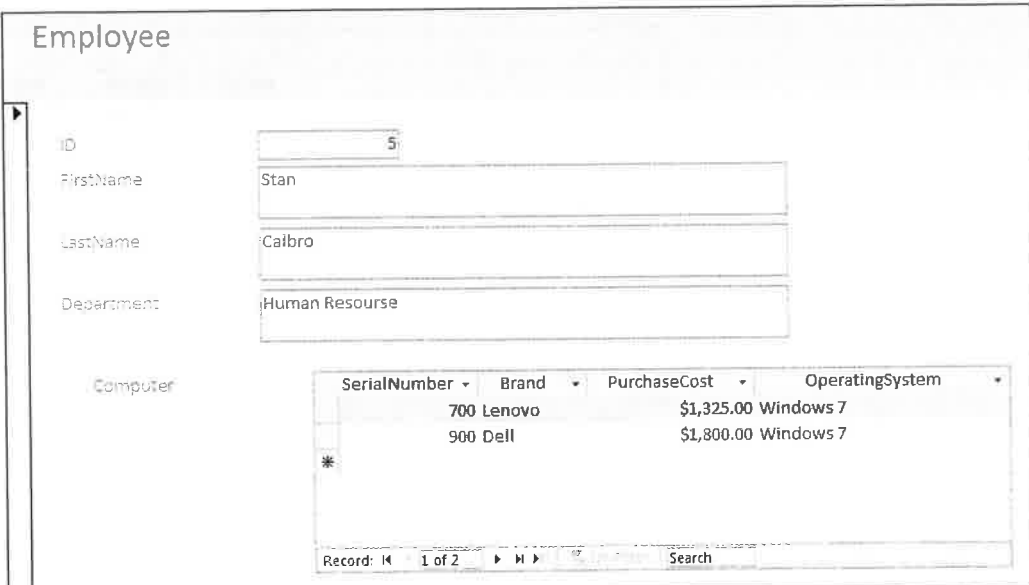e. Unfortunately, the task becomes messy at this point. You can copy the *Car Interests* column into *Make or Model of Auto*, but then you will need to straighten out the values by hand. Phone numbers will need to be copied one at a time.

f. Open the *Customer* form and manually add any remaining data from the spreadsheet into each customer record. Connect the customer to his or her auto interests.

g. The data in the finished database has much more structure than that in the spreadsheet. Explain why that is both an advantage and a disadvantage. Under what circumstances is the database more appropriate? Less appropriate?

5-3. In this exercise, you will create a two-table database, define relationships, create a form and a report, and use them to enter data and view results.

a. Download the Excel file **Ch05Ex03_U7e.xlsx**. Open the spreadsheet and review the data in the *Employee* and *Computer* worksheets.

b. Create a new Access database with the name *Ch05Ex03_Solution*. Close the table that Access automatically creates and delete it.

c. Import the data from the Excel spreadsheet into your database. Import the *Employee* worksheet into a table named *Employee*. Be sure to check *First Row Contains Column Headings*. Select *Choose my own primary key* and use the ID field as that key.

d. Import the *Computer* worksheet into a table named *Computer*. Check *First Row Contains Column Headings*, but let Access create the primary key.

e. Open the relationships window and add both *Employee* and *Computer* to the design space. Drag ID from *Employee* and drop it on *EmployeeID* in *Computer*. Check *Enforce Referential Integrity* and the two checkmarks below. Ensure you know what these actions mean.

f. Open the Form Wizard dialog box (under *Create, More Forms*) and add all of the columns for each of your tables to your form. Select *View your data by Employee*. Title your form *Employee* and your subform *Computer*.

g. Open the *Computer* subform and delete *EmployeeID* and *ComputerID*. These values are maintained by Access, and it is just a distraction to keep them. Your form should appear like the one shown in Figure AE-5.

h. Use your form to add two new computers to *Amanda Ashley*. Both computers are Dells, and both use Vista; one costs $750, and the other costs $1,400.

Figure AE-5
Employee Computer Assignment Form

    i. Delete the Lenovo computer for Stan Calbro.

    j. Use the Report Wizard (under *Create*) to create a report having all data from both the *Employee* and *Computer* tables. Adjust the report design until you find a design you like. Correct the label alignment if you need to.

Chapter 6

6-1. Numerous Web sites are available that will test your Internet data communications speed. You can find one good example at *www.speakeasy.net/speedtest/*. (If that site is no longer active, Google or Bing "What is my Internet speed?" to find another speed-testing site. Use it.)

    a. While connected to your university's network, go to Speakeasy and test your speed against servers in Seattle, New York City, and Atlanta. Compute your average upload and download speeds.

    b. Go home, or to a public wireless site, and run the Speakeasy test again. Compute your average upload and download speeds. If you are performing this test at home, are you getting the performance you are paying for?

    c. Contact a friend or relative in another state. Ask him or her to run the Speakeasy test against those same three cities.

    d. Compare the results in parts a–c. What conclusion, if any, can you draw from these tests?

6-2. Assume you have been asked to create an Office application to estimate cloud computing costs. You decide to create a spreadsheet into which your customers can provide their cloud computing needs and which you can then import into an Access database and use queries to compute cloud computing costs.

Figure AE-6 shows the structure of the spreadsheet into which your customers will input their requirements. You can download this spreadsheet in the Excel file **Ch06Ex02_U7e.xlsx**. Figure AE-7 shows an Access table that has costs corresponding to the requirements in Figure AE-6. You can download this database in the Access file **Ch06Ex02_U7e.accdb**.

    a. Import the spreadsheet data into the Access database.

    b. Write queries to compute the cost of each resource.

	A	B	C	D	E	F	G
1		Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13
2	**Compute requirements (hours):**						
3							
4	Extra Small Instance	1800	1800	1800	1800	1800	1800
5	Small Instance	2000	2000	2400	2400	0	0
6	Medium Instance	900	1800	2700	3600	3600	3600
7	Large Instance	0	500	1000	1500	2000	2000
8	Extra Large Instance	0	0	0	1000	1200	1500
9							
10	Storage requirements:						
11	Storage Required (GB)	30	35	40	45	50	55
12	Storage Transactions (1000s)	30	30	35	35	40	40
13							
14	Database requirements (number of instances)						
15	10GB Database	2	2	2	2	2	2
16	20GB Database	0	3	3	3	3	3
17	30GB Database		4	4	4	4	4
18	40GB Database	0	0	0	3	3	3
19	50GB Database	0	0	2	2	3	0

Figure AE-6
Worksheet for Inputting Cloud Computing Requirements