Excel is not a database system. Its strengths are in its extensive data analysis capabilities. The central section of this chapter is devoted to pivot tables. These are a very capable tool for grouping and organizing data with several parameters clearly. A feature of pivot tables is that with them data can be analyzed that are not even located in an Excel worksheet, but, for example, in an external database.

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Chapter 13

13.1 Grouping Data (Subtotals)

Introduction

Behind the rather cryptic command DATA\SUBTOTALS lies the possibility of distributing sorted data into groups, providing each group with a partial sum, and finally finishing things off with a final sum for all the data. Instead of summation, other possibilities include calculation of means, minima, and maxima.

The precondition for being able to use this command sensibly is having a column through which several associated data records can be identified. The entire database must be sorted according to this column (and perhaps by further criteria as well).

Let us begin with an example. Figure 13-1 shows a very simple database of products (example file Subtotal.xls). The database is sorted primarily by the product category (a–c) and secondarily by the quality of the product (I or II). Using the Subtotals form the data are grouped by category; at the same time, for each group the mean of the prices is computed. Internally, the worksheet function =SUBTOTAL(typ, range) is used.

![Figure 13-1](image)

Figure 13-1. The product database was grouped by category

The command SUBTOTALS not only creates groups, it automatically divides the table up according to these groups. Both the formation of groups and the subtotals can be easily deleted by clicking on the Remove All button in the SUBTOTALS form.

Normally, each time the command is executed the most recently created grouping is dissolved. If you deactivate the option REPLACE CURRENT SUBTOTALS, then Excel adds new groups to those already existing. In many cases this can be used to create multilevel groupings. However, as a rule, this attempt fails because Excel includes the subtotals of the previous group into its calculation and thus returns nonsensical results.