Sorting and Filtering Your Data: Excel’s Database Features

You hear the term database all the time, even in everyday conversation, but the concept is rarely defined. People tend to rely on a common sense understanding of databases, and that’s usually good enough—and the reality is that even Excel has found the task of deciding what it really means by database a bit troublesome. That doesn’t have to concern us, but on the other hand, since we need to use the term throughout this chapter, we’ll plunge ahead and define a database as a collection of records (i.e., rows) organized into fields, all of which are topped by titles.

And as it turns out, that’s pretty close to the common sense understanding. Thus, the very standard collection of data shown in Figure 7–1 would qualify as a database.

Pretty standard, no? Note that the first row—called a header row—contains the titles of each field, or column. And it doesn’t matter if the database contains 30,000 records or 3. Either way, it’s a database.

Databases serve as the starting point for many of the tasks users can carry out in Excel. For starters, databases can be sorted, either in numerical or alphabetical order, and either ascending or descending—that is, A to Z, or Z to A, or 1 to 100, or 100 to 1. And the same can be done with dates that you want to sort in chronological order, because remember, dates are values.

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In addition, users can pose all sorts of questions of databases, such as

- How many people work in HR?
- What’s their average salary?
- How many people in the company make more than $50,000?
- How much money did each salesperson earn each month?

In order to answer these questions, databases can be asked to produce a subset of their records—that is, only those records that meet a certain criterion or criteria that the user establishes. Excel offers a range of ways in which these kinds of questions can be asked—and answered—and we’ll look at some of them in this chapter.

And because databases depend on accurate data entry, Excel provides a set of controls on the data entry process, through which the user can at least minimize the likelihood of making mistakes. Called data validation techniques (introduced previously in Chapter 2), these are fast and easy ways to place limits on the kinds of data that can be entered in cells. You’ll learn about some of these too. But first, let’s take a look at sorting.

### Sorting Data: Instilling Order in Your Data

When I did my thing as a corporate trainer in New York, our in-house training manuals described sorting as an advanced topic. It isn’t. Spreadsheets nowadays make the job of arranging values and/or text in order an easy task. Here’s an example:

1. Enter the records from Figure 7–2 in a blank workbook, starting at cell H7 (note the header is formatted differently from the rest of the database; this will be important later).

![Figure 7–2. Out of sorts: Our workforce, ready to be sorted](image)