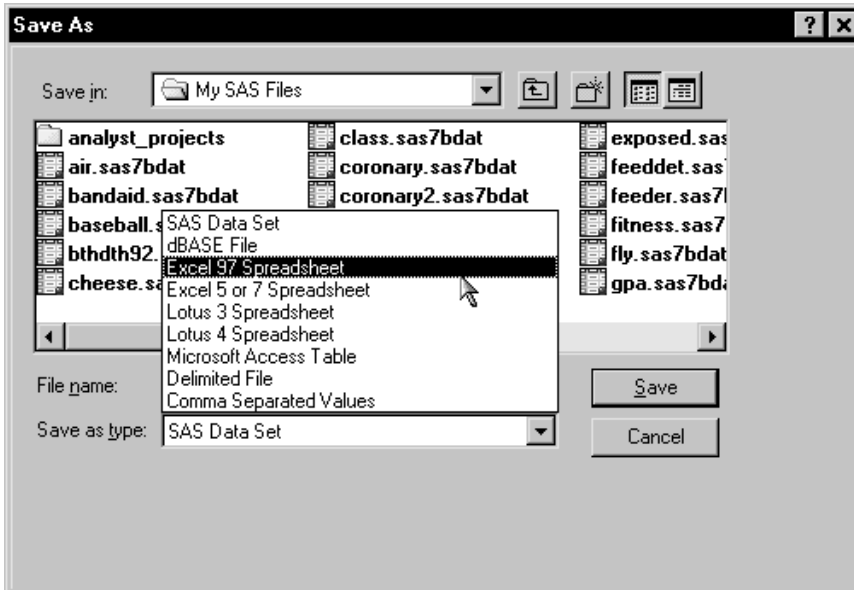


Figure 2.41. Save As Dialog

Example: Saving Data to an Excel Spreadsheet

In this example, you save data to an Excel spreadsheet.

Open a SAS Data Set

To open a SAS data set named Exposed, follow these steps:

1. Select **Tools** → **Sample Data ...**
2. Select Exposed.
3. Click **OK** to create the sample data set in your Sasuser directory.
4. Select **File** → **Open By SAS Name ...**
5. Select Sasuser from the list of **Libraries**.
6. Select Exposed from the list of members.
7. Click **OK** to bring the Exposed data set into the data table.

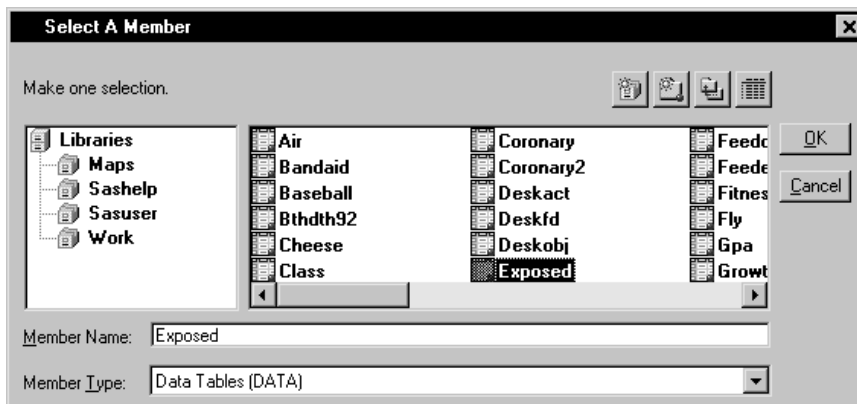


Figure 2.42. Open Exposed Data Set

Save Data as Excel Spreadsheet

To save your data table as an Excel 97 spreadsheet, follow these steps:

1. Select **File** → **Save As . . .**
2. Click on the arrow next to **Save as type:** and select **Excel 97 Spreadsheet** from the list.

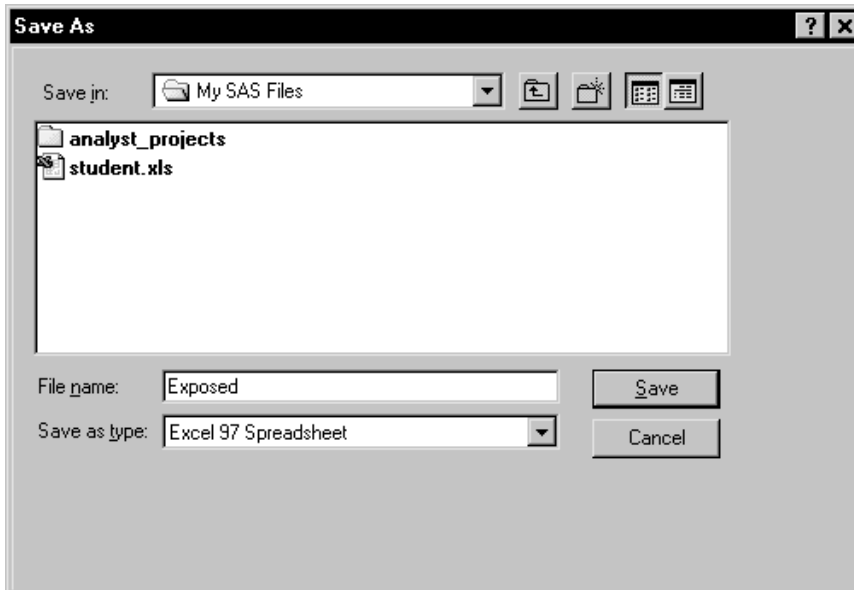


Figure 2.43. Saving as Excel 97 Spreadsheet

3. Click **Save**. Your data are saved to a Microsoft Excel 97 spreadsheet named Exposed.xls.

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