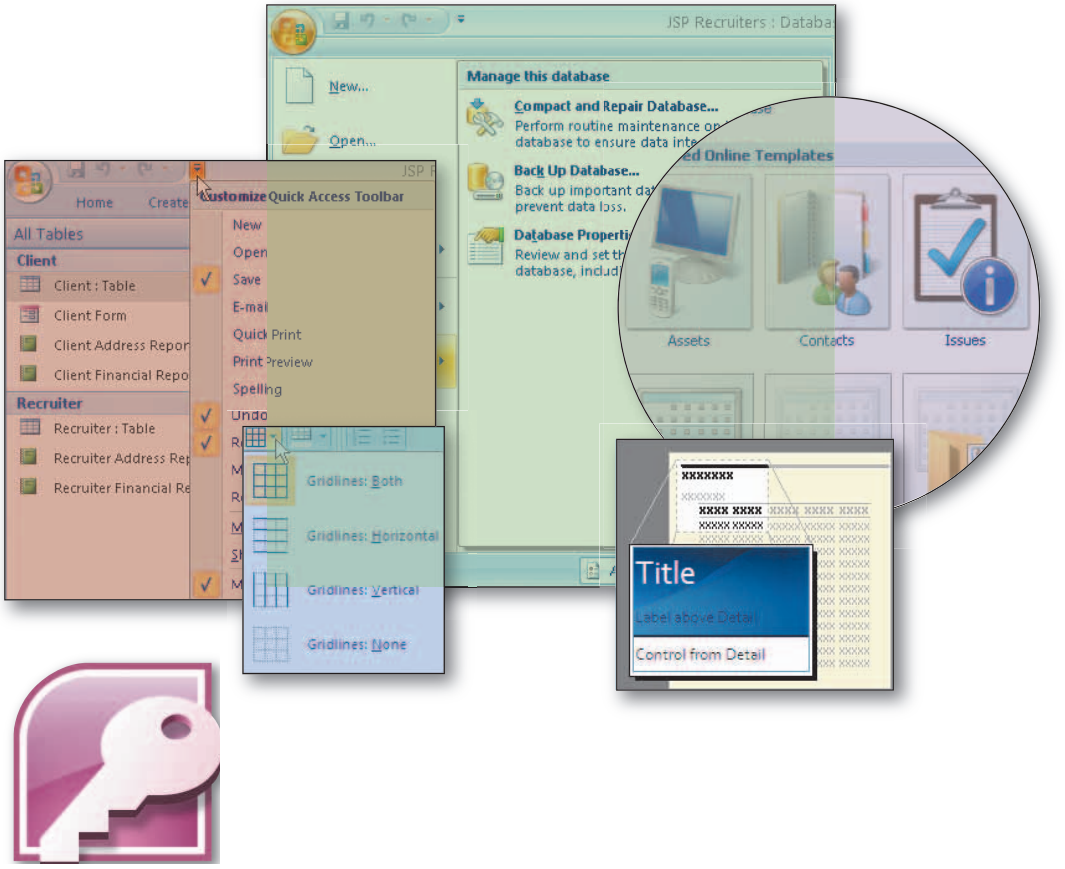
1 Creating and Using a Database



Objectives

You will have mastered the material in this chapter when you can:

- Describe databases and database management systems
- Design a database to satisfy a collection of requirements
- Start Access
- Describe the features of the Access window
- Create a database
- Create a table and add records
- Close a table
- Close a database and quit Access
- Open a database
- Print the contents of a table
- Create and print custom reports
- Create and use a split form
- Use the Access Help system

1 Creating and Using a Database

What Is Microsoft Office Access 2007?

Microsoft Office Access 2007, usually referred to as simply Access, is a database management system. A database management system, such as Access, is a software tool that allows you to use a computer to create a database; add, change, and delete data in the database; sort the data in the database; retrieve data in the database; and create forms and reports using the data in the database. The term **database** describes a collection of data organized in a manner that allows access, retrieval, and use of that data. Some of the key features in Access are:

- **Data entry and update** Access provides easy mechanisms for adding, changing, and deleting data, including the capability of making mass changes in a single operation.
- **Queries (questions)** Access makes it possible to ask complex questions concerning the data in the database and then receive instant answers.
- **Forms** Access allows the user to produce attractive and useful forms for viewing and updating data.
- **Reports** Access includes report creation tools that make it easy to produce sophisticated reports for presenting data.
- **Web support** Access allows you to save objects, reports, and tables in HTML format so they can be viewed using a browser. You also can import and export documents in XML format as well as share data with others using SharePoint Services.

This latest version of Access has many new features to help you be more productive. Like the other Office applications, it features a new, improved interface utilizing the Ribbon. The new Navigation pane makes navigating among the various objects in a database easier and more intuitive than in the past. The new version includes several professionally designed templates that you can use to quickly create a database. Sorting and filtering has been enhanced in this version. The new Layout view allows you to make changes to the design of forms and reports at the same time you are browsing the data. Datasheet view also has been enhanced to make creating tables more intuitive. Split form, a new form object, combines both a datasheet and a form as a single unit. Memo fields now support rich text, and there is a new Attachment data type. Using the Attachment data type, a field can contain an attached file, such as a document, image, or spreadsheet.

Project Planning Guidelines

The process of developing a database that communicates specific information requires careful analysis and planning. As a starting point, establish why the database is needed. Once the purpose is determined, analyze the intended users of the database and their unique needs. Then, gather information about the topic and decide what to include in the database. Finally, determine the database design and style that will be most successful at delivering the message. Details of these guidelines are provided in Appendix A. In addition, each project in this book provides practical applications of these planning considerations.

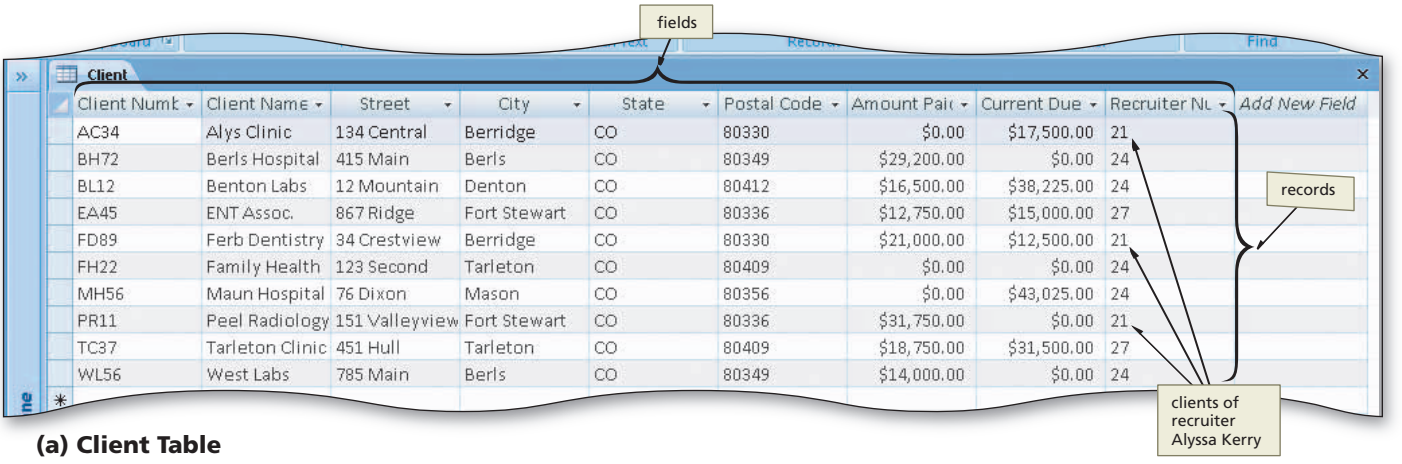
Project — Database Creation

JSP Recruiters is a recruiting firm that specializes in job placement for health care professionals. Because the recruiters at JSP have previous experience in the health care industry, the firm is able to provide quality candidates for employment in hospitals, clinics, medical laboratories, doctors' offices, and other health care facilities.

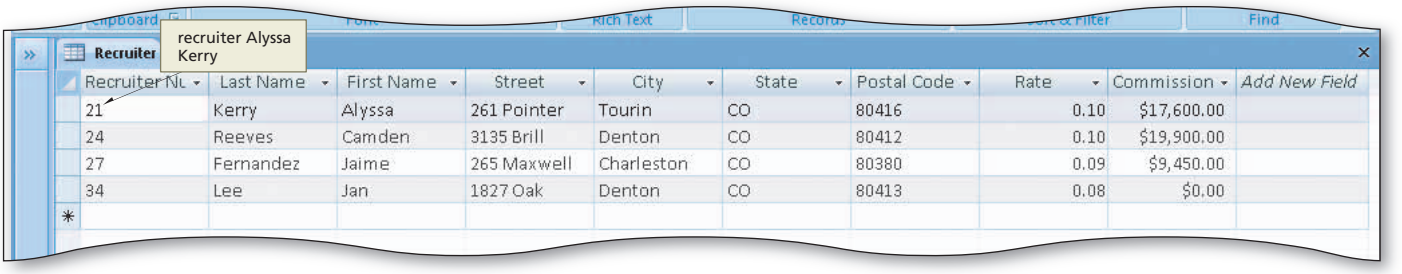
JSP Recruiters works with clients in need of health care professionals. It assigns each client to a specific recruiter. The recruiter works with the client to determine the necessary qualifications for each job candidate. The recruiter then contacts and does a preliminary review of the qualifications for each candidate before setting up a job interview between the client and the candidate. If the candidate is hired, the client pays a percentage of the new employee's annual salary to the recruiting firm, which then distributes a percentage of that client fee to the recruiter.

To ensure that operations run smoothly, JSP Recruiters organizes data on its clients and recruiters in a database, managed by Access. In this way, JSP keeps its data current and accurate while the firm's management can analyze the data for trends and produce a variety of useful reports.

In Access, a database consists of a collection of tables, each of which contains information on a specific subject. Figure 1–1 shows the database for JSP Recruiters. It consists of two tables. The Client table (Figure 1–1a) contains information about the clients to whom JSP provides services. The Recruiter table (Figure 1–1b) contains information about the recruiters to whom these clients are assigned.



(a) Client Table



(b) Recruiter Table

Figure 1–1

The rows in the tables are called **records**. A record contains information about a given person, product, or event. A row in the Client table, for example, contains information about a specific client.

The columns in the tables are called fields. A **field** contains a specific piece of information within a record. In the Client table, for example, the fourth field, City, contains the city where the client is located.

The first field in the Client table is the Client Number. JSP Recruiters assigns a number to each client. As is common to the way in which many organizations format client numbers, JSP Recruiters calls it a *number*, although it actually contains letters. The JSP client numbers consist of two uppercase letters followed by a two-digit number.

These numbers are unique; that is, no two clients are assigned the same number. Such a field can be used as a **unique identifier**. This simply means that a given client number will appear only in a single record in the table. Only one record exists, for example, in which the client number is BH72. A unique identifier also is called a **primary key**. Thus, the Client Number field is the primary key for the Client table.

The next seven fields in the Client table are Client Name, Street, City, State, Postal Code, Amount Paid, and Current Due. Note that the default width of the columns cuts off the names of some of the columns. The Amount Paid column contains the amount that the client has paid JSP Recruiters year to date (YTD) prior to the current period. The Current Due column contains the amount due to JSP for the current period. For example, client BL12 is Benton Labs. The address is 12 Mountain in Denton, Colorado. The postal code is 80412. The client has paid $16,500 for recruiting services so far this year. The amount due for the current period is $38,225.

JSP assigns each client a single recruiter. The last column in the Client table, Recruiter Number, gives the number of the client's recruiter.

The first field in the Recruiter table, Recruiter Number, is the number JSP Recruiters assigns to the recruiter. These numbers are unique, so Recruiter Number is the primary key of the Recruiter table.

The other fields in the Recruiter table are Last Name, First Name, Street, City, State, Postal Code, Rate, and Commission. The Rate field contains the percentage of the client fee that the recruiter earns, and the Commission field contains the total amount that JSP has paid the recruiter so far this year. For example, Recruiter 27 is Jaime Fernandez. His address is 265 Maxwell in Charleston, Colorado. The Postal Code is 80380. His commission rate is .09 (9%), and his commission is $9,450.

The recruiter number appears in both the Client table and the Recruiter table. It relates clients and recruiters. For example, in the Client table, you see that the recruiter number for client BL12 is 24. To find the name of this recruiter, look for the row in the Recruiter table that contains 24 in the Recruiter Number column. After you have found it, you know the client is assigned to Camden Reeves. To find all the clients assigned to Camden Reeves, you must look through the Client table for all the clients that contain 24 in the Recruiter Number column. His clients are BH72 (Berls Hospital), BL12 (Benton Labs), FH22 (Family Health), MH56 (Maun Hospital), and WL56 (West Labs).

The last recruiter in the Recruiter table, Jan Lee, has not been assigned any clients yet; therefore, her recruiter number, 34, does not appear on any row in the Client table.

Overview

As you read this chapter, you will learn how to create the database shown in Figure 1–1 on the previous page by performing these general tasks:

- Design the database.
- Create a new blank database.

- Create a table and add the records.
- Preview and print the contents of a table.
- Create a second table and add the records.
- Create four reports.
- Create a form.

Plan Ahead

Database design guidelines.
Database design refers to the arrangement of data into tables and fields. In the example in this chapter the design is specified, but in many cases, you will have to determine the design based on what you want the system to accomplish.

When designing a database, the actions you take and the decisions you make will determine the tables and fields that will be included in the database. As you create a database, such as the project shown in Figure 1–1 on page AC 3, you should follow these general guidelines:

1. **Identify the tables.** Examine the requirements for the database in order to identify the main objects that are involved. There will be a table for each object you identified.

   In one database, for example, the main objects might be departments and employees. Thus, there would be two tables: one for departments and the other for employees. In another database, the main objects might be clients and recruiters. In this case, there would also be two tables: one for clients and the other for recruiters. In still another database, the main objects might be books, publishers, and authors. Here there would be three tables: one for books, a second for publishers, and a third for authors.

2. **Determine the primary keys.** Recall that the primary key is the unique identifier for records in the table. For each table, determine the unique identifier, if there is one. For a Department table, for example, the unique identifier might be the Department Code. For a Book table, the unique identifier might be the ISBN number.

3. **Determine the additional fields.** The primary key will be a field or combination of fields in a table. There typically will be many additional fields, each of which contains a type of data. Examine the project requirements to determine these additional fields. For example, in an Employee table, the additional fields might include such fields as Employee Name, Street Address, City, State, Postal Code, Date Hired, Salary, and so on.

4. **Determine relationships among the tables.** Examine the list of tables you have created to see which tables are related. When you determine two tables are related, include matching fields in the two tables. For example, in a database containing employees and departments, there is a relationship between the two tables because one department can have many employees assigned to it. Department Code could be the matching field in the two tables.

5. **Determine data types for the fields.** For each field, determine the type of data the field can contain. One field, for example, might contain only numbers. Another field might contain currency amounts, while a third field might contain only dates. Some fields contain text data, meaning any combination of letters, numbers and special characters (!, ;, ', &, and so on). For example, in an Employee table, the Date Hired field would contain dates, the Salary field would contain currency amounts, and the Hours Worked field would contain numbers. The other fields in the Employee table would contain text data, such as Employee Name and Department Code.

6. **Identify and remove any unwanted redundancy. Redundancy** is the storing of a piece of data in more than one place. Redundancy usually, but not always, causes problems, such as wasted space, difficulties with update, and possible data inconsistency. Examine each table you have created to see if it contains redundancy and, if so, determine whether the redundancy causes these problems. If it does, remove the redundancy by splitting the table into two tables. For example, you may have a single table of employees. In addition to typical employee data (name, address, earnings, and so on), the table might contain Department Number and Department Name. If so, the Department Name could repeat multiple times.

(continued)

Plan Ahead

(continued)

Every employee whose department number is 12, for example, would have the same department name. It would be better to split the table into two tables, one for Employees and one for Department. In the Department table, the Department Name is stored only once.

7. **Determine a location for the database. The database you have designed will be stored in a single file. You need to determine a location in which to store the file.**

When necessary, more specific details concerning the above guidelines are presented at appropriate points in the chapter. The chapter also will identify the actions performed and decisions made regarding these guidelines during the creation of the database shown in Figure 1–1 on page AC 3.

BTW

Database Design
For more information on database design methods and for techniques for identifying and eliminating redundancy, visit the Access 2007 Database Design Web page (scsite.com/ac2007/dbdesign).

Designing a Database

This section illustrates the database design process by showing how you would design the database for JSP Recruiters from a set of requirements. In this section, you will use a commonly accepted shorthand to represent the tables and fields that make up the database as well as the primary keys for the tables. For each table, you give the name of the table followed by a set of parentheses. Within the parentheses is a list of the fields in the table separated by columns. You underline the primary key. For example,

Product (Product Code, Description, On Hand, Price)

represents a table called Product. The Product table contains four fields: Product Code, Description, On Hand, and Price. The Product Code field is the primary key.

Database Requirements

JSP Recruiters needs to maintain information on both clients and recruiters. It currently keeps this data in the two Word tables and two Excel workbooks shown in Figure 1–2. They use Word tables for address information and Excel workbooks for financial information.

Client Number	Client Name	Street	City	State	Postal Code
AC34	Alys Clinic	134 Central	Berridge	CO	80330
BH72	Berls Hospital	415 Main	Berls	CO	80349
BL12	Benton Labs	12 Mountain	Denton	CO	80412
EA45	ENT Assoc.	867 Ridge	Fort Stewart	CO	80336
FD89	Ferb Dentistry	34 Crestview	Berridge	CO	80330
FH22	Family Health	123 Second	Tarleton	CO	80409
MH56	Maun Hospital	76 Dixon	Mason	CO	80356
PR11	Peel Radiology	151 Valleyview	Fort Stewart	CO	80336
TC37	Tarleton Clinic	451 Hull	Tarleton	CO	80409
WL56	West Labs	785 Main	Berls	CO	80349

(a) Client Address Information (Word Table)

Figure 1–2

(b) Client Financial Information (Excel Workbook)

	A	B	C	D
1	Client Number	Client Name	Amount Paid	Current Due
2	AC34	Alys Clinic	$0.00	$17,500.00
3	BH72	Berls Hospital	$29,200.00	$0.00
4	BL12	Benton Labs	$16,500.00	$38,225.00
5	EA45	ENT Assoc.	$12,750.00	$15,000.00
6	FD89	Ferb Dentistry	$21,000.00	$12,500.00
7	FH22	Family Health	$0.00	$0.00
8	MH56	Maun Hospital	$0.00	$43,025.00
9	PR11	Peel Radiology	$31,750.00	$0.00
10	TC37	Tarleton Clinic	$18,750.00	$31,500.00
11	WL56	West Labs	$14,000.00	$0.00

(c) Recruiter Address Information (Word Table)

Recruiter Number	Last Name	First Name	Street	City	State	Postal Code
21	Kerry	Alyssa	261 Pointer	Tourin	CO	80416
24	Reeves	Camden	3135 Brill	Denton	CO	80412
27	Fernandez	Jaime	265 Maxwell	Charleston	CO	80380
34	Lee	Jan	1827 Oak	Denton	CO	80413

(d) Recruiter Financial Information (Excel Workbook)

	A	B	C	D	E
1	Recruiter Number	Last Name	First Name	Rate	Commission
2	21	Kerry	Alyssa	0.10	$17,600.00
3	24	Reeves	Camden	0.10	$19,900.00
4	27	Fernandez	Jaime	0.09	$9,450.00
5	34	Lee	Jan	0.08	$0.00

Figure 1–2 (continued)

For clients, JSP needs to maintain address data. It currently keeps this address data in a Word table (Figure 1–2a). It also maintains financial data for each client. This includes the amount paid and the current due from the client. It keeps these amounts along with the client name and number in the Excel workbook shown in Figure 1–2b.

JSP keeps recruiter address data in a Word table as shown in Figure 1–2c. Just as with clients, it keeps financial data for recruiters, including their rate and commission, in a separate Excel workbook, as shown in Figure 1–2d.

Finally, it keeps track of which clients are assigned to which recruiters. Currently, for example, clients AC34 (Alys Clinic), FD89 (Ferb Dentistry), and PR11 (Peel Radiology) are assigned to recruiter 21 (Alyssa Kerry). Clients BH72 (Berls Hospital), BL12 (Benton Labs), FH22 (Family Health), MH56 (Maun Hospital), and WL56 (West Labs) are assigned to recruiter 24 (Camden Reeves). Clients EA45 (ENT Assoc.) and TC37 (Tarleton Clinic) are assigned to recruiter 27 (Jaime Fernandez). JSP has an additional recruiter, Jan Lee, whose number has been assigned as 34, but who has not yet been assigned any clients.

Naming Tables and Fields

In designing your database, you must name the tables and fields. Thus, before beginning the design process, you must understand the rules for table and field names, which are:

1. Names can be up to 64 characters in length.
2. Names can contain letters, digits, and spaces, as well as most of the punctuation symbols.
3. Names cannot contain periods (.), exclamation points (!), accent graves (`), or square brackets ([ ]).
4. The same name cannot be used for two different fields in the same table.

The approach to naming tables and fields used in this text is to begin the names with an uppercase letter and to use lowercase for the other letters. In multiple-word names, each word begins with an uppercase letter, and there is a space between words (for example, Client Number). You should know that there are other approaches. Some people omit the space (ClientNumber). Still others use an underscore in place of the space (Client_Number). Finally, some use an underscore in place of a space, but use the same case for all letters (CLIENT_NUMBER or client_number).

BTW

Naming Fields
Access 2007 has a number of reserved words, words that have a special meaning to Access. You cannot use these reserved words as field names. For example, Name is a reserved word and could not be used in the Client table to describe a client's name. For a complete list of reserved words in Access 2007, consult Access Help.

Identifying the Tables

Now that you know the rules for naming tables and fields, you are ready to begin the design process. The first step is to identify the main objects involved in the requirements. For the JSP Recruiters database, the main objects are clients and recruiters. This leads to two tables, which you must name. Reasonable names for these two tables are:

Client
Recruiter

Determining the Primary Keys

The next step is to identify the fields that will be the primary keys. Client numbers uniquely identify clients, and recruiter numbers uniquely identify recruiters. Thus, the primary key for the Client table is the client number, and the primary key for the Recruiter table is the recruiter number. Reasonable names for these fields would be Client Number and Recruiter Number, respectively. Adding these primary keys to the tables gives:

Client (Client Number)
Recruiter (Recruiter Number)

BTW

Database Design Language (DBDL)
DBDL is a commonly accepted shorthand representation for showing the structure of a relational database. You write the name of the table and then within parentheses you list all the columns in the table. If the columns continue beyond one line, indent the subsequent lines.

Determining Additional Fields

After identifying the primary keys, you need to determine and name the additional fields. In addition to the client number, the Client Address Information shown in Figure 1–2a contains the client name, street, city, state, and postal code. These would be fields in the Client table. The Client Financial Information shown in Figure 1–2b on the previous page also contains the client number and client name, which are already included in the Client table. The financial information also contains the amount paid and the current due. Adding the amount paid and current due fields to those already identified in the Client table and assigning reasonable names gives:

Client (Client Number, Client Name, Street, City, State, Postal Code,
Amount Paid, Current Due)

Similarly, examining the Recruiter Address Information in Figure 1–2c on page AC 7 adds the last name, first name, street, city, state, and postal code fields to the Recruiter table. In addition to the recruiter number, last name, and first name, the Recruiter Financial Information in Figure 1–2d would add the rate and commission. Adding these fields to the Recruiter table and assigning reasonable names gives:

Recruiter (Recruiter Number, Last Name, First Name, Street, City, State, Postal Code, Rate, Commission)

Determining and Implementing Relationships Between the Tables

Plan Ahead

Determine relationships among the tables.
The most common type of relationship you will encounter between tables is the **one-to-many relationship**. This means that each row in the first table may be associated with *many* rows in the second table, but each row in the second table is associated with only *one* row in the first. The first table is called the "one" table and the second is called the "many" table. For example, there may be a relationship between departments and employees, in which each department can have many employees, but each employee is assigned to only one department. In this relationship, there would be two tables, Department and Employee. The Department table would be the "one" table in the relationship. The Employee table would be the "many" table.

To determine relationships among tables, you can follow these general guidelines:

1. Identify the "one" table.
2. Identify the "many" table.
3. Include the primary key from the "one" table as a field in the "many" table.

According to the requirements, each client has one recruiter, but each recruiter can have many clients. Thus, the Recruiter table is the "one" table, and the Client table is the "many" table. To implement this one-to-many relationship between recruiters and clients, add the Recruiter Number field (the primary key of the Recruiter table) to the Client table. This produces:

Client (Client Number, Client Name, Street, City, State, Postal Code, Amount Paid, Current Due, Recruiter Number)

Recruiter (Recruiter Number, Last Name, First Name, Street, City, State, Postal Code, Rate, Commission)

Determining Data Types for the Fields

Each field has a **data type**. This indicates the type of data that can be stored in the field. Three of the most commonly used data types are:

1. **Text** — The field can contain any characters. A maximum number of 255 characters is allowed in a field whose data type is Text.
2. **Number** — The field can contain only numbers. The numbers either can be positive or negative. Fields are assigned this type so they can be used in arithmetic operations. Fields that contain numbers but will not be used for arithmetic operations usually are assigned a data type of Text.
3. **Currency** — The field can contain only monetary data. The values will appear with currency symbols, such as dollar signs, commas, and decimal points, and with

BTW

Currency Symbols
To show the symbol for the Euro (€) instead of the dollar sign, change the Format property for the field whose data type is currency. To change the default symbols for currency, change the settings in the operating system using the Control Panel.

two digits following the decimal point. Like numeric fields, you can use currency fields in arithmetic operations. Access assigns a size to currency fields automatically.

Table 1–1 shows the other data types that are available.

Table 1–1 Additional Data Types

Data Type	Description
Memo	Field can store a variable amount of text or combinations of text and numbers where the total number of characters may exceed 255.
Date/Time	Field can store dates and times.
AutoNumber	Field can store a unique sequential number that Access assigns to a record. Access will increment the number by 1 as each new record is added.
Yes/No	Field can store only one of two values. The choices are Yes/No, True/False, or On/Off.
OLE Object	Field can store an OLE object, which is an object linked to or embedded in the table.
Hyperlink	Field can store text that can be used as a hyperlink address.
Attachment	Field can contain an attached file. Images, spreadsheets, documents, charts, and so on can be attached to this field in a record in the database. You can view and edit the attached file.

In the Client table, because the Client Number, Client Name, Street, City, and State can all contain letters, their data types should be Text. The data type for Postal Code is Text instead of Number, because postal codes are not used in arithmetic operations. You do not add postal codes or find an average postal code, for example. The Amount Paid and Current Due fields both contain monetary data, so their data types should be Currency.

Similarly, in the Recruiter table, the data type for the Recruiter Number, Last Name, First Name, Street, City, State, and Postal Code fields all should be Text. The Commission field contains monetary amounts, so its data type should be Currency. The Rate field contains a number that is not a currency amount, so its data type should be Number.

Identifying and Removing Redundancy

Redundancy means storing the same fact in more than one place. It usually results from placing too many fields in a table — fields that really belong in separate tables — and often causes serious problems. If you had not realized there were two objects, clients and recruiters, for example, you might have placed all the data in a single Client table. Figure 1–3 shows a portion of this table with some sample data. Notice that the data for a given Recruiter (number, name, address, and so on) occurs on more than one record. The data for Camden Reeves is repeated in the figure.

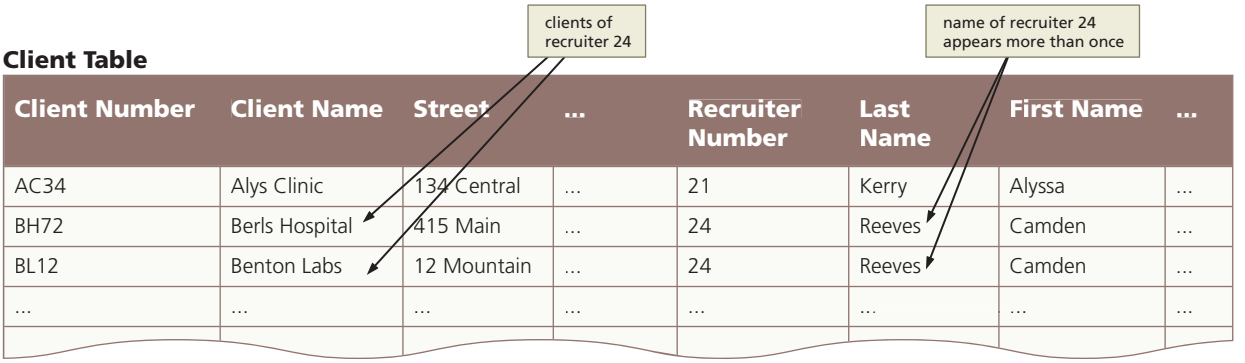


Figure 1–3

Storing this data on multiple records is an example of redundancy, which causes several problems, including:

1. Wasted storage space. The name of Recruiter 24 (Camden Reeves), for example, should be stored only once. Storing this fact several times is wasteful.
2. More difficult database updates. If, for example, Camden Reeves's name is spelled wrong and needs to be changed in the database, his name would need to be changed in several different places.
3. A possibility of inconsistent data. There is nothing to prohibit the recruiter's last name from being Reeves on client BH72's record and Reed on client BL12's record. The data would be inconsistent. In both cases, the recruiter number is 24, but the last names are different.

The solution to the problem is to place the redundant data in a separate table, one in which the data no longer will be redundant. If, for example, you place the data for recruiters in a separate table (Figure 1–4), the data for each recruiter will appear only once.

Client Table

Client Number	Client Name	Street	...	Recruiter Number
AC34	Alys Clinic	134 Central	...	21
BH72	Berls Hospital	415 Main	...	24
BL12	Benton Labs	12 Mountain	...	24
...	...	...	...	...

clients of recruiter 24

Recruiter Table

Recruiter Number	Last Name	First Name	...
21	Kerry	Alyssa	...
24	Reeves	Camden	...
...	...	...	...

name of recruiter 24 appears only once

Figure 1–4

Notice that you need to have the recruiter number in both tables. Without it, there would be no way to tell which recruiter is associated with which client. The remaining recruiter data, however, was removed from the Client table and placed in the Recruiter table. This new arrangement corrects the problems of redundancy in the following ways:

1. Because the data for each recruiter is stored only once, space is not wasted.
2. Changing the name of a recruiter is easy. You have only to change one row in the Recruiter table.
3. Because the data for a recruiter is stored only once, inconsistent data cannot occur. Designing to omit redundancy will help you to produce good and valid database designs.

You should always examine your design to see if it contains redundancy. If it does, you should decide whether you need to remove the redundancy by creating a separate table.

BTW

Postal Codes
Some organizations with many customers spread throughout the country will, in fact, have a separate table of postal codes, cities, and states. If you call such an organization to place an order, they typically will ask you for your postal code (or ZIP code), rather than asking for your city, state, and postal code. They then will indicate the city and state that correspond to that postal code and ask you if that is correct.

If you examine your design, you'll see that there is one area of redundancy (see the data in Figure 1–1 on page AC 3). Cities and states are both repeated. Every client whose postal code is 80330, for example, has Berridge as the city and CO as the state. To remove this redundancy, you would create a table whose primary key is Postal Code and that contains City and State as additional fields. City and State would be removed from the Client table. Having City, State, and Postal Code in a table is very common, however, and usually you would not take such action. There is no other redundancy in your tables.

Starting Access

If you are using a computer to step through the project in this chapter, and you want your screen to match the figures in this book, you should change your screen's resolution to 1024 × 768. For information about how to change a computer's resolution, read Appendix E.

To Start Access

The following steps, which assume Windows is running, start Access based on a typical installation. You may need to ask your instructor how to start Access for your computer.

1

- Click the Start button on the Windows taskbar to display the Start menu.
- Point to All Programs on the Start menu to display the All Programs submenu.
- Point to Microsoft Office on the All Programs submenu to display the Microsoft Office submenu (Figure 1–5).

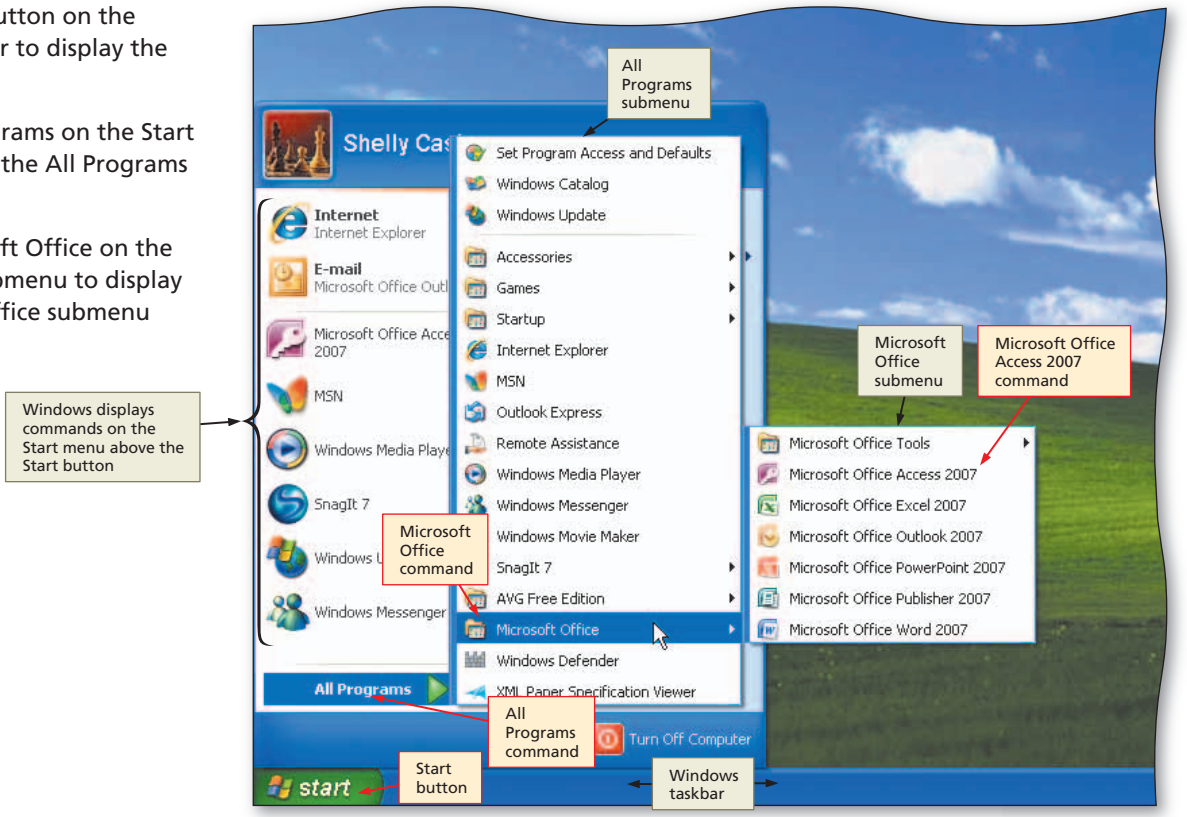


Figure 1–5

2

- Click Microsoft Office Access 2007 to start Access and display the Getting Started with Microsoft Office Access screen (Figure 1–6).
- If the Access window is not maximized, click the Maximize button next to the Close button on its title bar to maximize the window.

Q&A

What is a maximized window?

A maximized window fills the entire screen. When you maximize a window, the Maximize button changes to a Restore Down button.

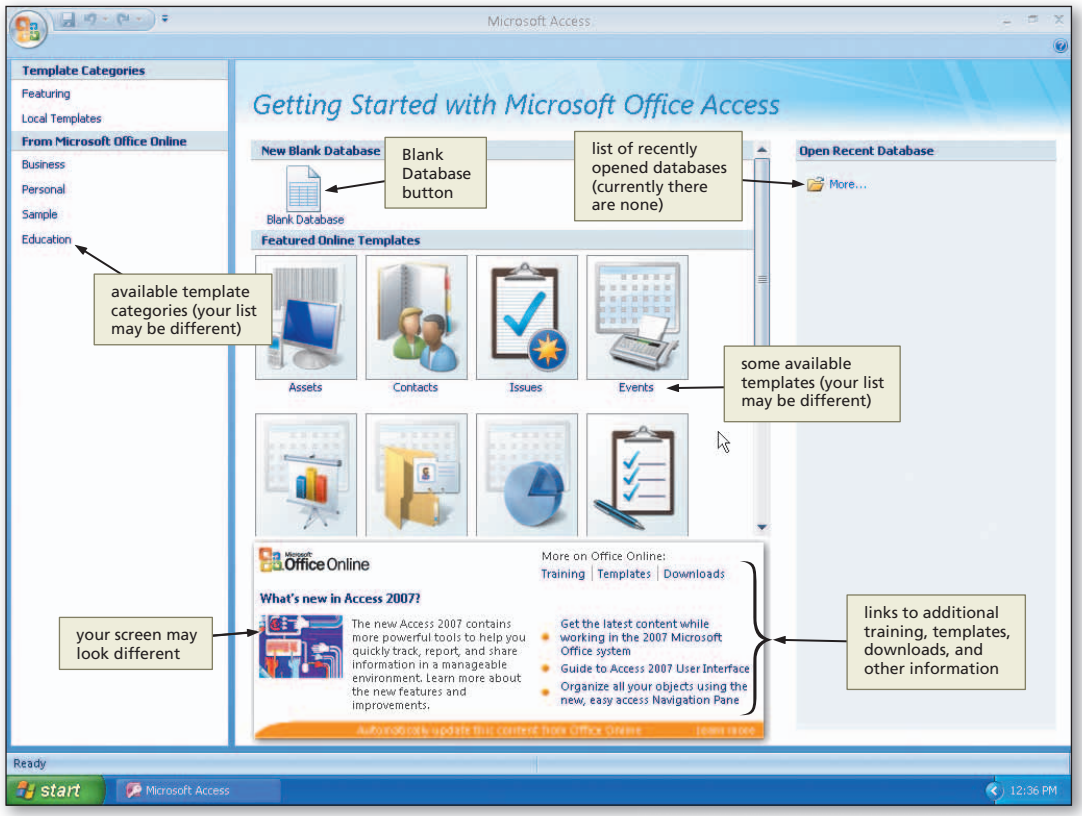


Figure 1–6

Other Ways

1. Double-click Access icon on desktop, if one is present
2. Click Microsoft Office Access 2007 on Start menu

Creating a Database

In Access, all the tables, reports, forms, and queries that you create are stored in a single file called a database. Thus, before creating any of these objects, you first must create the database that will hold them. You can use either the Blank Database option or a template to create a new database. If you already know the tables and fields you want in your database, you would use the Blank Database option. If not, you can use a template. Templates can guide you by suggesting some commonly used databases. If you choose to create a database using a template, you would use the following steps.

To Create a Database Using a Template

1. If the template you wish to use is not already visible on the Getting Started with Microsoft Office Access page, double-click the links in the Template Categories pane to display the desired template.
2. Click the template you wish to use.
3. Enter a file name (or accept the suggested file name) and select a location for the database.
4. Click the Create button to create the database or the Download button to download the database and create the database, if necessary.

When you create a database, the computer places it on a storage medium, such as a USB flash drive, CD, or hard disk. A saved database is referred to as a **file**. A **file name** is the name assigned to a file when it is saved.

BTW

Naming Files

File names can be a maximum of 255 characters including the file extension. The file extension for Access 2007 is .accdb. You can use either uppercase or lowercase letters in file names.

Plan Ahead

Determine where to create the database.
When creating a database, you must decide which storage medium to use.

If you always work on the same computer and have no need to transport your database to a different location, then your computer's hard drive will suffice as a storage location. It is a good idea, however, to save a backup copy of your database on a separate medium in case the file becomes corrupted, or the computer's hard drive fails.

If you plan to work on your database in various locations or on multiple computers, then you can consider saving your projects on a portable medium, such as a USB flash drive or CD. The projects in this book are stored on a USB flash drive, which saves files quickly and reliably and can be reused. CDs are easily portable and serve as good backups for the final versions of projects because they generally can save files only one time.

To Create a Database

Because you already know the tables and fields you want in the JSP Recruiters database, you would use the Blank Database option rather than using a template. The following steps create a database, using the file name JSP Recruiters, on a USB flash drive.

1

- With a USB flash drive connected to one of the computer's USB ports, click Blank Database to create a new blank database (Figure 1–7).

Figure 1–7

2

- Repeatedly press the DELETE key to delete the default name of Database1.
- Type `JSP Recruiters` in the File Name text box to replace the default file name of Database1 (your screen may show Database1.accdb). Do not press the ENTER key after typing the file name (Figure 1–8).

Q&A What characters can I use in a file name?

A file name can have a maximum of 255 characters, including spaces. The only invalid characters are the backslash (\), slash (/), colon (:), asterisk (*), question mark (?), quotation mark ("), less than symbol (<), greater than symbol (>), and vertical bar (|).

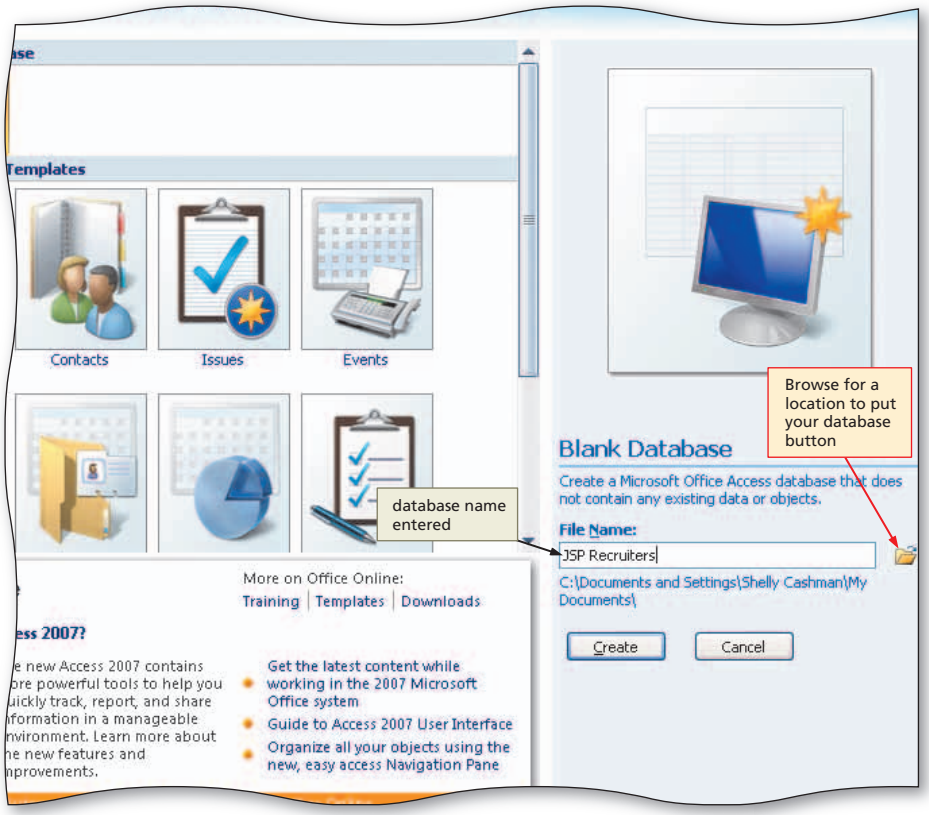


Figure 1–8

3

- Click the 'Browse for a location to put your database' button to display the File New Database dialog box (Figure 1–9).

Q&A Do I have to save to a USB flash drive?

No. You can save to any device or folder. A **folder** is a specific location on a storage medium. You can save to the default folder or a different folder. You also can create your own folders, which is explained later in this book.

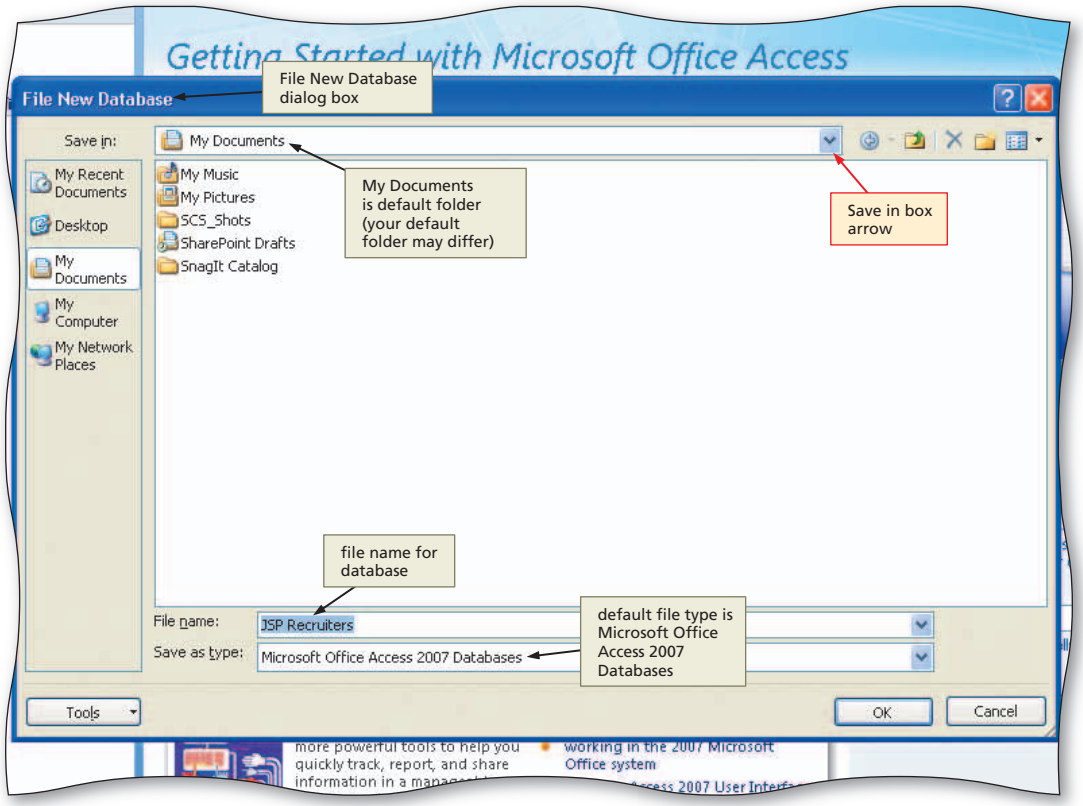


Figure 1–9

4

- Click the Save in box arrow to display a list of available drives and folders (Figure 1–10).

Q&A Why is my list of files, folders, and drives arranged and named differently from those shown in the figure?

Your computer's configuration determines how the list of files and folders is displayed and how drives are named. You can change the save location by clicking shortcuts on the My Places bar.

Q&A How do I save the file if I am not using a USB flash drive?

Use the same process, but be certain to select your device in the Save in list.

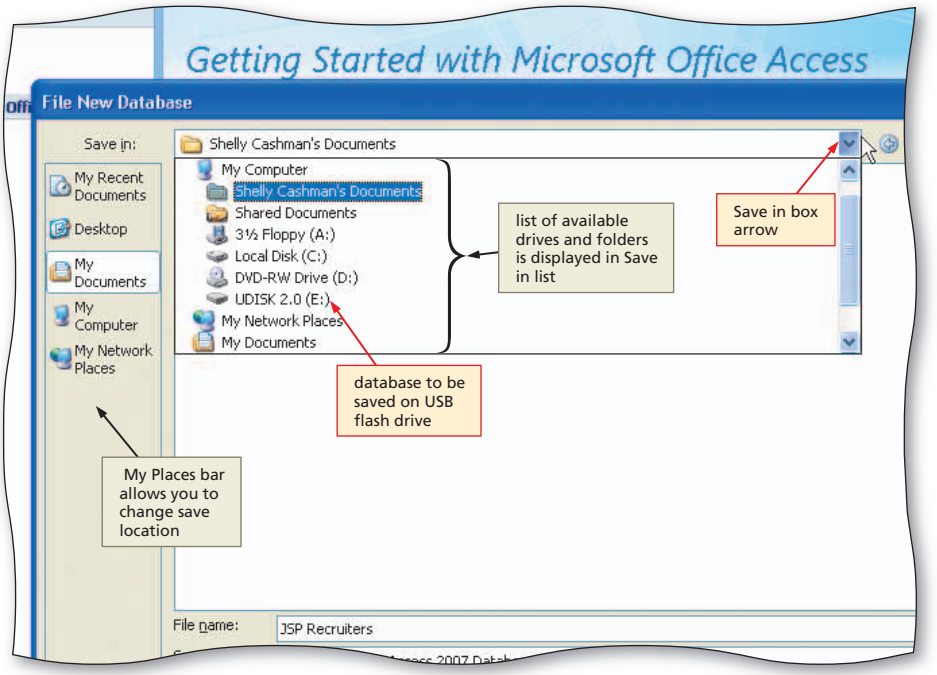


Figure 1–10

5

- Click UDISK 2.0 (E:) in the Save in list to select the USB flash drive, Drive E in this case, as the new save location (Figure 1–11).

Q&A What if my USB flash drive has a different name or letter?

It is very likely that your USB flash drive will have a different name and drive letter and be connected to a different port. Verify that the device in your Save in list is correct.

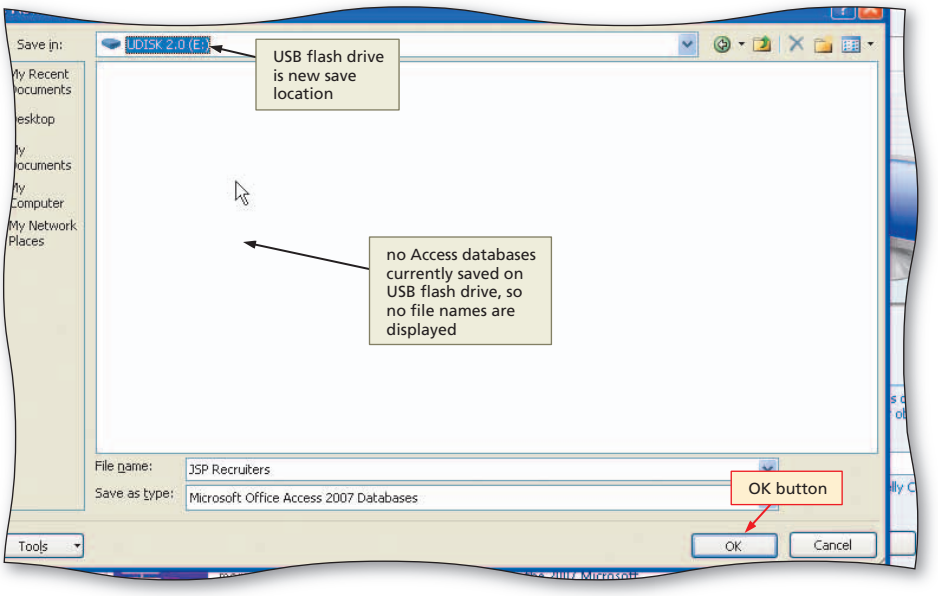


Figure 1–11

6

- Click the OK button to select the USB flash drive as the location for the database and to return to the Getting Started with Microsoft Office Access screen (Figure 1–12).

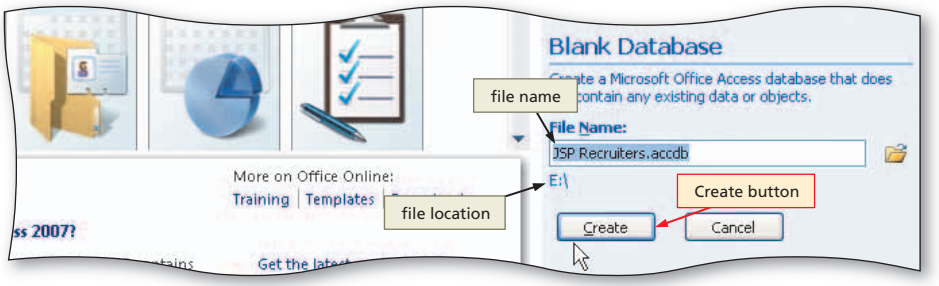


Figure 1–12

7

- Click the Create button to create the database on the USB flash drive with the file name, JSP Recruiters (Figure 1–13).

Q&A

How do I know that the JSP Recruiters database is created?

The name of the database appears in the title bar.

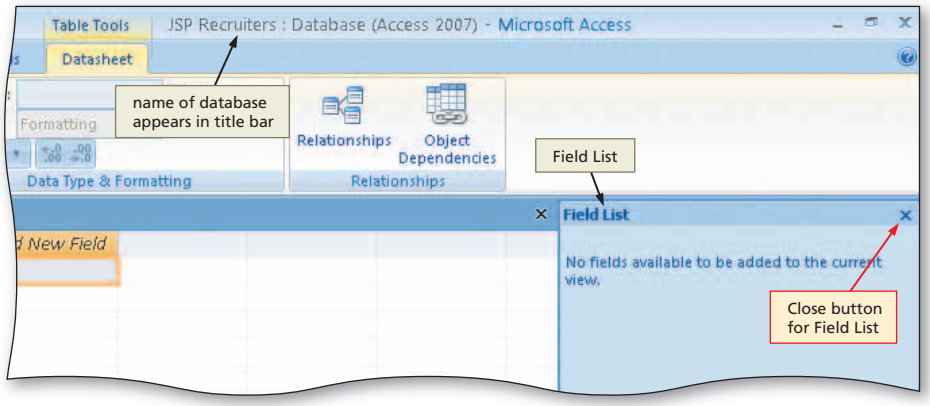


Figure 1–13

8

- If a Field List appears, click its Close button to remove the Field List from the screen (Figure 1–14).

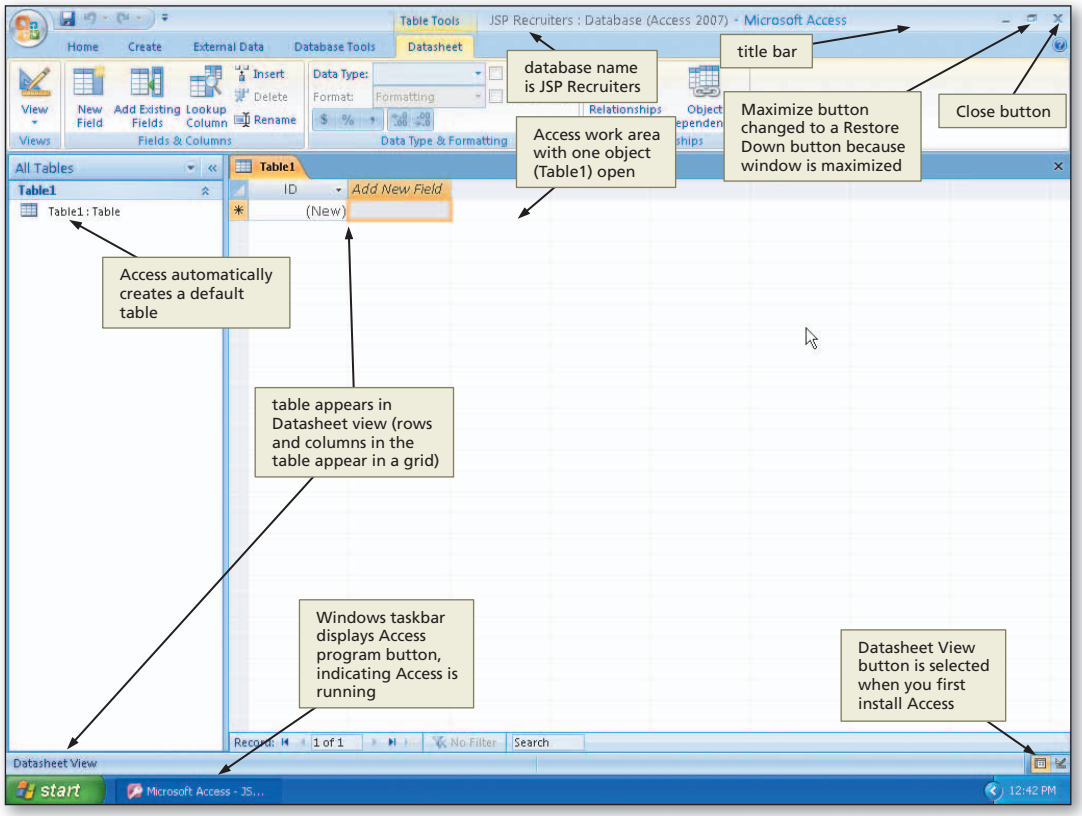


Figure 1–14

Other Ways

1. Click Office Button, click Save, type file name, select drive or folder, click Save button
2. Press CTRL+S or press SHIFT+F12 or press ALT and then 1, type file name, select drive or folder, click Save button

The Access Window

The Access window consists of a variety of components to make your work more efficient and documents more professional. These include the Navigation pane, Access work area, Ribbon, Mini toolbar and shortcut menus, Quick Access Toolbar, and Office Button. Some of these components are common to other Microsoft Office 2007 programs; others are unique to Access.

Navigation Pane and Access Work Area

You work on objects such as tables, forms, and reports in the **Access work area**. In the work area in Figure 1–14 on the previous page, a single table, Table1, is open in the work area. Figure 1–15 shows a work area with multiple objects open. **Object tabs** for the open objects appear at the top of the work area. You can select one of the open objects by clicking its tab. In the figure the Client Form is the selected object. To the left of the work area is the Navigation pane. The Navigation pane contains a list of all the objects in the database. You use this pane to open an object. You also can customize the way objects are displayed in the Navigation pane.

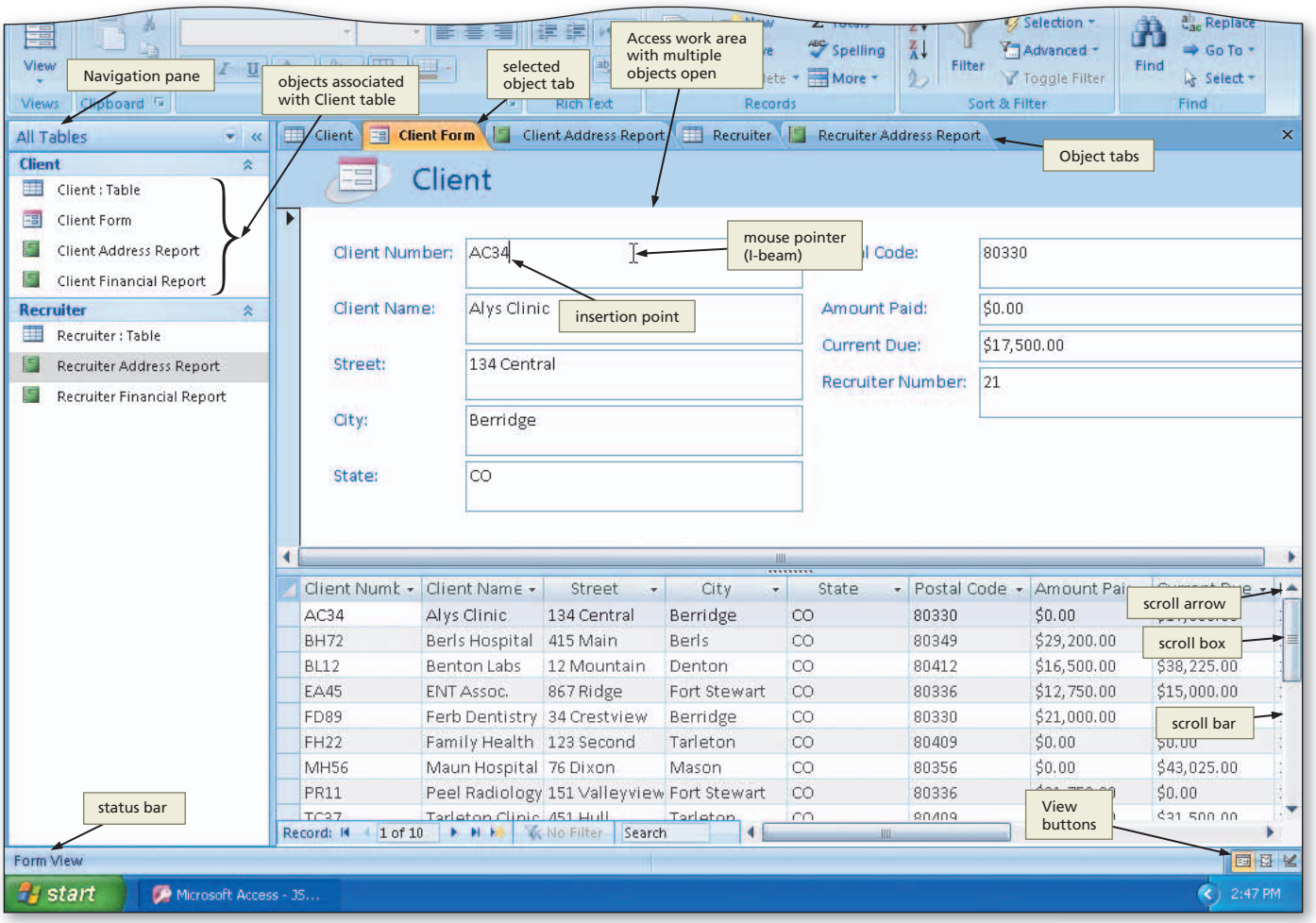


Figure 1–15

The Access work area in Figure 1–15 contains an insertion point, mouse pointer, scroll bar, and status bar. Other elements that may appear in the work area are discussed later in this and subsequent chapters.

Insertion Point The **insertion point** is a blinking vertical bar that indicates where text, graphics, and other items will be inserted. As you type, the insertion point moves to the right.

Mouse Pointer The **mouse pointer** becomes different shapes depending on the task you are performing in Access and the pointer's location on the screen. The mouse pointer in Figure 1–15 is the shape of an I-beam.

Scroll Bar You use a **scroll bar** to display different portions of a database object in the Access window. At the right edge of the window is a **vertical scroll bar**. If an object is too wide to fit in the Access window, a **horizontal scroll bar** also appears at the bottom of the window. On a scroll bar, the position of the **scroll box** reflects the location of the portion of the database object that is displayed in the Access window. A **scroll arrow** is located at each end of a scroll bar. To scroll through, or display different portions of the object in the Access window, you can click a scroll arrow or drag the scroll box.

Status Bar The **status bar**, located at the bottom of the Access window above the Windows taskbar, presents information about the database object, the progress of current tasks, and the status of certain commands and keys; it also provides controls for viewing the object. As you type text or perform certain commands, various indicators may appear on the status bar.

The left edge of the status bar in Figure 1–15 shows that the form object is open in Form view. Toward the right edge are View buttons, which you can use to change the view that is currently displayed.

Ribbon

The **Ribbon**, located near the top of the Access window, is the control center in Access (Figure 1–16a). The Ribbon provides easy, central access to the tasks you perform while creating a database object. The Ribbon consists of tabs, groups, and commands. Each **tab** surrounds a collection of groups, and each group contains related commands.

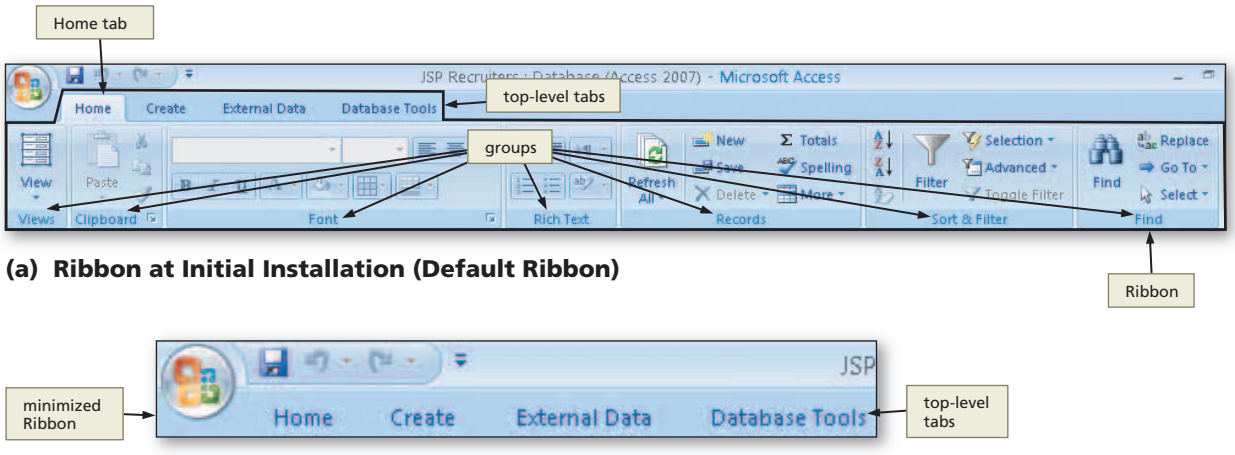
When you start Access, the Ribbon displays four top-level tabs: Home, Create, External Data, and Database Tools. The **Home tab**, called the primary tab, contains the more frequently used commands. To display a different tab on the Ribbon, click the top-level tab. That is, to display the Create tab, click Create on the Ribbon. To return to the Home tab, click Home on the Ribbon. The tab currently displayed is called the **active tab**.

To allow more space in the Access work area, some users prefer to minimize the Ribbon, which hides the groups on the Ribbon and displays only the top-level tabs (Figure 1–16b). To use commands on a minimized Ribbon, click the top-level tab.

Each time you start Access, the Ribbon appears the same way it did the last time you used Access. The chapters in this book, however, begin with the Ribbon appearing as it did at the initial installation of the software. If you are stepping through this chapter on a computer and you want your Ribbon to match the figures in this book, read Appendix E.

BTW

Minimizing the Ribbon
If you want to minimize the Ribbon, right-click the Ribbon and then click Minimize the Ribbon on the shortcut menu, double-click the active tab, or press CTRL+F1. To restore a minimized Ribbon, right-click the Ribbon and then click Minimize the Ribbon on the shortcut menu, double-click any top-level tab, or press CTRL+F1. To use commands on a minimized Ribbon, click the top-level tab.



(a) Ribbon at Initial Installation (Default Ribbon)

(b) Minimized Ribbon

Figure 1–16

In addition to the top-level tabs, Access displays other tabs, called **contextual tabs**, when you perform certain tasks or work with objects such as datasheets. If you are working with a table in Datasheet view, for example, the Table Tools tab and its related subordinate Datasheet tab appear (Figure 1–17). When you are finished working with the table, the Table Tools and Datasheet tabs disappear from the Ribbon. Access determines when contextual tabs should appear and disappear based on tasks you perform. Some contextual tabs have more than one related subordinate tab.

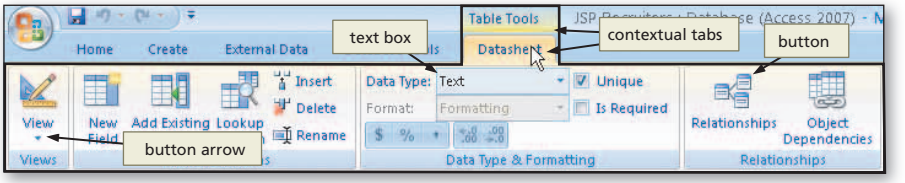


Figure 1–17

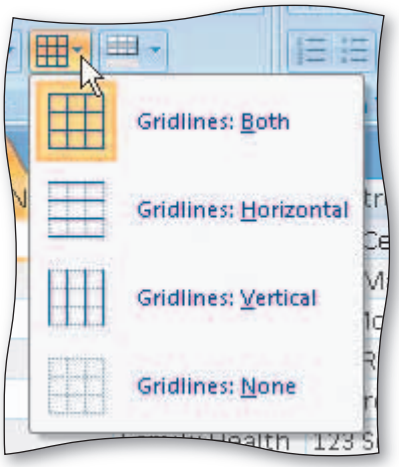


Figure 1–18

Commands on the Ribbon include buttons, boxes (text boxes, check boxes, etc.), and galleries (Figure 1–18). A **gallery** is a set of choices, often graphical, arranged in a grid or in a list. You can scroll through choices on an in-Ribbon gallery by clicking the gallery's scroll arrows. Or, you can click a gallery's More button to view more gallery options on the screen at a time. Some buttons and boxes have arrows that, when clicked, also display a gallery; others always cause a gallery to be displayed when clicked. Many galleries support **live preview**, which is a feature that allows you to point to a gallery choice and see its effect in the database object — without actually selecting the choice.

Some commands on the Ribbon display an image to help you remember their function. When you point to a command on the Ribbon, all or part of the command glows in shades of yellow and orange, and an Enhanced ScreenTip appears on the screen. An **Enhanced ScreenTip** is an on-screen note that provides the name of the command, available keyboard shortcut(s), a description of the command, and sometimes instructions for how to obtain help about the command (Figure 1–19). Enhanced ScreenTips are more detailed than a typical ScreenTip, which usually only displays the name of the command.

The lower-right corner of some groups on the Ribbon has a small arrow, called a **Dialog Box Launcher**, which, when clicked, displays a dialog box or a task pane with additional options for the group (Figure 1–20). When presented with a dialog box, you make selections and must close the dialog box before returning to the database object. A **task pane**, by contrast, is a window that can remain open and visible while you work in the database object.

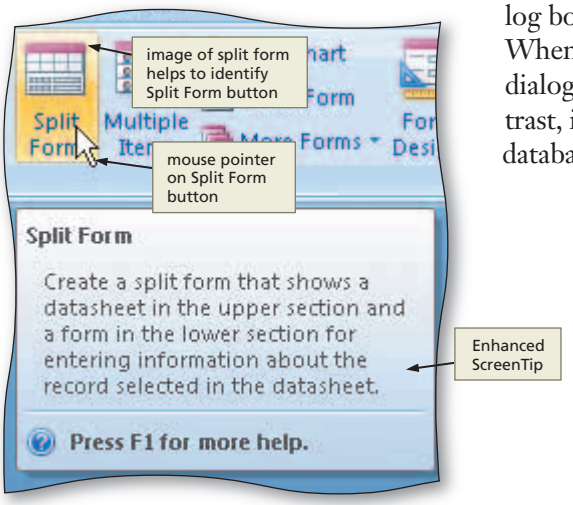


Figure 1–19

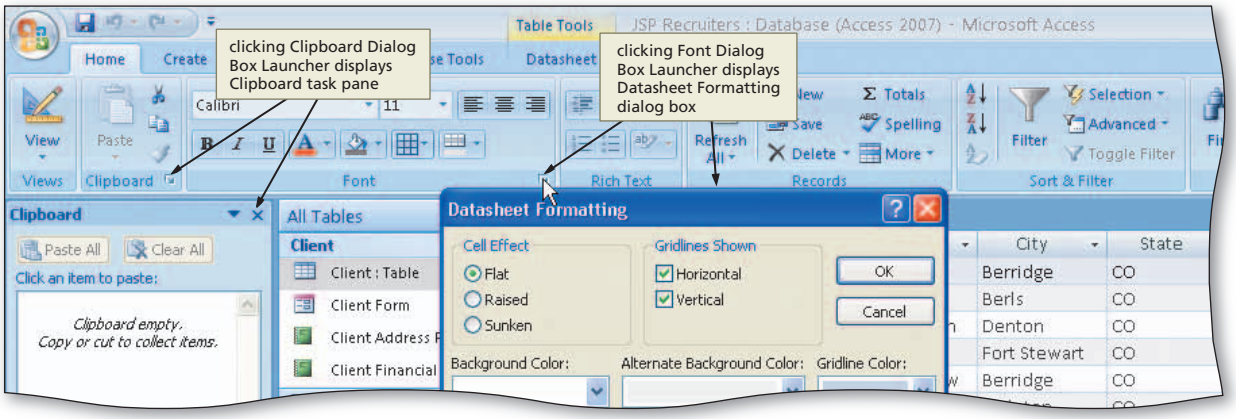


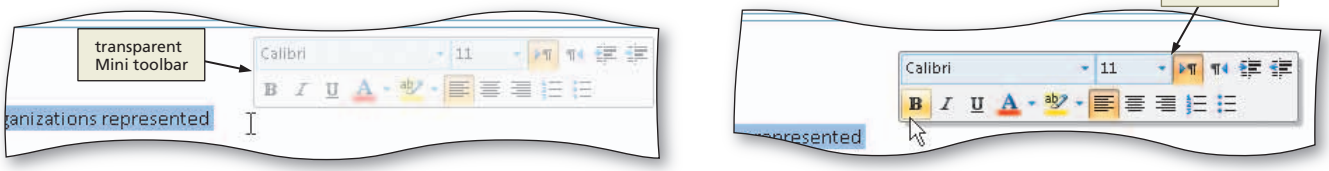
Figure 1–20

Mini Toolbar and Shortcut Menus

The **Mini toolbar**, which appears automatically based on tasks you perform, contains commands related to changing the appearance of text in a database object. All commands on the Mini toolbar also exist on the Ribbon. The purpose of the Mini toolbar is to minimize mouse movement. For example, if you want to use a command that currently is not displayed on the active tab, you can use the command on the Mini toolbar — instead of switching to a different tab to use the command.

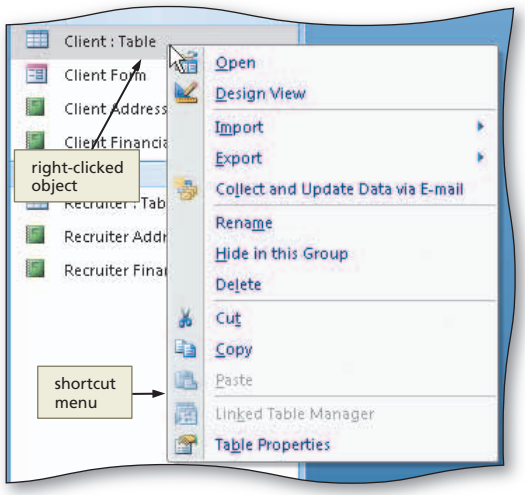
When the Mini toolbar appears, it initially is transparent (Figure 1–21a). If you do not use the transparent Mini toolbar, it disappears from the screen. To use the Mini toolbar, move the mouse pointer into the toolbar, which causes the Mini toolbar to change from a transparent to bright appearance (Figure 1–21b).

A **shortcut menu**, which appears when you right-click an object, is a list of frequently used commands that relate to the right-clicked object. When you right-click a table, for example, a shortcut menu appears with commands related to the table (Figure 1–21c).



(a) Transparent Mini Toolbar

(b) Bright Mini Toolbar



(c) Shortcut Menu

Figure 1–21

Quick Access Toolbar

The **Quick Access Toolbar**, located by default above the Ribbon, provides easy access to frequently used commands (Figure 1–22a). The commands on the Quick Access Toolbar always are available, regardless of the task you are performing. Initially, the Quick Access Toolbar contains the Save, Undo, and Redo commands. If you click the Customize Quick Access Toolbar button, Access provides a list of commands you quickly can add to and remove from the Quick Access Toolbar (Figure 1–22b).

You also can add other commands to or delete commands from the Quick Access Toolbar so that it contains the commands you use most often. As you add commands to the Quick Access Toolbar, its commands may interfere with the title of the database object on the title bar. For this reason, Access provides an option of displaying the Quick Access Toolbar below the Ribbon (Figure 1–22c).

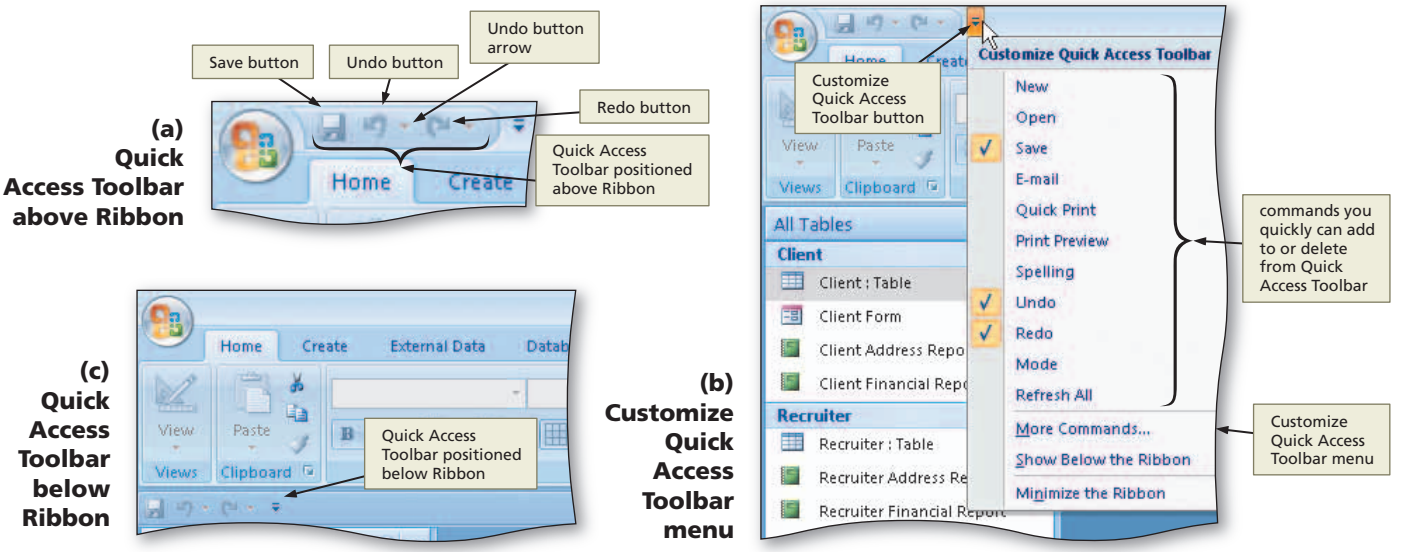


Figure 1-22

Each time you start Access, the Quick Access Toolbar appears the same way it did the last time you used Access. The chapters in this book, however, begin with the Quick Access Toolbar appearing as it did at the initial installation of the software. If you are stepping through this chapter on a computer, and you want your Quick Access Toolbar to match the figures in this book, you should reset your Quick Access Toolbar. For more information about how to reset the Quick Access Toolbar, read Appendix E.

Office Button

While the Ribbon is a control center for creating database objects, the **Office Button** is a central location for managing and sharing database objects. When you click the Office Button, located in the upper-left corner of the window, Access displays the Office Button menu (Figure 1–23). A **menu** contains a list of commands.

When you click the New, Open, and Print commands on the Office Button menu, Access displays a dialog box with additional options. The Save As, Print, Manage, and Publish commands have an arrow to their right. If you point to this arrow, Access displays a **submenu**, which is a list of additional commands associated with the selected command (Figure 1–24). For the Save As, Print, Manage, and Publish commands that do not display a dialog box when clicked, you can point either to the command or the arrow to display the submenu.

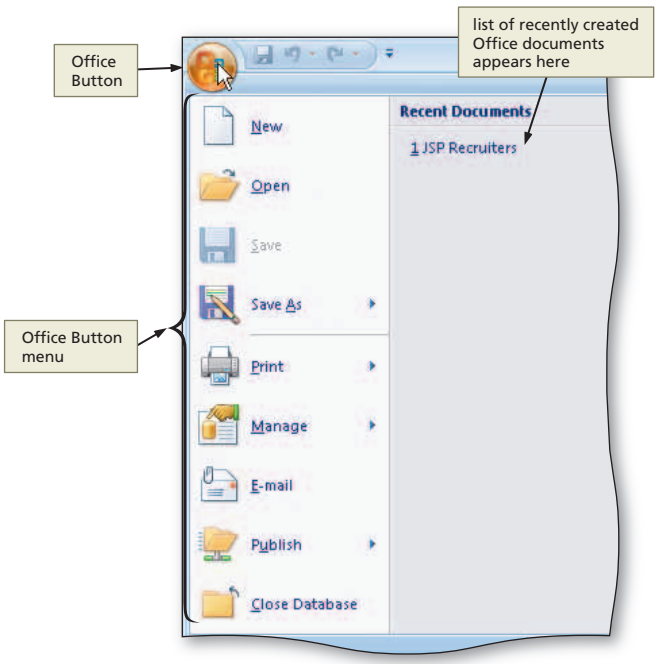


Figure 1–23

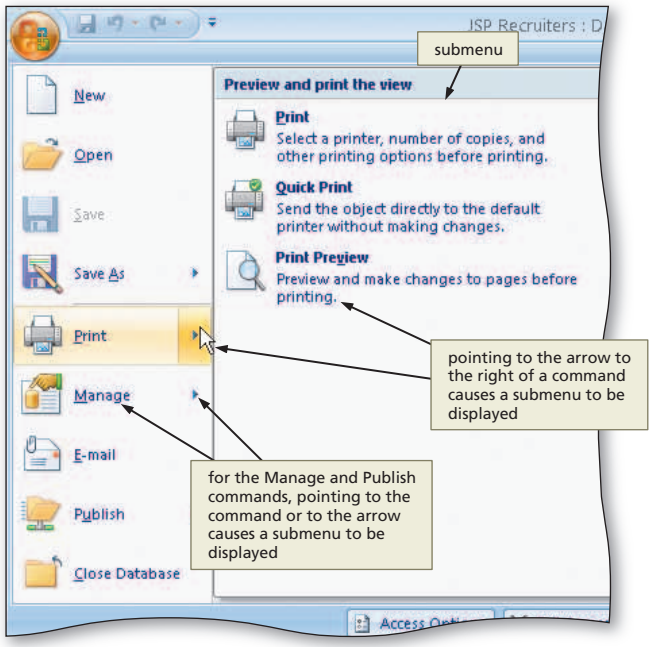


Figure 1–24

Key Tips

If you prefer using the keyboard instead of the mouse, you can press the ALT key on the keyboard to display a **Key Tip badge**, or keyboard code icon, for certain commands (Figure 1–25). To select a command using the keyboard, press its displayed code letter, or **Key Tip**. When you press a Key Tip, additional Key Tips related to the selected command may appear. For example, to select the New command on the Office Button menu, press the ALT key, then press the F key, then press the N key.

To remove the Key Tip badges from the screen, press the ALT key or the ESC key until all Key Tip badges disappear, or click the mouse anywhere in the Access window.

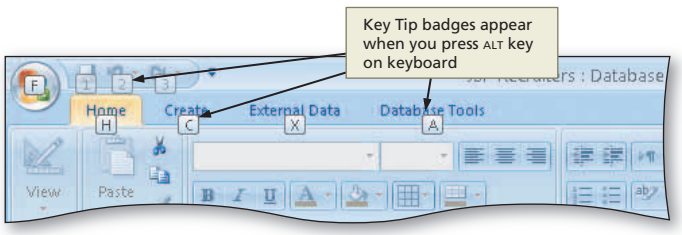


Figure 1–25

Creating a Table

When you first create your database, Access automatically creates a table for you. You can immediately begin defining the fields. If, for whatever reason, you do not have this table or inadvertently delete it, you can create the table by clicking Create on the Ribbon and then clicking the Table button on the Create tab. In either case, you are ready to define the fields.

To Define the Fields in a Table

With the table already created, the next step is to define the fields in the table and to assign them data types. The fields in the Client table are Client Number, Client Name, Street, City, State, Postal Code, Amount Paid, Current Due, and Recruiter Number. The data type for the Amount Paid and Current Due fields is Currency. The data type for all other fields is Text. The following steps define the fields in the table.

1

- Right-click Add New Field to display a shortcut menu (Figure 1–26).

Q&A Why don't I delete the ID field first, before adding other fields?

You cannot delete the primary key in Datasheet view; you only can delete it in Design view. After adding the other fields, you will move to Design view, delete the ID field, and then make the Client Number the primary key.

Q&A Why does my shortcut menu look different?

You right-clicked within the column instead of right-clicking the column heading.

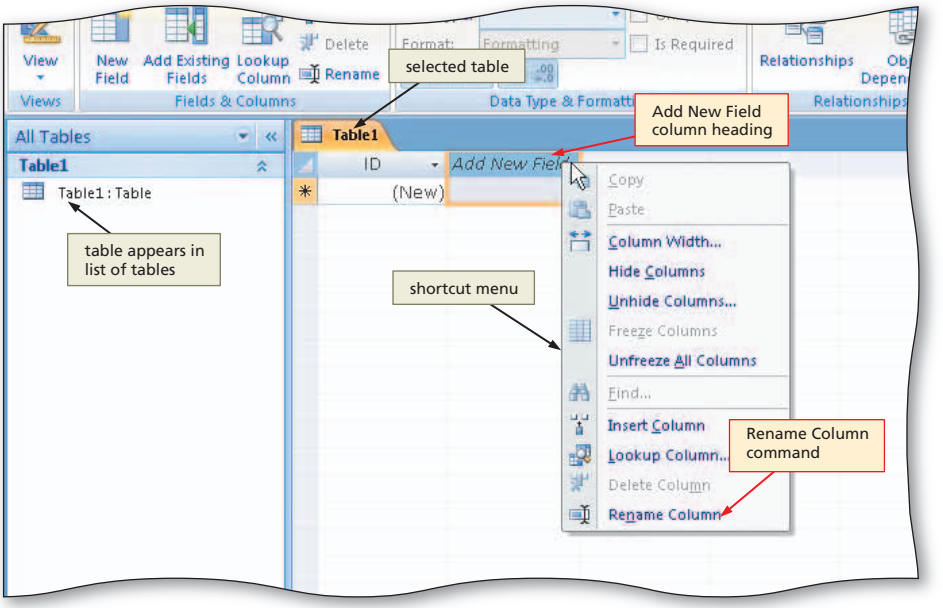


Figure 1–26

2

- Click Rename Column on the shortcut menu to display an insertion point.
- Type `Client Number` to assign a name to the new field.
- Press the DOWN ARROW key to complete the addition of the field (Figure 1–27).

Q&A Why doesn't the whole name appear?

The default column size is not large enough for Client Number to appear in its entirety. Later in this book, you will learn how to resize columns so that the entire name can appear.

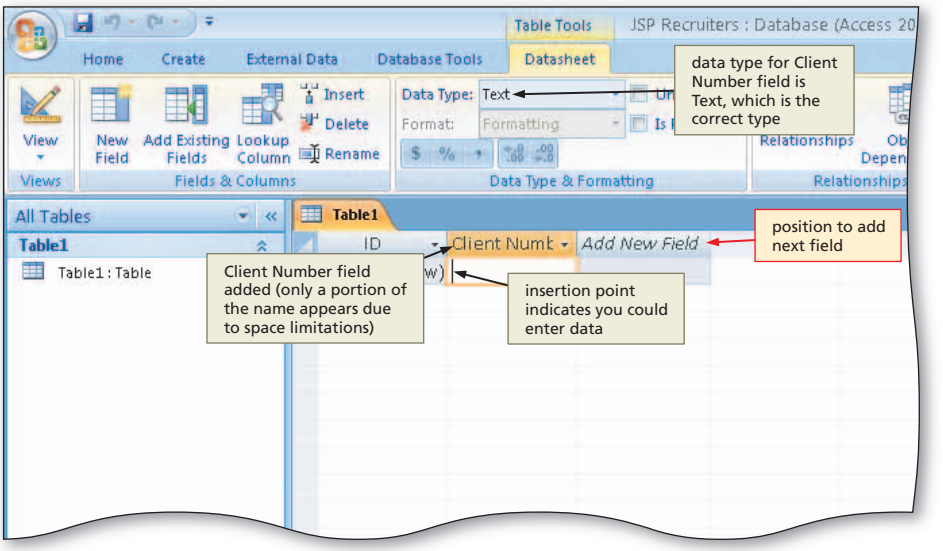


Figure 1–27

3

- Right-click Add New Field to display a shortcut menu, click Rename Column on the shortcut menu to display an insertion point, type `Client Name` to assign a name to the new field, and then press the DOWN ARROW key to complete the addition of the field.

Q&A Did I have to press the DOWN ARROW key? Couldn't I have just moved to the next field or pressed the ENTER key?

You could have pressed the TAB key or the ENTER key to move to the column heading for the next field. Pressing the DOWN ARROW key, however, completes the entry of the Client Number field and allows you to ensure that the column is assigned the correct data type.

- Using the same technique add the fields in the Client table up through and including the Amount Paid field.
- Click the Data Type box arrow to display the Data Type box menu (Figure 1–28).

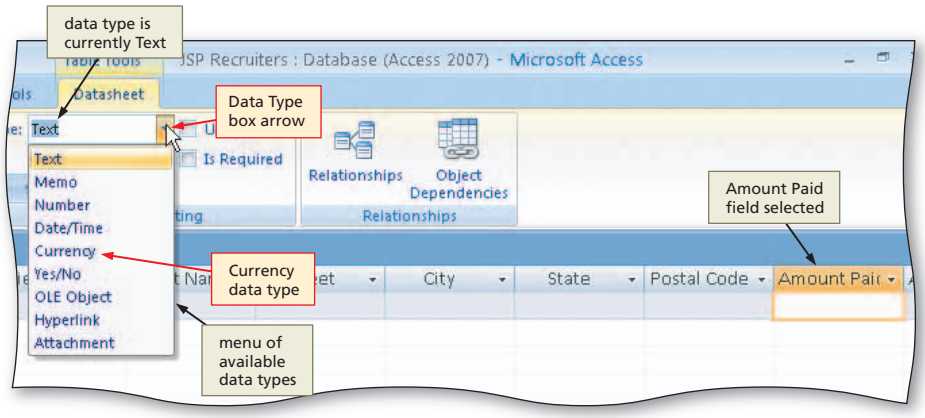


Figure 1–28

4

- Click Currency to select Currency as the data type for the Amount Paid field (Figure 1–29).

Q&A Why does Currency appear twice?

The second Currency is the format, which indicates how the data will be displayed. For the Currency data type, Access automatically sets the format to Currency, which is usually what you would want. You could change it to something else, if desired, by clicking the arrow and selecting the desired format.

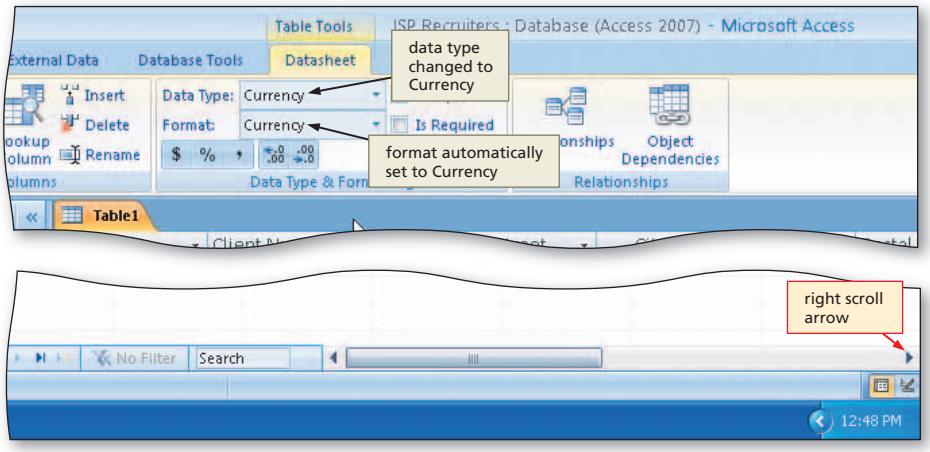


Figure 1–29

5

- Click the right scroll arrow to shift the fields to the left and display the Add New Field column (Figure 1–30).

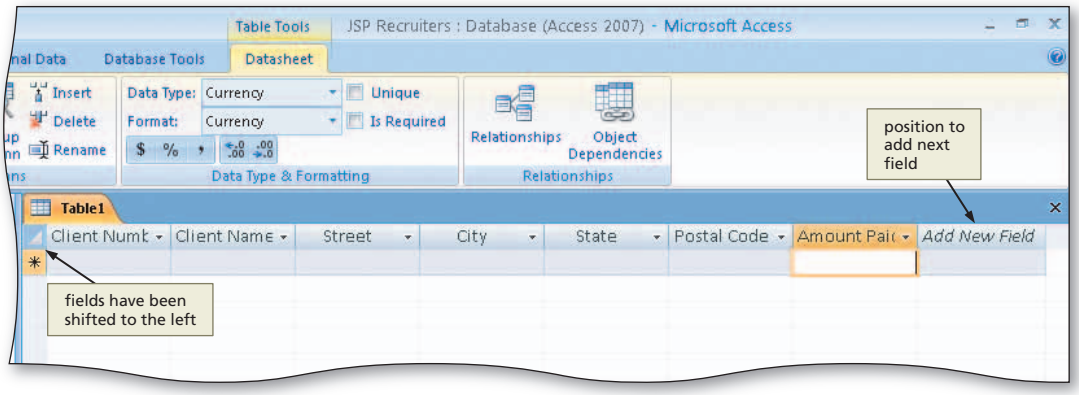


Figure 1–30

6

- Make the remaining entries from the Client table structure shown in Figure 1–31 to complete the structure. Be sure to select Currency as the data type for the Current Due field.

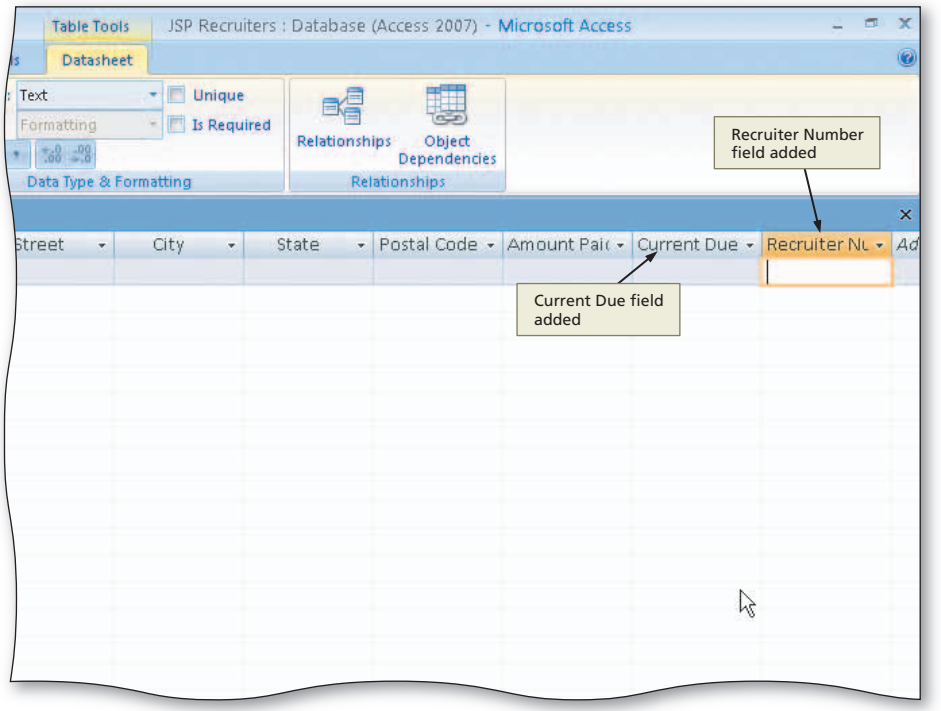


Figure 1–31

BTW

Creating a Table: Table Templates

Access includes table templates that assist you in creating some commonly used tables and fields. To use a template, click Create on the ribbon and then click the Table Templates button on the Create tab. Click the desired template, make any adjustments you wish to the table that Access creates, and then save the table.

Making Changes to the Structure

When creating a table, check the entries carefully to ensure they are correct. If you discover a mistake while still typing the entry, you can correct the error by repeatedly pressing the BACKSPACE key until the incorrect characters are removed. Then, type the correct characters. If you do not discover a mistake until later, you can use the following techniques to make the necessary changes to the structure:

- To undo your most recent change, click the Undo button on the Quick Access Toolbar. If there is nothing that Access can undo, this button will be dim, and clicking it will have no effect.
- To delete a field, right-click the column heading for the field (the position containing the field name), and then click Delete Column on the shortcut menu.
- To change the name of a field, right-click the column heading for the field, click Rename Column on the shortcut menu, and then type the desired field name.
- To insert a field as the last field, right-click the Add New Field column heading, click Rename Column on the shortcut menu, type the desired field name, click the down arrow, and then ensure the correct data type is already selected.
- To insert a field between existing fields, right-click the column heading for the field that will follow the new field, and then click Insert Column on the shortcut menu. You then proceed just as you do when you insert a field as the last field.

As an alternative to these steps, you may want to start over. To do so, click the Close button for the window containing the table, and then click the No button in the Microsoft Office Access dialog box. Click Create on the Ribbon and then click the Table button to create a table. You then can repeat the process you used earlier to define the fields in the table.

To Save a Table

The Client table structure now is complete. The final step is to save and close the table within the database. At this time, you should give the table a name.

The following steps save the table, giving it the name, Client.

1

- Click the Save button on the Quick Access Toolbar to save the structure of the table (Figure 1–32).

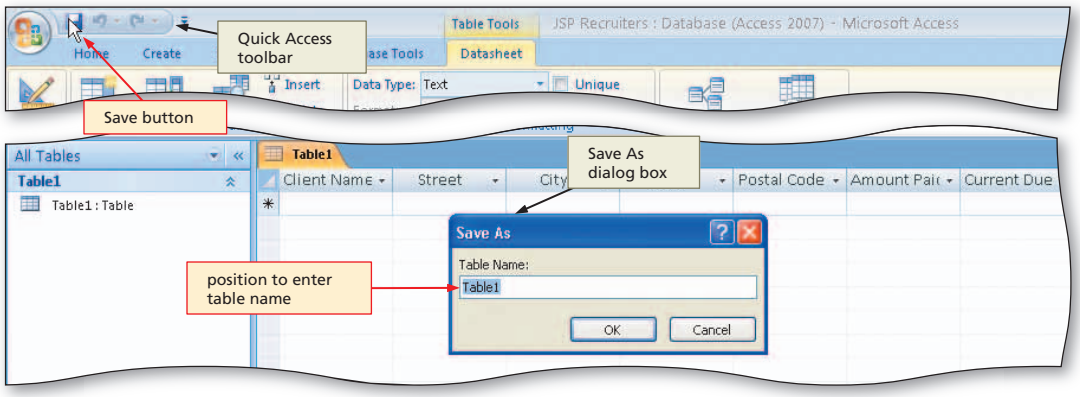


Figure 1–32

2

- Type `Client` to change the name to be assigned to the table (Figure 1–33).

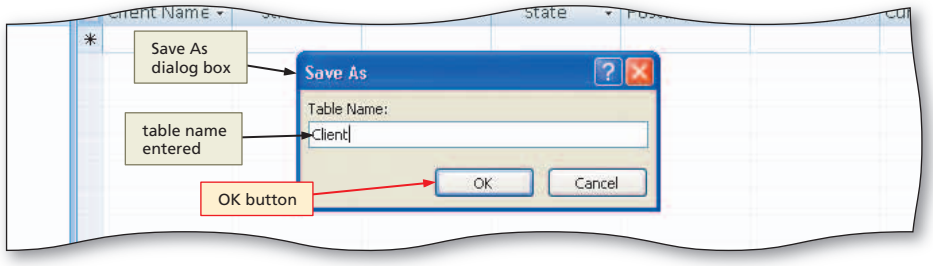


Figure 1–33

3

- Click the OK button to save the structure with the name, Client (Figure 1–34).

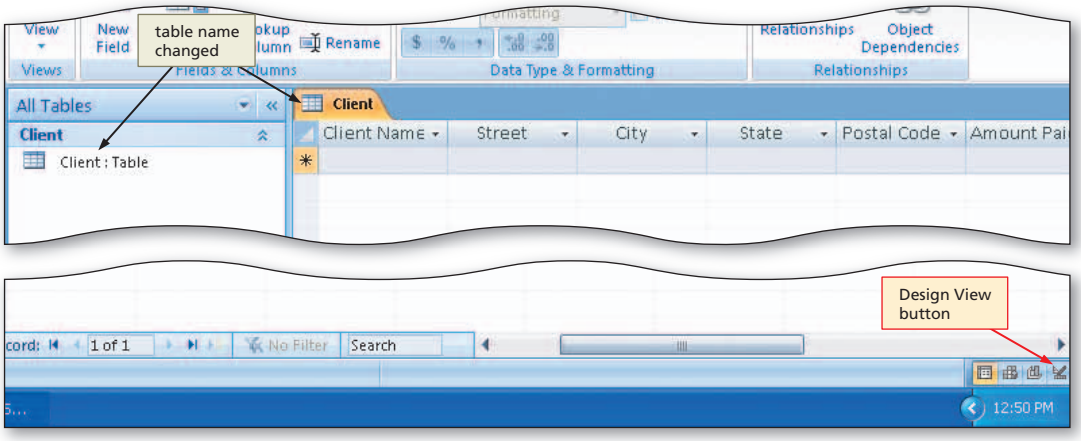


Figure 1–34

Other Ways

1. Click Office Button, click Save on the Office Button menu
2. Right-click tab for table, click Save on shortcut menu
3. Press CTRL+S

To Change the Primary Key

To change the primary key, you must first delete the ID field that Access created automatically. You then can designate the Client Number field as the primary key. To delete the ID field, the table must appear in Design view rather than Datasheet view. You also can designate the Client Number field as the primary key within Design view. As you define or modify the fields, the **row selector**, the small box or bar that, when you click it, selects the entire row, indicates the field you currently are describing. The following steps move to Design view and then change the primary key.

1

- Click the Design View button on the status bar to move to Design view.
- Confirm that your data types match those shown in the figure. Make any necessary corrections to the data types (Figure 1–35).

Q&A Did I have to save the table before moving to Design view?

Yes. If you had not saved it yourself, Access would have asked you to save it.

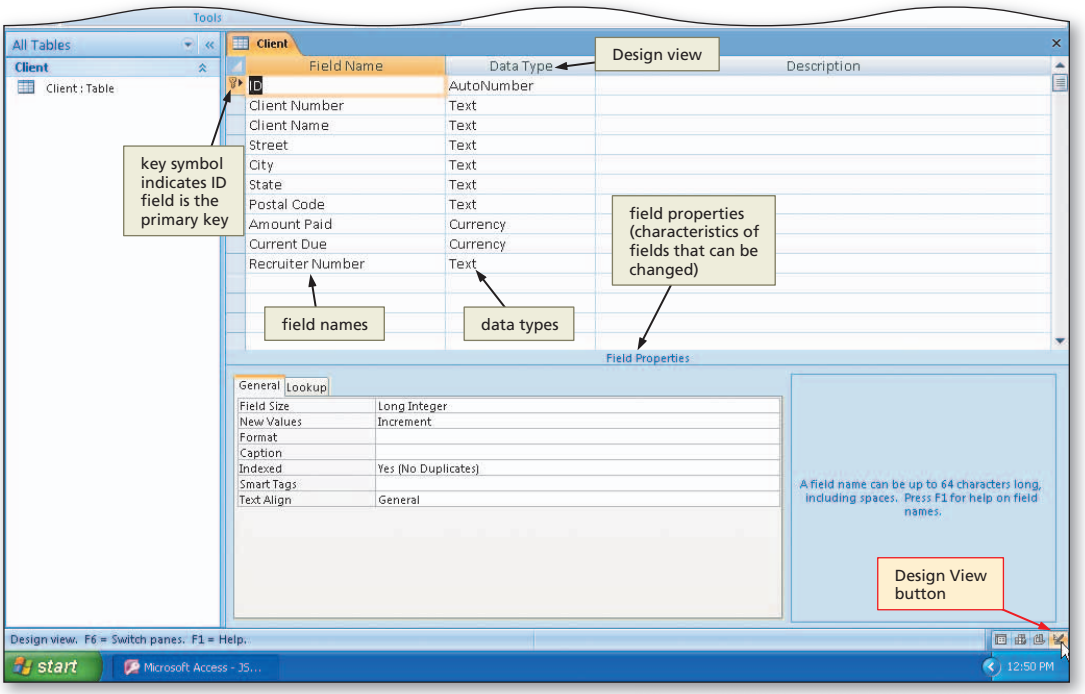


Figure 1–35

2

- Click the row selector for the ID field to select the field.
- Press the DELETE key to delete the field (Figure 1–36).

Q&A What if I click the row selector for the wrong field before pressing the DELETE key?

Click the No button in the Microsoft Office Access dialog box. If you inadvertently clicked the Yes button, you have deleted the wrong field. You can fix this by clicking the Close button for the Client table, and then clicking the No button when asked if you want to save your changes.

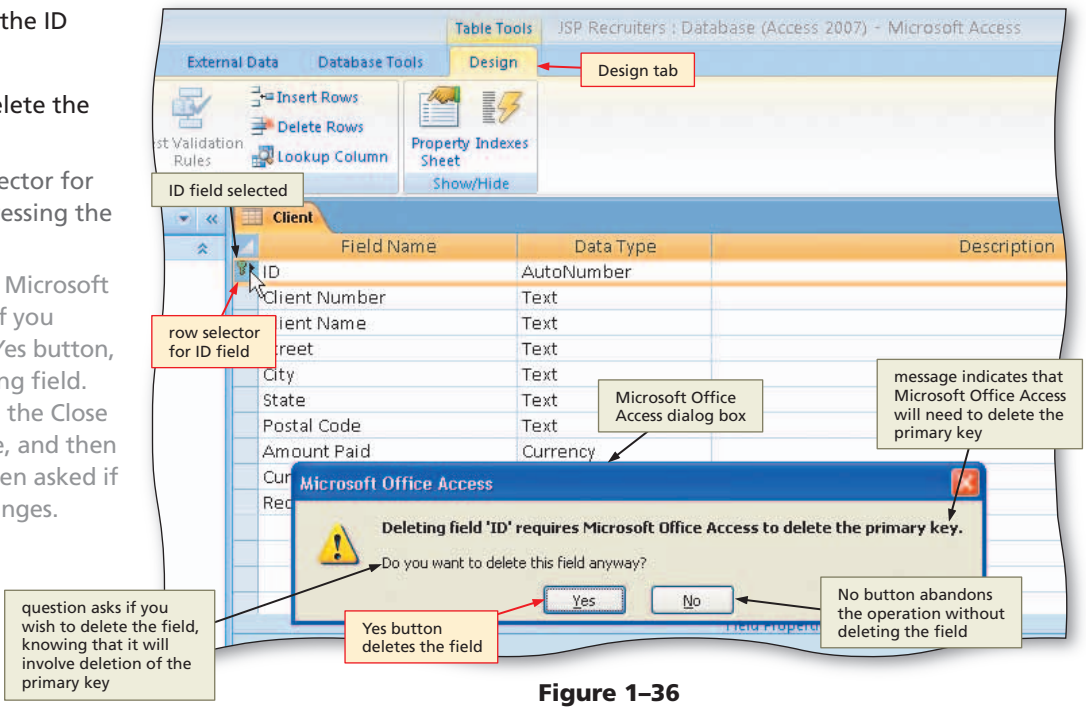


Figure 1–36

3

- Click the Yes button to complete the deletion of the field.
- With the Client Number field selected, click the Primary Key button to designate the Client Number field as the primary key.
- Click the Save button to save the changes (Figure 1–37).

Q&A

When I attempted to save the table I got an error message that indicates index or primary key cannot contain a null value. What did I do wrong and how do I fix it?

You inadvertently added a record to the table by pressing some key after you pressed the DOWN ARROW key. To fix it, click the OK button (you will need to do it twice) and then click the Primary Key button to remove the primary key. Click the Save button to save the table and then click the View button near the upper-left corner of the screen to return to datasheet view. Click the little box immediately to the left of the record you added and press the DELETE key. Click the Yes button when Access asks if it is OK to delete the record. Click the View button again and continue with these steps.

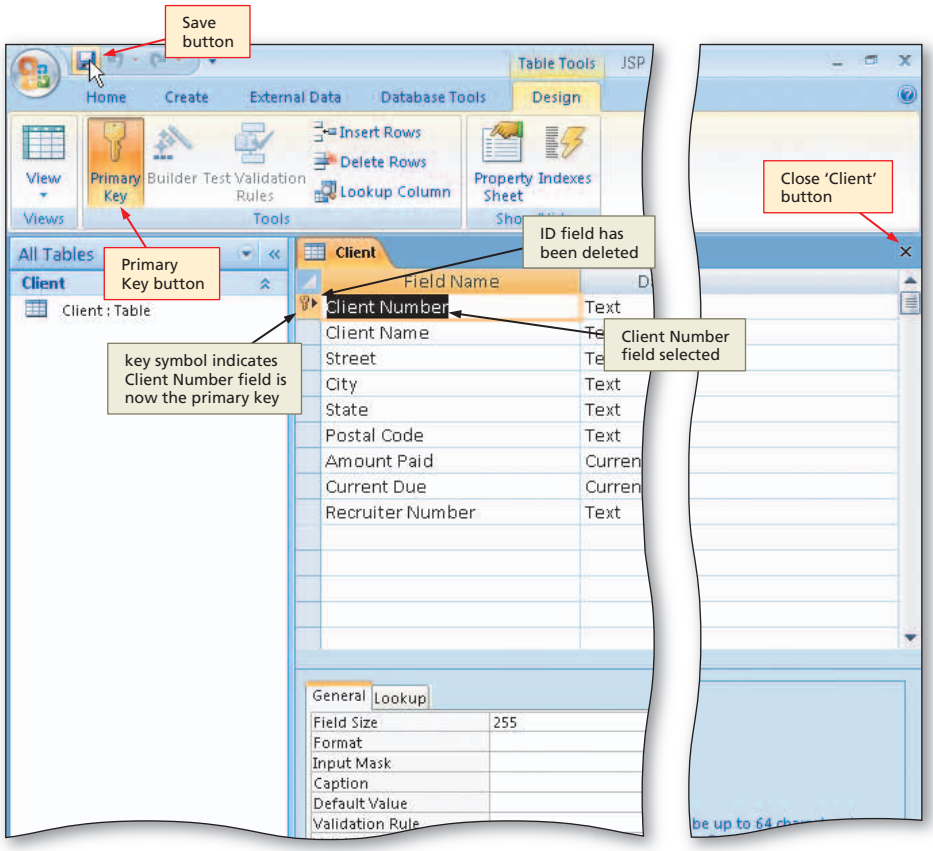


Figure 1–37

4

- Close the Client table by clicking the Close 'Client' button (Figure 1–38).

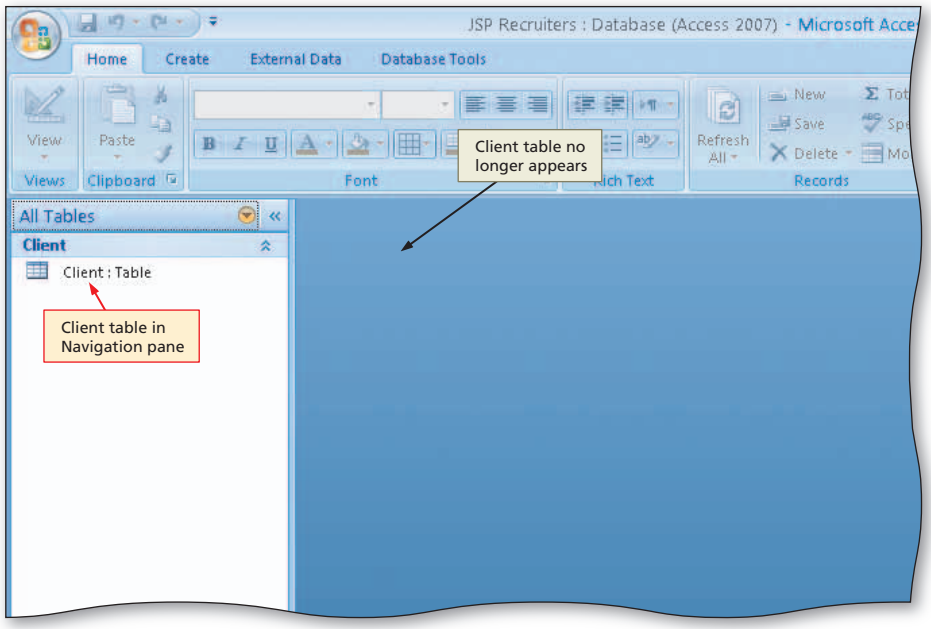


Figure 1–38

To Add Records to a Table

Creating a table by building the structure and saving the table is the first step in a two-step process. The second step is to add records to the table. To add records to a table, the table must be open. When making changes to tables, you work in Datasheet view. In **Datasheet view**, the table is represented as a collection of rows and columns called a **datasheet**.

You often add records in phases. You may, for example, not have enough time to add all the records in one session. The following steps open the Client table in Datasheet view and then add the first two records in the Client table (Figure 1–39).

Client

Client Numb	Client Name	Street	City	State	Postal Code	Amount Paic	Current Due	Recruiter Nu
AC34	Alys Clinic	134 Central	Berridge	CO	80330	$0.00	$17,500.00	21
BH72	Berls Hospital	415 Main	Berls	CO	80349	$29,200.00	$0.00	24

Figure 1–39

1

- Right-click the Client table in the Navigation pane to display the shortcut menu (Figure 1–40).

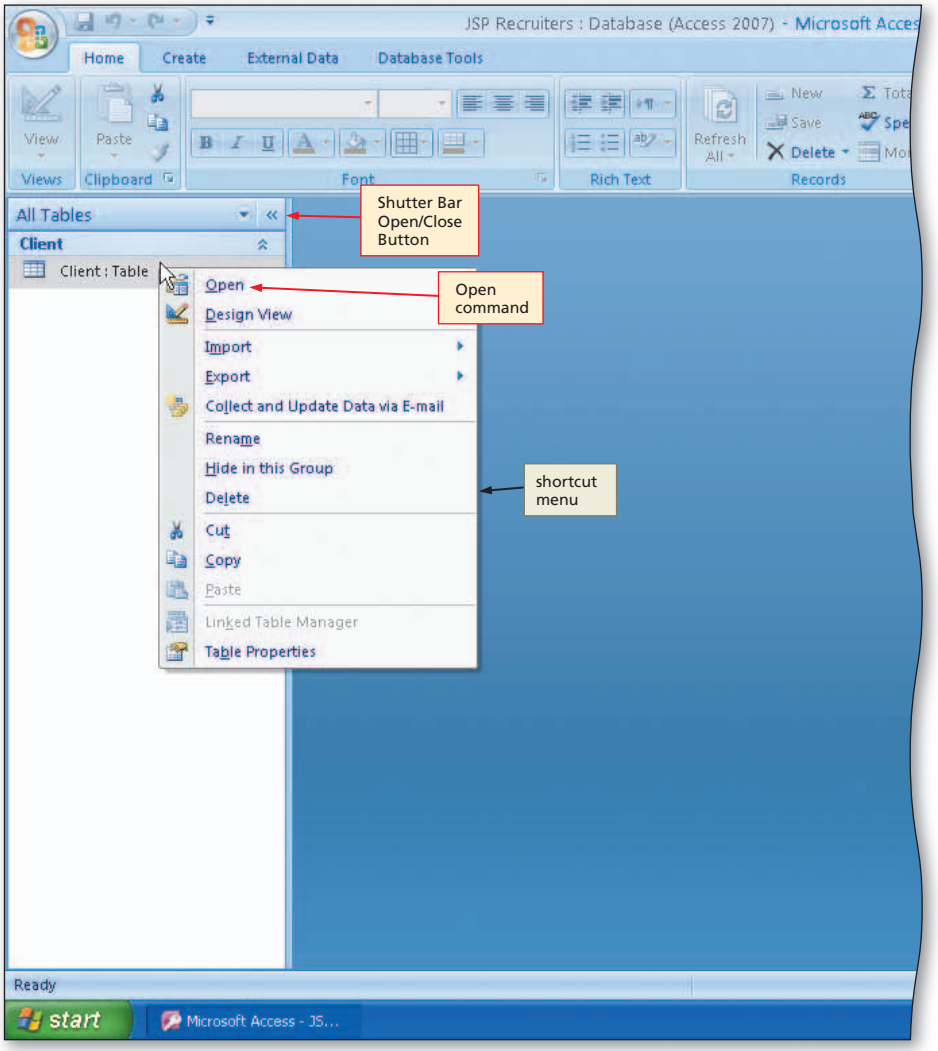


Figure 1–40

2

- Click Open on the shortcut menu to open the Client table in Datasheet view.

Q&A

What if I want to return to Design view?

There are two ways to get to Design view. You could click Design View on the shortcut menu. Alternatively, you could click Open on the shortcut menu to open the table in Datasheet view and then click the Design View button on the Access status bar.

- Click the Shutter Bar Open/Close Button to hide the Navigation pane (Figure 1–41).

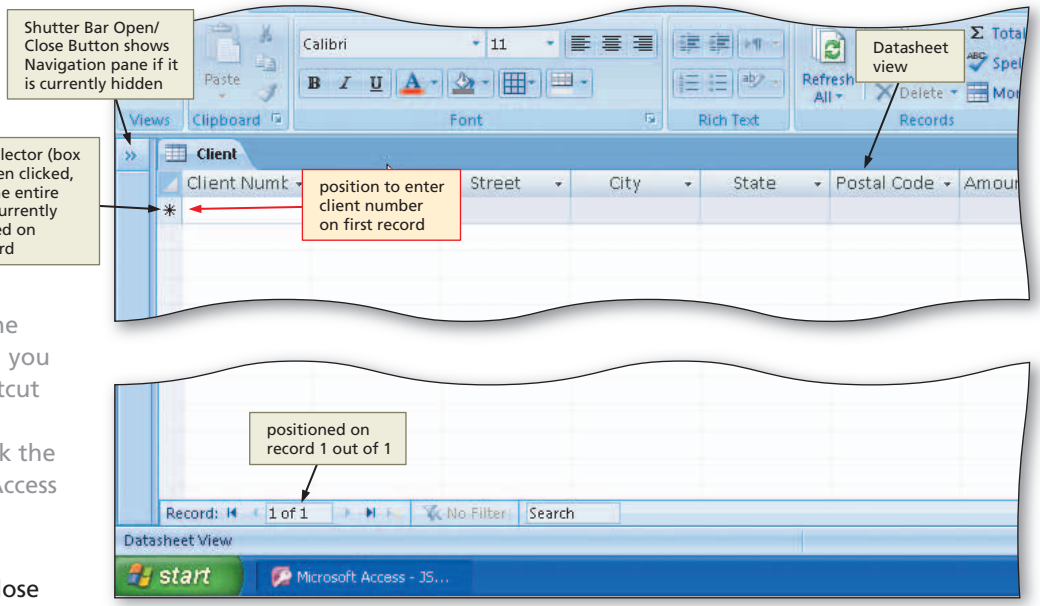


Figure 1–41

3

- Click in the Client Number field and type AC34 to enter the first client number. Be sure you type the letters in uppercase so they are entered in the database correctly (Figure 1–42).

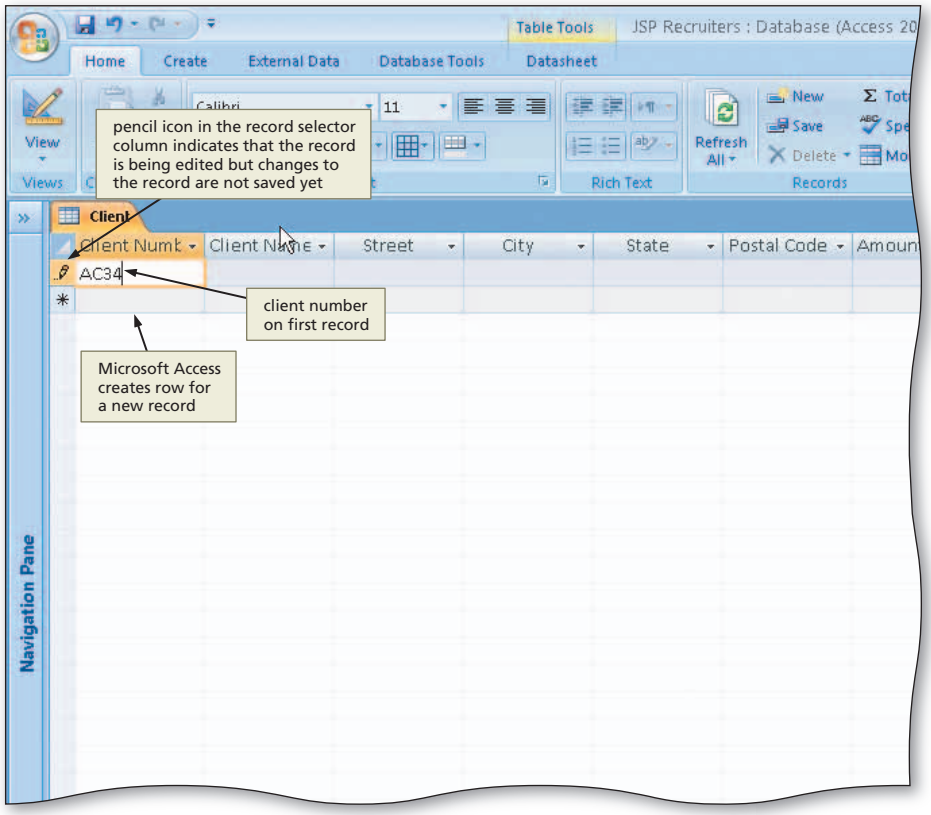


Figure 1–42

4

- Press the TAB key to complete the entry for the Client Number field.
- Enter the client name, street, city, state, and postal code by typing the following entries, pressing the TAB key after each one: `Alys Clinic` as the client name, `134 Central` as the street, `Berridge` as the city, `CO` as the state, and `80330` as the postal code.
- Type `0` to enter the amount paid (Figure 1–43).

Q&A

Do I need to type a dollar sign?

You do not need to type dollar signs or commas. In addition, because the digits to the right of the decimal point are both zeros, you do not need to type either the decimal point or the zeros.

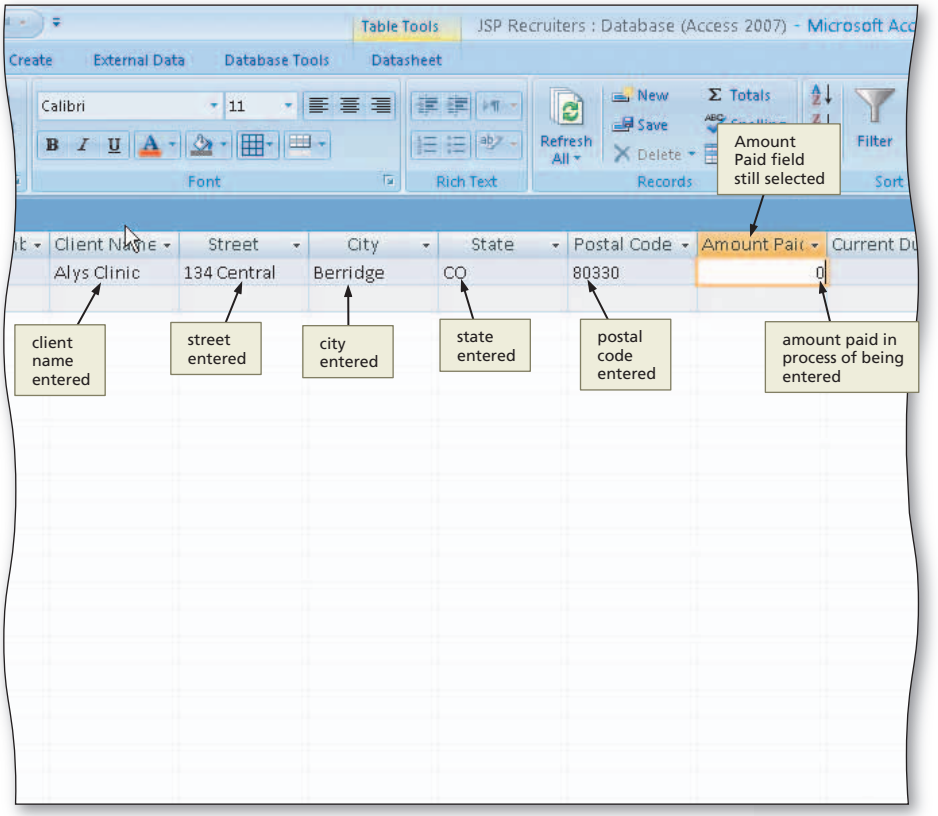


Figure 1–43

5

- Press the TAB key to complete the entry for the Amount Paid field.
- Type `17500` to enter the current due amount and then press the TAB key to move to the next field.
- Type `21` as the Recruiter number to complete data entry for the record (Figure 1–44).

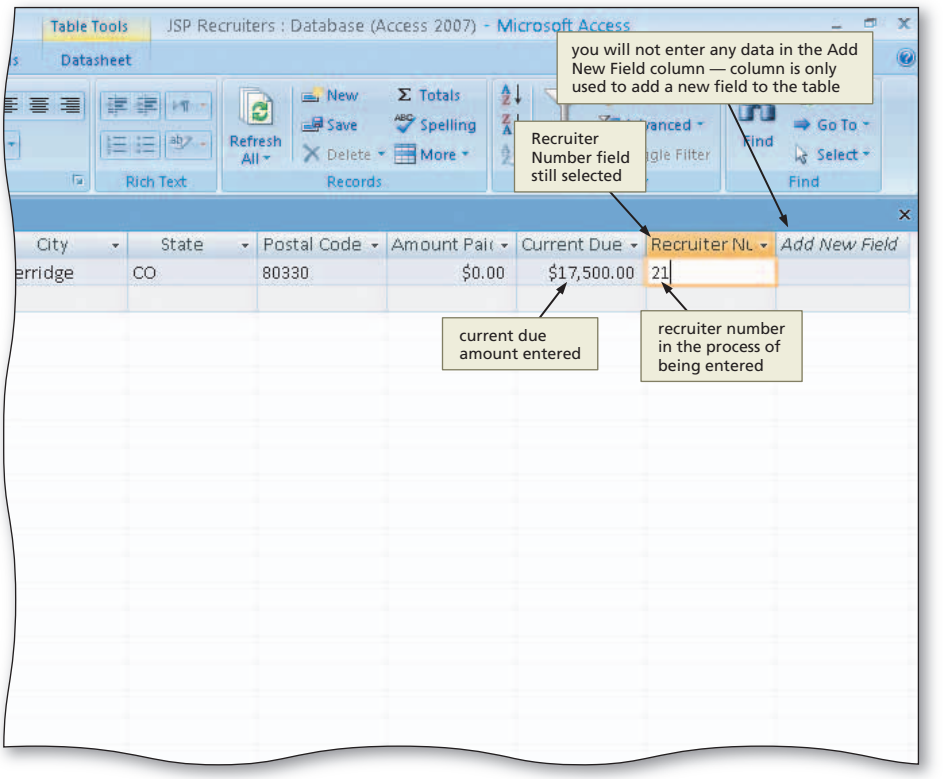


Figure 1–44

6

- Press the TAB key to complete the entry of the first record (Figure 1–45).

Q&A

How and when do I save the record?

As soon as you have entered or modified a record and moved to another record, the original record is saved. This is different from other applications. The rows entered in an Excel worksheet, for example, are not saved until the entire worksheet is saved.

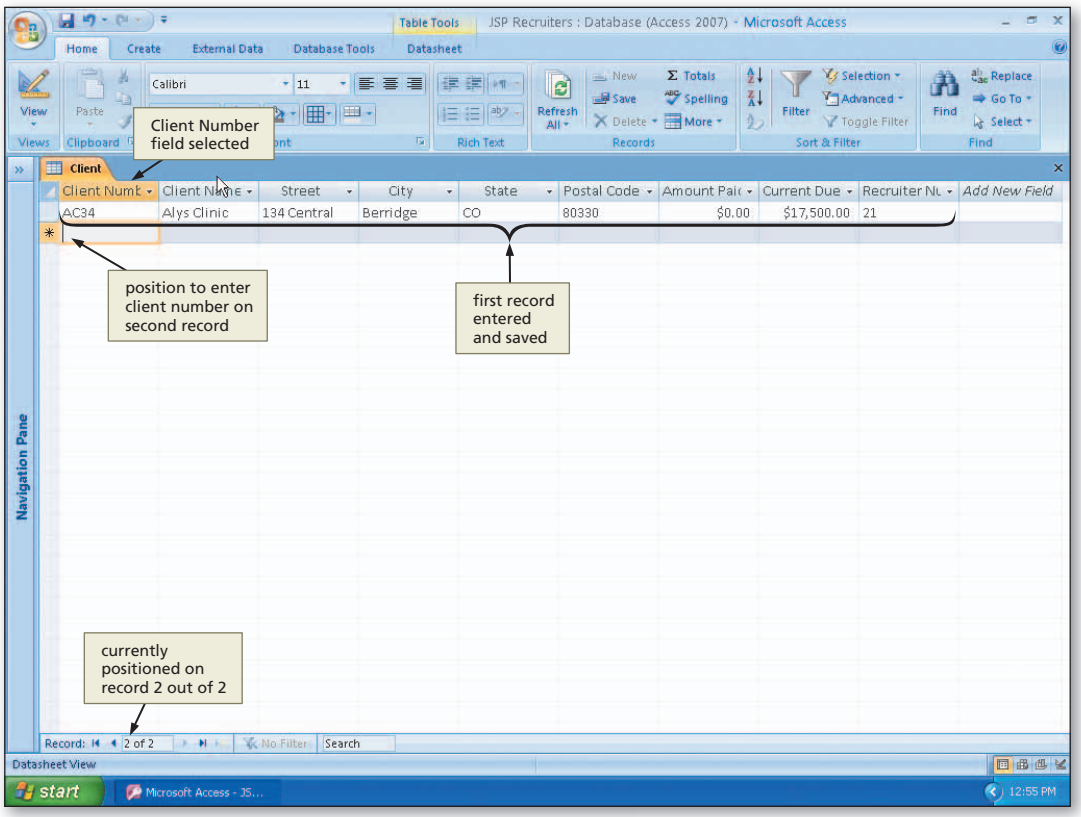


Figure 1–45

7

- Use the techniques shown in Steps 3 through 6 to enter the data for the second record in the Client table (Figure 1–46).

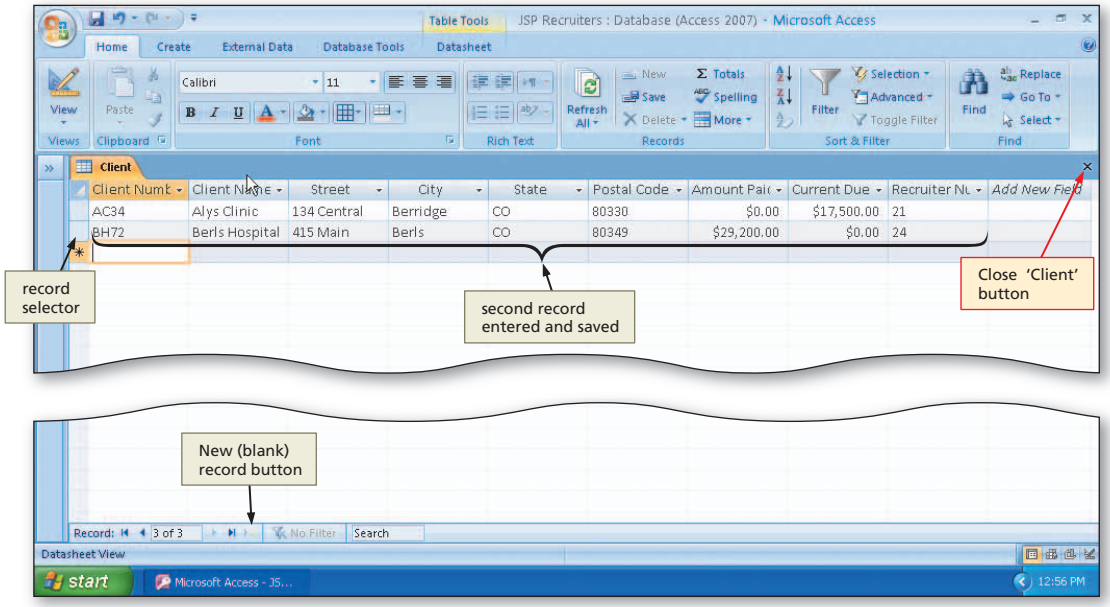


Figure 1–46

BTW

Undo and Redo

You also can undo multiple actions. To see a list of recent actions that you can undo, click the down arrow next to the Undo button on the Quick Access Toolbar. To redo the most recent action, click the Redo button on the Quick Access Toolbar. You also can redo multiple actions by clicking the down arrow next to the button.

Making Changes to the Data

Check your entries carefully to ensure they are correct. If you make a mistake and discover it before you press the TAB key, correct it by pressing the BACKSPACE key until the incorrect characters are removed and then typing the correct characters. If you do not discover a mistake until later, you can use the following techniques to make the necessary corrections to the data:

- To undo your most recent change, click the Undo button on the Quick Access Toolbar. If there is nothing that Access can undo, this button will be dim, and clicking it will have no effect.
- To add a record, click the New (blank) record button, shown in Figure 1–46 on the previous page, and then add the record. Do not worry about it being in the correct position in the table. Access will reposition the record based on the primary key, in this case, the Client Number.
- To delete a record, click the Record selector, shown in Figure 1–46, for the record to be deleted. Then press the DELETE key to delete the record, and click the Yes button when Access asks you to verify that you do indeed wish to delete the record.
- To change the contents of one or more fields in a record, the record must be on the screen. If it is not, use any appropriate technique, such as the UP ARROW and DOWN ARROW keys or the vertical scroll bar, to move to it. If the field you want to correct is not visible on the screen, use the horizontal scroll bar along the bottom of the screen to shift all the fields until the one you want appears. If the value in the field is currently highlighted, you can simply type the new value. If you would rather edit the existing value, you must have an insertion point in the field. You can place the insertion point by clicking in the field or by pressing F2. Once you have produced an insertion point, you can use the arrow keys, the DELETE key, and the BACKSPACE key in making the correction. You also can use the INSERT key to switch between Insert and Overtype mode. When you have made the change, press the TAB key to move to the next field.

If you cannot determine how to correct the data, you may find that you are "stuck" on the record. Access neither allows you to move to any other record until you have made the correction, nor allows you to close the table. If you encounter this situation, simply press the ESC key. Pressing the ESC key will remove from the screen the record you are trying to add. You then can move to any other record, close the table, or take any other action you desire.

BTW

AutoCorrect Options

Using the Office AutoCorrect feature, you can create entries that will replace abbreviations with spelled-out names and phrases automatically. For example, you can create the abbreviated entry *dbms* for *database management system*. Whenever you type dbms followed by a space or punctuation mark, Access automatically replaces dbms with database management system. To specify AutoCorrect rules and exceptions to the rules, click Access Options on the Office Button menu and then click Proofing in the Access Options dialog box.

AutoCorrect

Not visible in the Access window, the **AutoCorrect** feature of Access works behind the scenes, correcting common mistakes when you complete a text entry in a cell. AutoCorrect makes three types of corrections for you:

1. Corrects two initial capital letters by changing the second letter to lowercase.
2. Capitalizes the first letter in the names of days.
3. Replaces commonly misspelled words with their correct spelling. For example, it changes the misspelled word *recieve* to *receive* when you complete the entry. AutoCorrect will correct the spelling automatically of more than 400 commonly misspelled words.

To Close a Table

It is a good idea to close a table as soon as you have finished working with it. It keeps the screen from getting cluttered and prevents you from making accidental changes to the data in the table. The following steps close the Client table.

1

- Click the Close 'Client' button, shown in Figure 1–46 on page AC 33, to close the table (Figure 1–47).

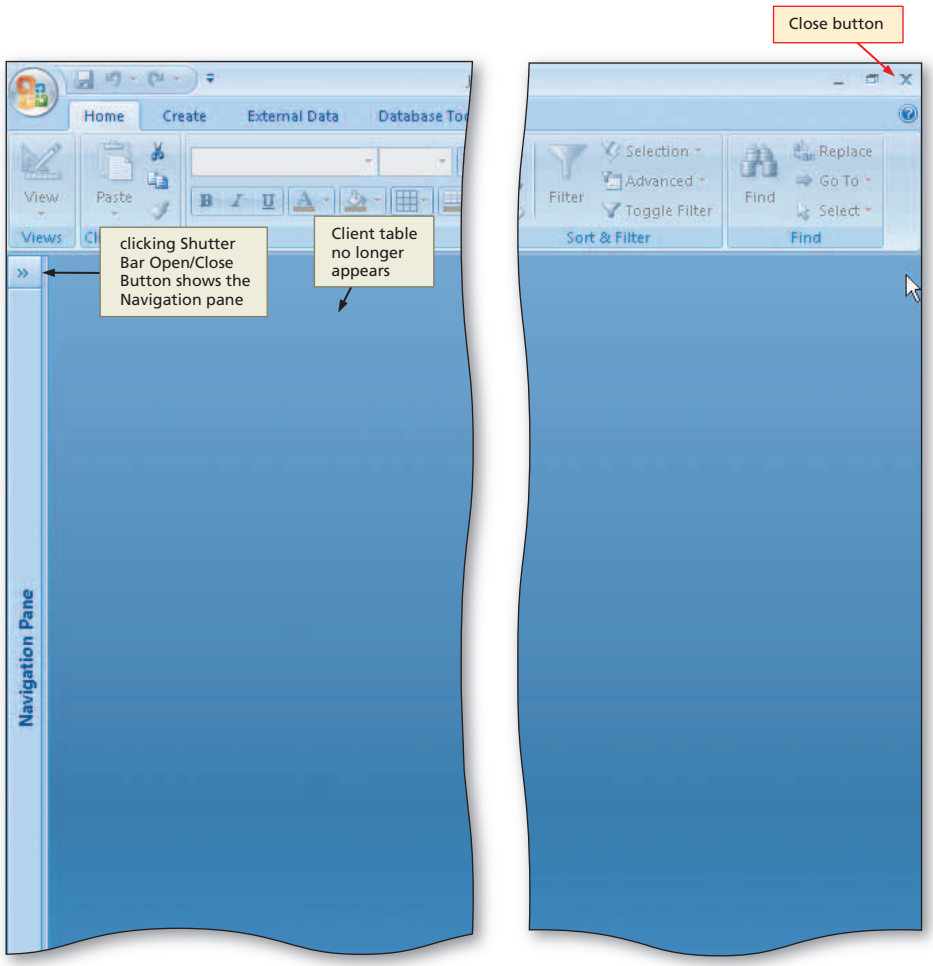


Figure 1–47

Other Ways

1. Right-click tab for table, click Close on shortcut menu

Quitting Access

If you save the object on which you are currently working and then quit Access, all Access windows close. If you have made changes to an object since the last time the object was saved, Access displays a dialog box asking if you want to save the changes you made before it closes that window. The dialog box contains three buttons with these resulting actions:

- Yes button — Saves the changes and then quits Access
- No button — Quits Access without saving changes
- Cancel button — Closes the dialog box and redisplays the database without saving the changes

If no changes have been made to any object since the last time the object was saved, Access will close all windows without displaying any dialog boxes.

To Quit Access

You saved your changes to the table and did not make any additional changes. You are ready to quit Access. The following step quits Access.

1. Click the Close button on the right side of the Access title bar, shown in Figure 1–47 on the previous page, to quit Access.

Starting Access and Opening a Database

Once you have created and later closed a database, you will need to open it in the future in order to use it. Opening a database requires that Access is running on your computer.

To Start Access

The following steps, which assume Windows is running, start Access.

1. Click the Start button on the Windows taskbar to display the Start menu.
2. Point to All Programs on the Start menu to display the All Programs submenu and then point to Microsoft Office on the All Programs submenu to display the Microsoft Office submenu.
3. Click Microsoft Office Access 2007 on the Microsoft Office submenu to start Access and display the Getting Started with Microsoft Office Access window (Figure 1–48).
4. If the Access window is not maximized, click the Maximize button on its title bar to maximize the window.

Figure 1–48

To Open a Database from Access

Earlier in this chapter you created your database on a USB flash drive using the file name, JSP Recruiters. There are two ways to open the file containing your database. If the file you created appears in the Recent Documents list, you could click it to open the file. If not, you can use the More button to open the file. The following steps use the More button to open the JSP Recruiters database from the USB flash drive.

1

- With your USB flash drive connected to one of the computer's USB ports, click the More button, shown in Figure 1–48, to display the Open dialog box.
- If necessary, click the Look in box arrow and then click UDISK 2.0 (E:) to select the USB flash drive, Drive E in this case, in the Look in list as the new open location.
- Click JSP Recruiters to select the file name (Figure 1–49).

Q&A How do I open the file if I am not using a USB flash drive?

Use the same process, but be certain to select your device in the Look in list. You might need to open multiple folders.

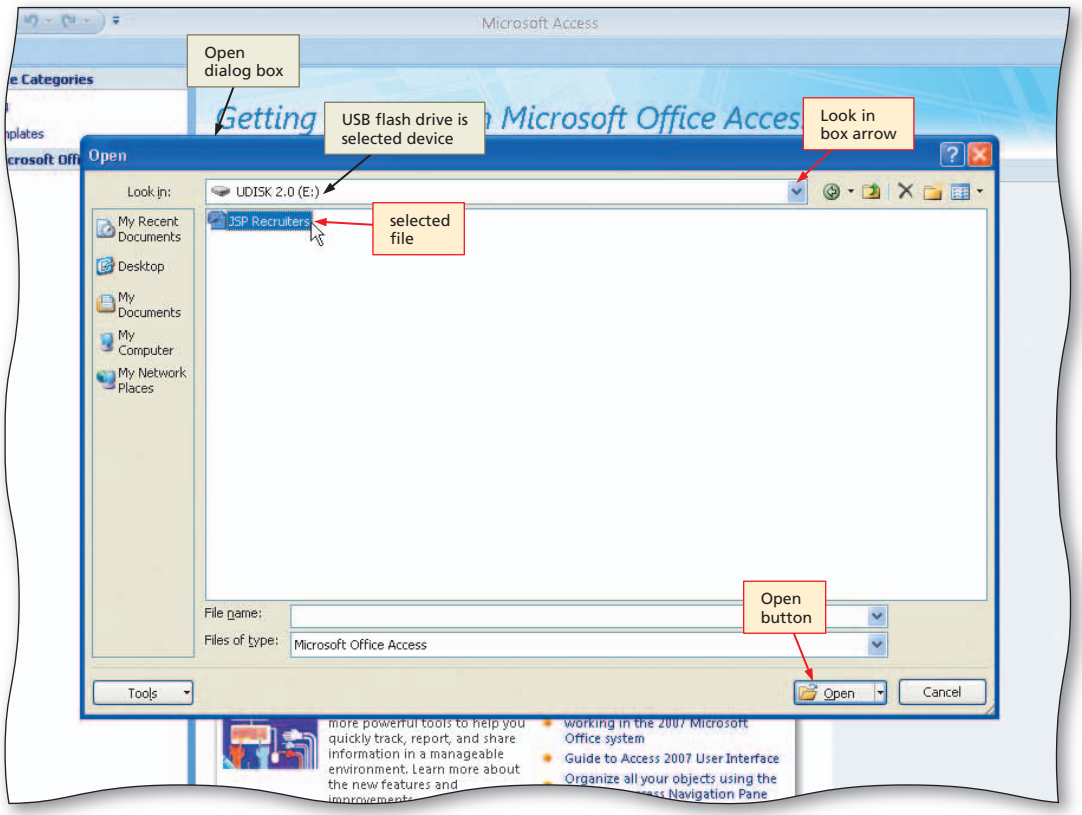


Figure 1–49

2

- Click the Open button to open the database (Figure 1–50).

Q&A Why do I see the Access icon and name on the Windows taskbar?

When you open an Access database, an Access program button is displayed on the taskbar. If the contents of a button cannot fit in the allotted button space, an ellipsis appears. If you point to a program button, its entire contents appear in a ScreenTip, which in this case would be the program name followed by the file name.

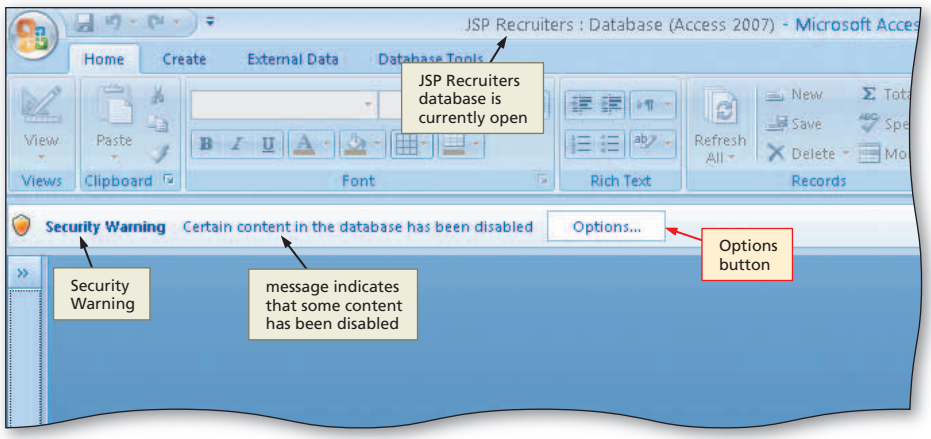


Figure 1–50

3

- If a Security Warning appears, as shown in Figure 1–50 on the previous page, click the Options button to display the Microsoft Office Security Options dialog box (Figure 1–51).

4

- Click the 'Enable this content' option button.
- Click the OK button to enable the content.

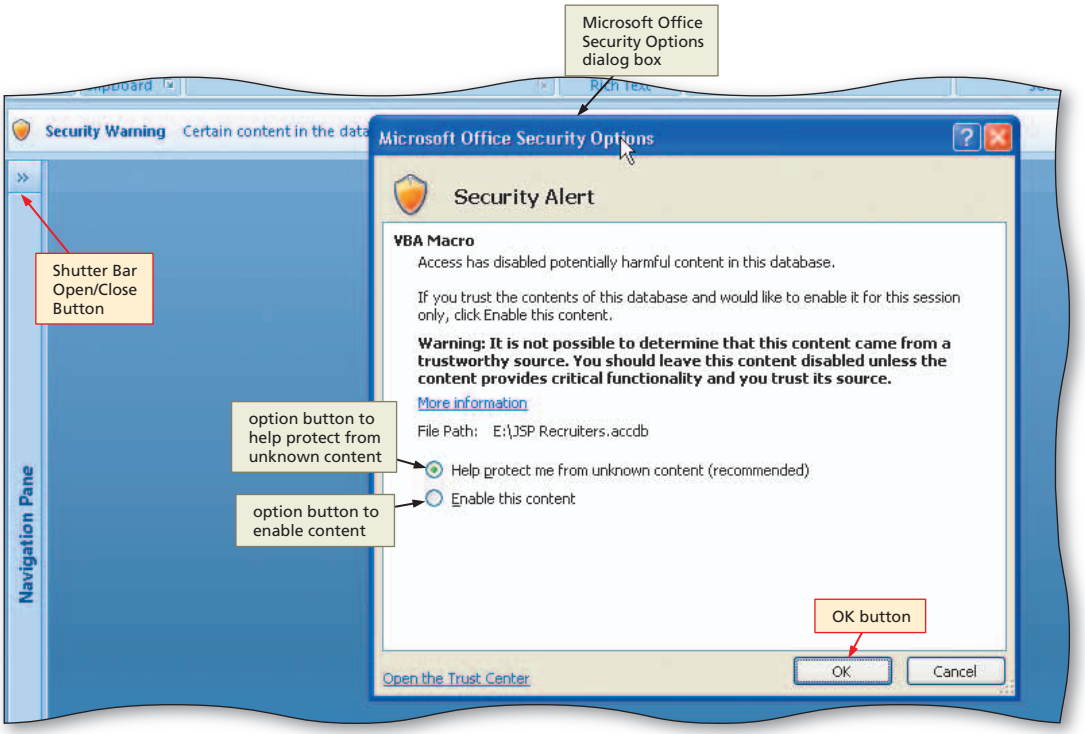


Figure 1–51

Q&A

When would I want to disable the content?

You would want to disable the content if you suspected that your database might contain harmful content or damaging macros. Because you are the one who created the database and no one else has used it, you should have no such suspicions.

Other Ways

1. Click Office Button, double-click file name in Recent Documents list
2. Press CTRL+O, select file name, press ENTER

To Add Additional Records to a Table

You can add records to a table that already contains data using a process almost identical to that used to add records to an empty table. The only difference is that you place the insertion point after the last data record before you enter the additional data. To do so, use the **Navigation buttons**, which are buttons used to move within a table, found near the lower-left corner of the screen when a table is open. The purpose of each of the Navigation buttons is described in Table 1–2.

Table 1–2 Navigation Buttons in Datasheet View

Button	Purpose
First record	Moves to the first record in the table
Previous record	Moves to the previous record
Next record	Moves to the next record
Last record	Moves to the last record in the table
New (blank) record	Moves to the end of the table to a position for entering a new record

The following steps add the remaining records (Figure 1–52) to the Client table.

Client

Client Numb	Client Name	Street	City	State	Postal Code	Amount Paic	Current Due	Recruiter Nu
BL12	Benton Labs	12 Mountain	Denton	CO	80412	$16,500.00	$38,225.00	24
EA45	ENT Assoc.	867 Ridge	Fort Stewart	CO	80336	$12,750.00	$15,000.00	27
FD89	Ferb Dentistry	34 Crestview	Berridge	CO	80330	$21,000.00	$12,500.00	21
FH22	Family Health	123 Second	Tarleton	CO	80409	$0.00	$0.00	24
MH56	Maun Hospital	76 Dixon	Mason	CO	80356	$0.00	$43,025.00	24
PR11	Peel Radiology	151 Valleyview	Fort Stewart	CO	80336	$31,750.00	$0.00	21
TC37	Tarleton Clinic	451 Hull	Tarleton	CO	80409	$18,750.00	$31,500.00	27
WL56	West Labs	785 Main	Berls	CO	80349	$14,000.00	$0.00	24

Figure 1–52

1

- If the Navigation pane is hidden, click the Shutter Bar Open/Close Button, shown in Figure 1–51, to show the Navigation pane (Figure 1–53).

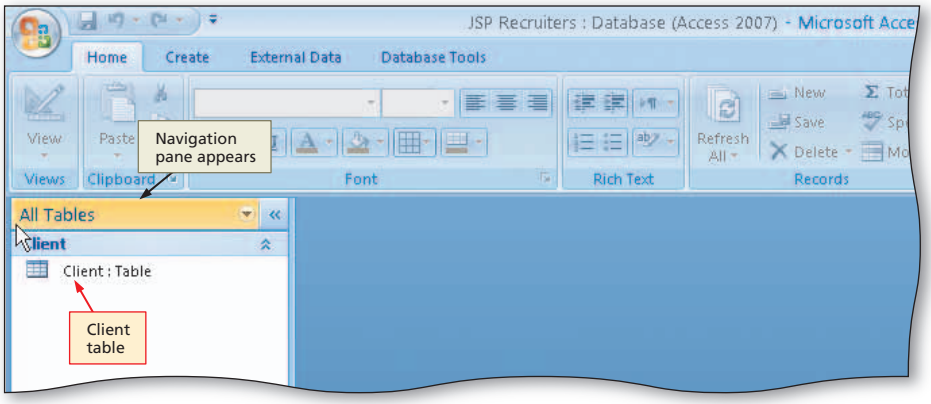


Figure 1–53

2

- Right-click the Client table in the Navigation pane to display a shortcut menu.
- Click Open on the shortcut menu to open the Client table in Datasheet view.
- Hide the Navigation pane by clicking the Shutter Bar Open/Close button (Figure 1–54).

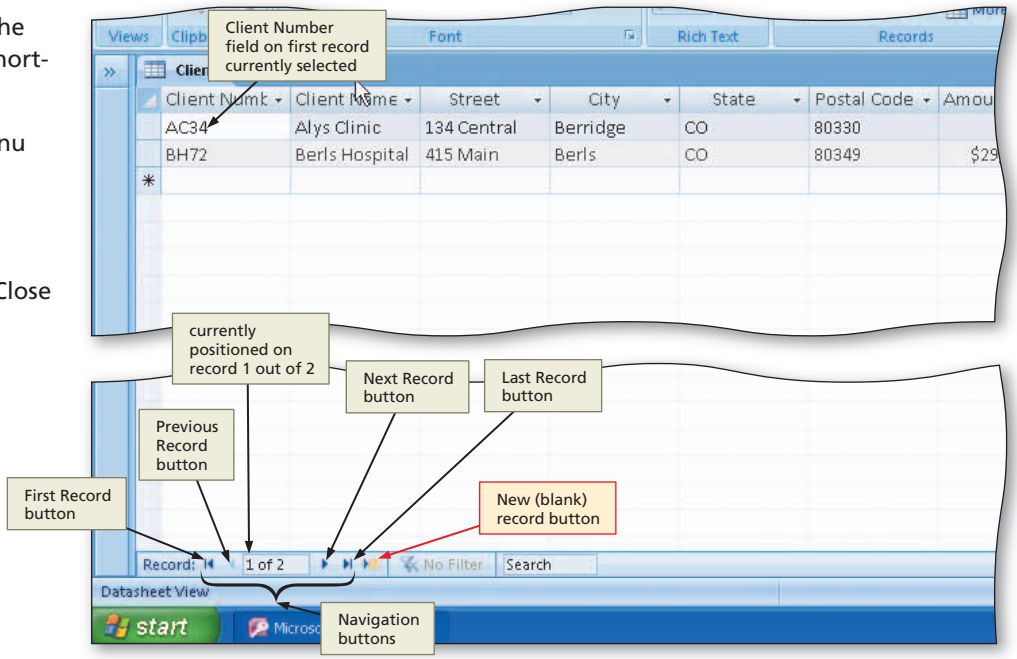


Figure 1–54

3

- Click the New (blank) record button to move to a position to enter a new record (Figure 1–55).

Q&A

Why click the New (blank) record button? Could you just click the Client Number on the first open record and then add the record?

You could click the Client Number on the first open record, provided that record appears on the screen. With only two records in the table, this is not a problem. Once a table contains more records than will fit on the screen, it is easier to click the New (blank) record button.

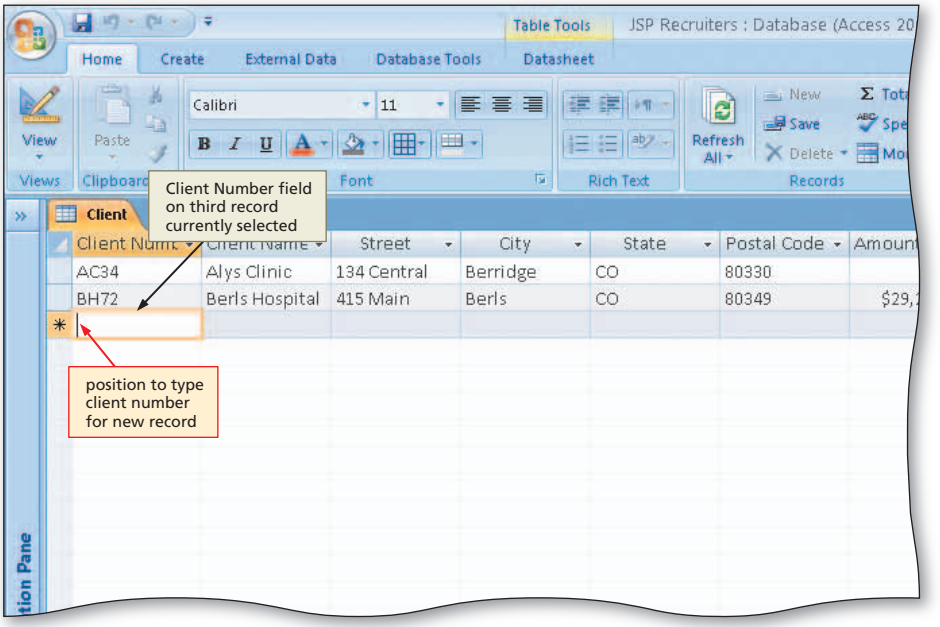


Figure 1–55

4

- Add the records shown in Figure 1–52, using the same techniques you used to add the first two records (Figure 1–56).

5

- Click the Close 'Client' button to close the table.

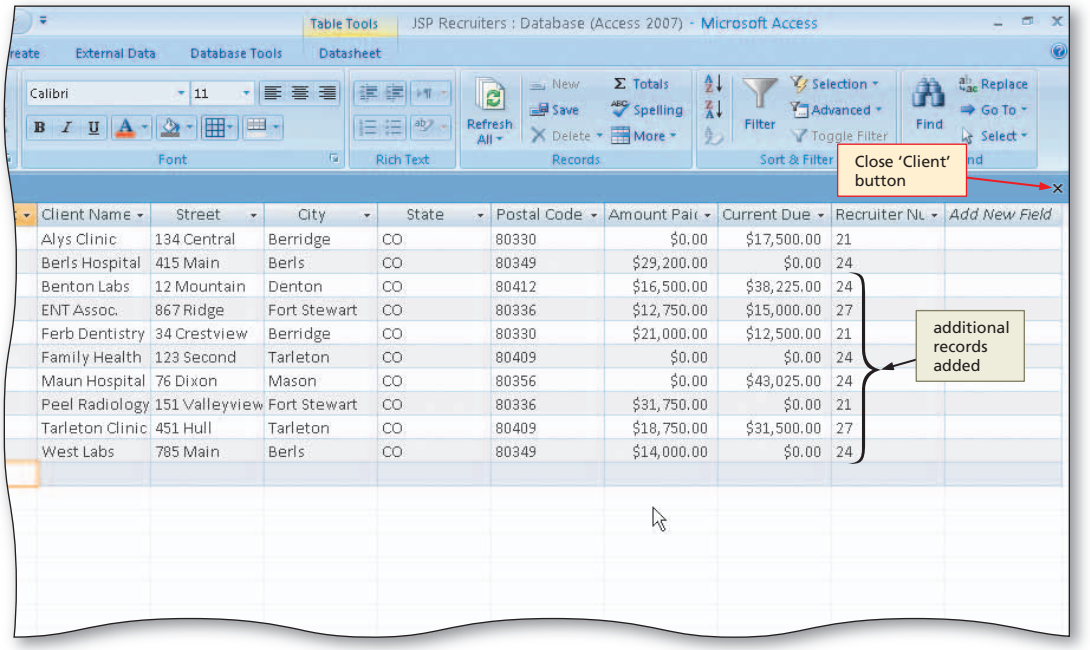


Figure 1–56

Other Ways

1. Click New button on Ribbon
2. Press CTRL+PLUS SIGN (+)

Previewing and Printing the Contents of a Table

When working with a database, you often will need to print a copy of the table contents. Figure 1–57 shows a printed copy of the contents of the Client table. (Yours may look slightly different, depending on your printer.) Because the Client table is wider substantially than the screen, it also will be wider than the normal printed page in portrait orientation. **Portrait orientation** means the printout is across the width of the page.

Client 4/23/2008

Client Number	Client Name	Street	City	State	Postal Code	Amount Paid	Current Due	Recruiter Numb
AC34	Alys Clinic	134 Central	Berridge	CO	80330	$0.00	$17,500.00	21
BH72	Berls Hospital	415 Main	Berls	CO	80349	$29,200.00	$0.00	24
BL12	Benton Labs	12 Mountain	Denton	CO	80412	$16,500.00	$38,225.00	24
EA45	ENT Assoc.	867 Ridge	Fort Stewart	CO	80336	$12,750.00	$15,000.00	27
FD89	Ferb Dentistry	34 Crestview	Berridge	CO	80330	$21,000.00	$12,500.00	21
FH22	Family Health	123 Second	Tarleton	CO	80409	$0.00	$0.00	24
MH56	Maun Hospital	76 Dixon	Mason	CO	80356	$0.00	$43,025.00	24
PR11	Peel Radiology	151 Valleyview	Fort Stewart	CO	80336	$31,750.00	$0.00	21
TC37	Tarleton Clinic	451 Hull	Tarleton	CO	80409	$18,750.00	$31,500.00	27
WL56	West Labs	785 Main	Berls	CO	80349	$14,000.00	$0.00	24

Figure 1–57

Landscape orientation means the printout is across the length (height) of the page. Thus, to print the wide database table, use landscape orientation. If you are printing the contents of a table that fit on the screen, you will not need landscape orientation. A convenient way to change to landscape orientation is to preview what the printed copy will look like by using Print Preview. This allows you to determine whether landscape orientation is necessary and, if it is, to change the orientation easily to landscape. In addition, you also can use Print Preview to determine whether any adjustments are necessary to the page margins.

To Preview and Print the Contents of a Table

The following steps use Print Preview to preview and then print the Client table.

1

- If the Navigation pane is hidden, show the Navigation pane by clicking the Shutter Bar Open/ Close Button.
- Be sure the Client table is selected (Figure 1–58).

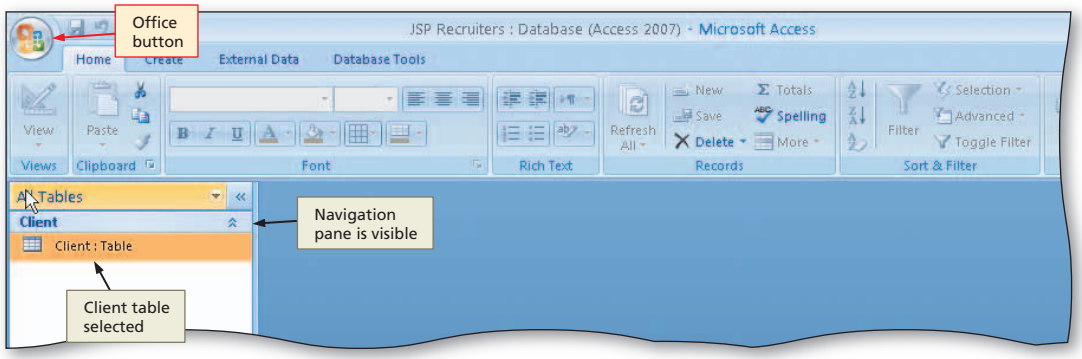


Figure 1–58

Q&A

Why do I have to be sure the Client table is selected? It is the only object in the database.

There is no issue when the database contains only one object. Ensuring that the correct object is selected is a good habit to form, however, to make sure that the object you print is the one you want.

2

- Click the Office Button to display the Office Button menu.
- Point to the Print command arrow to display the Print submenu (Figure 1–59).

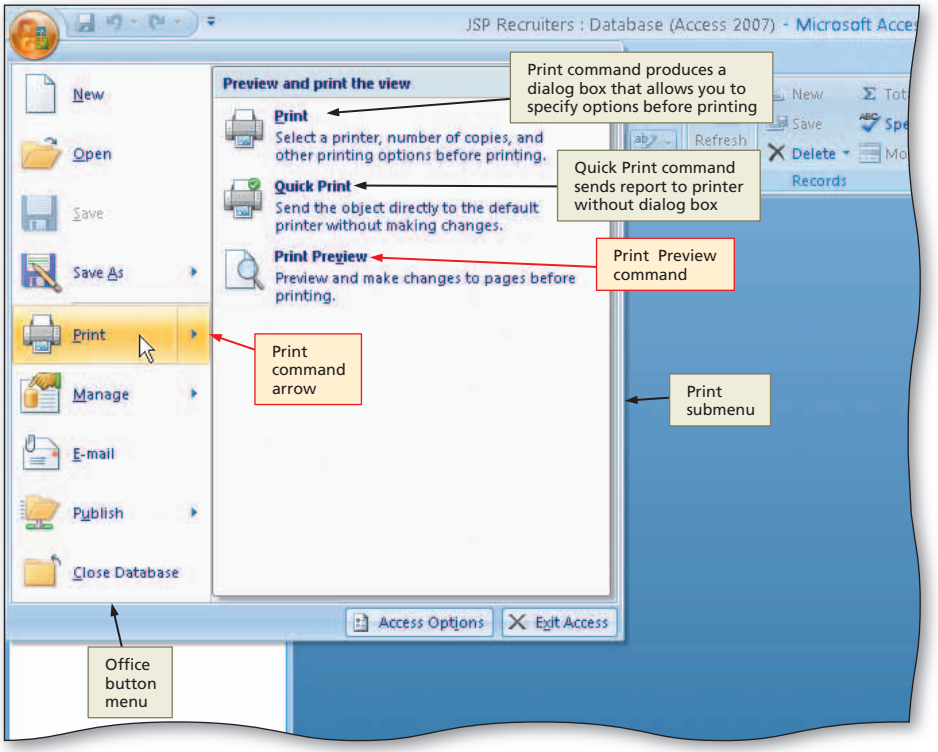


Figure 1–59

3

- Click Print Preview on the Print submenu to display a preview of the report (Figure 1–60).

Q&A

I can't read the report. Can I magnify a portion of the report?

Yes. Point the mouse pointer, whose shape will change to a magnifying glass, at the portion of the report that you wish to magnify, and then click. You can return the view of the report to the one shown in the figure by clicking a second time.

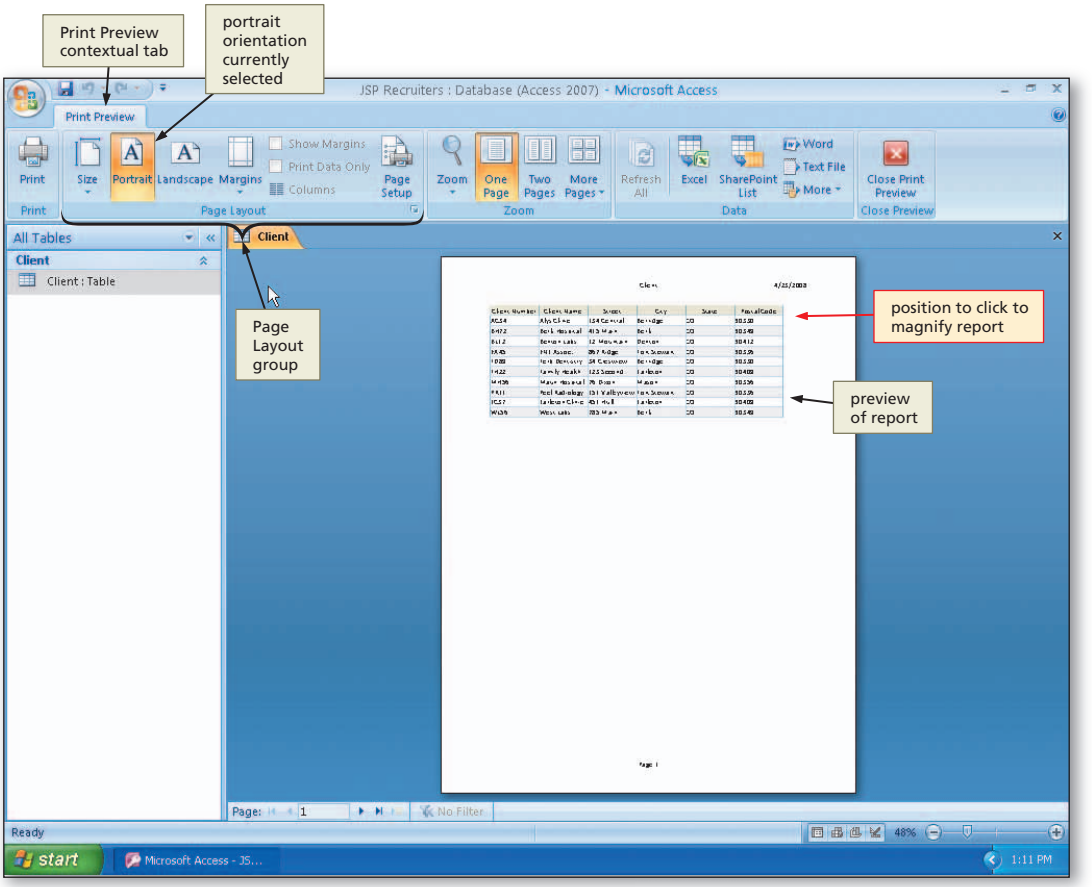


Figure 1–60

4

- Click the mouse pointer in the position shown in Figure 1–60 to magnify the upper-right section of the report (Figure 1–61).

Q&A My report was already magnified in a different area. How can I see the area shown in the figure?

There are two ways. You can use the scroll bars to move to the desired portion of the report. You also can click the mouse pointer anywhere in the report to produce a screen like the one in Figure 1–60, and then click in the location shown in the figure.

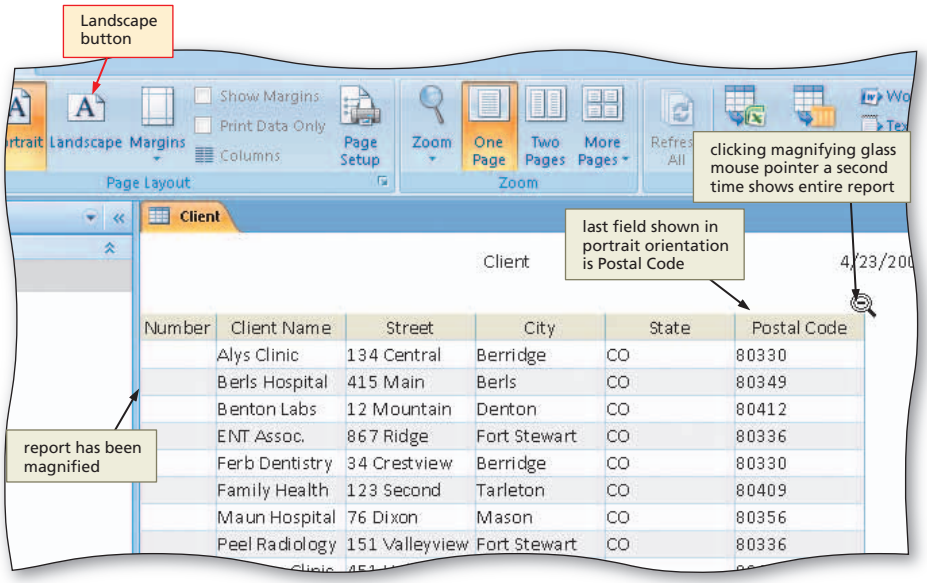


Figure 1–61

5

- Click the Landscape button to change to landscape orientation (Figure 1–62).

6

- Click the Print button on the Print Preview tab to print the report.
- When the printer stops, retrieve the hard copy of the Client table.
- Click the Close 'Client' button to close the Print Preview window.

Q&A How can I print multiple copies of my document other than clicking the Print button multiple times?

Click the Office Button, point to the arrow next to Print on the Office Button menu, click Print on the Print submenu, increase the number in the Number of Copies: box, and then click the OK button.

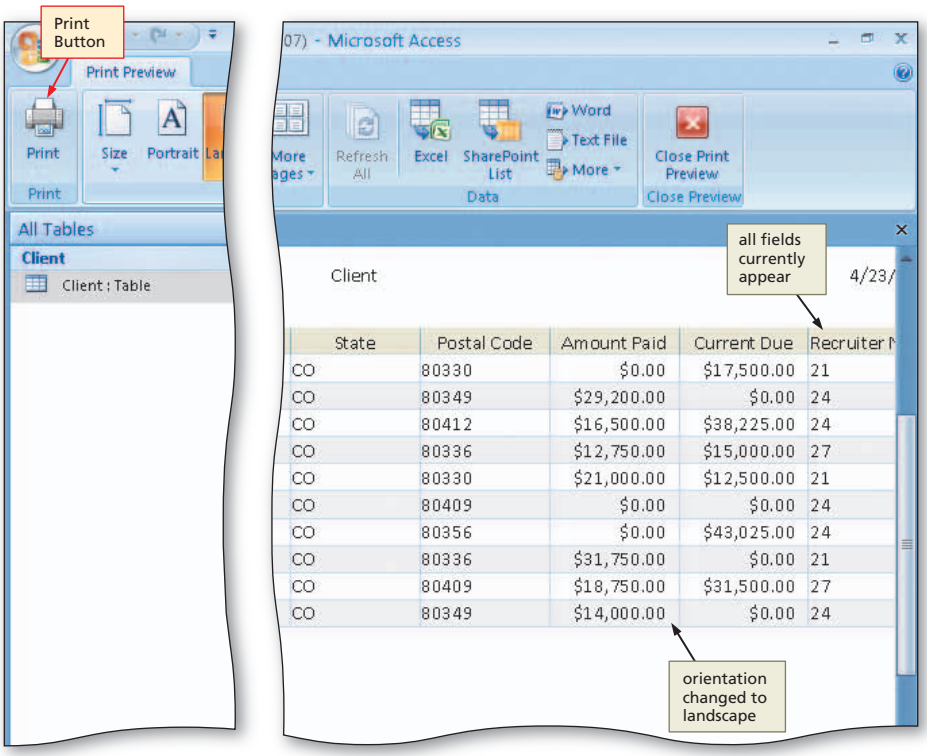


Figure 1–62

Q&A How can I print a range of pages rather than printing the whole report?

Click the Office Button, point to the arrow next to Print on the Office Button menu, click Print on the Print submenu, click the Pages option button in the Print Range box, enter the desired page range, and then click the OK button.

Other Ways

1. Press CTRL+P, press ENTER

To Create an Additional Table

The JSP Recruiters database contains two tables, the Client table and the Recruiter table. You need to create the Recruiter table and add records to it. Because you already used the default table that Access created when you created the database, you will need to first create the table. You can then add fields as you did with the Client table. The fields to be added are Recruiter Number, Last Name, First Name, Street, City, State, Postal Code, Rate, and Commission. The data type for the Rate field is Number, and the data type for the Commission field is Currency. The data type for all other fields is Text. The following steps create the Recruiter table.

1

- Click Create on the Ribbon to display the Create tab (Figure 1–63).

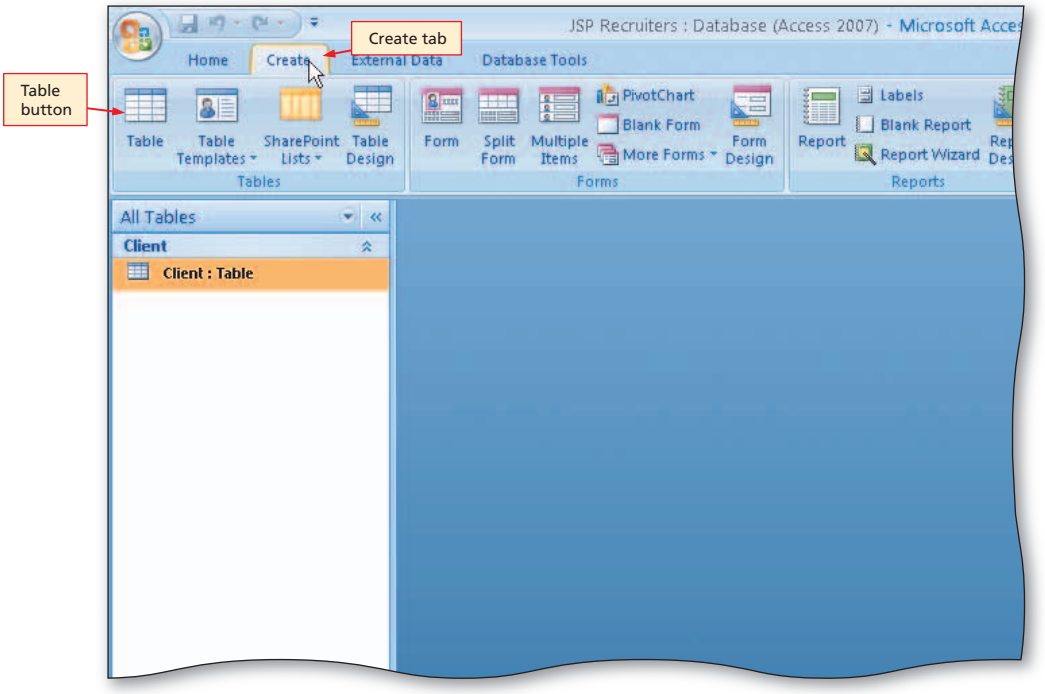


Figure 1–63

2

- Click the Table button on the Create tab to create a new table (Figure 1–64).

Q&A

Could I save the table now so I can assign it the name I want, rather than Table1?

You certainly can. Be aware, however, that you will still need to save it again once you have added all your fields.

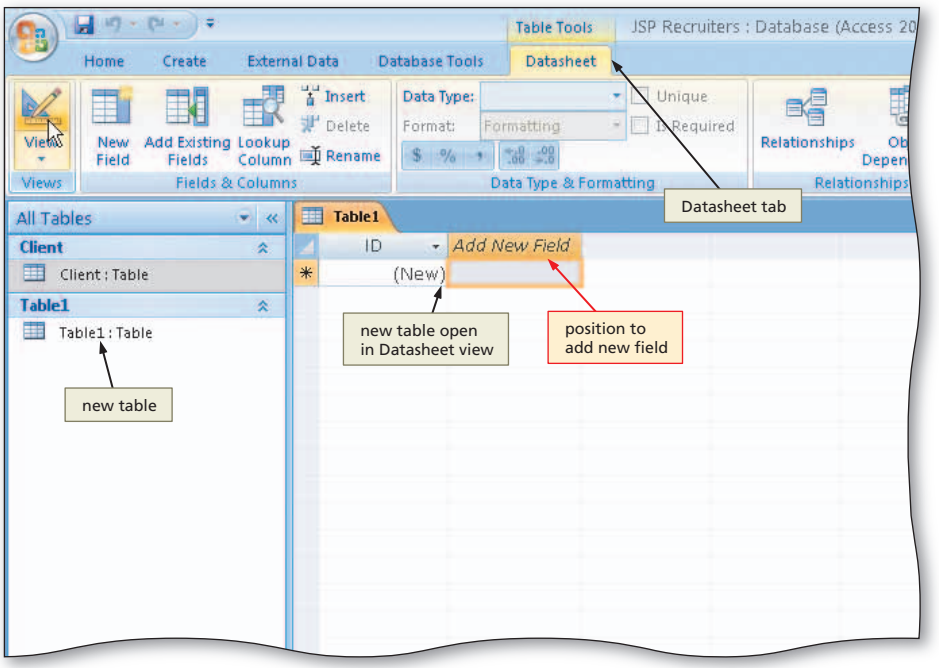


Figure 1–64

3

- Right-click Add New Field to display a shortcut menu.
- Click Rename Column on the shortcut menu to display an insertion point.
- Type `Recruiter Number` to assign a name to the new field.
- Press the DOWN ARROW key to complete the addition of the field.
- Using the same technique, add the Last Name, First Name, Street, City, State, Postal Code, and Rate fields.

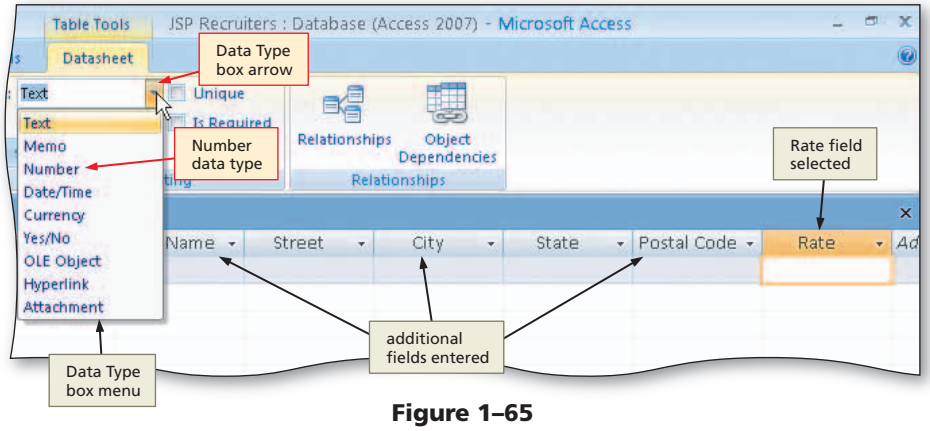


Figure 1–65

- Click the Data Type box arrow to display the Data Type box menu (Figure 1–65).

4

- Click Number on the Data Type box menu to select the Number data type and assign the Number data type to the Rate field.
- Add the Commission field and assign it the Currency data type.
- Click the Save button to display the Save As dialog box (Figure 1–66).

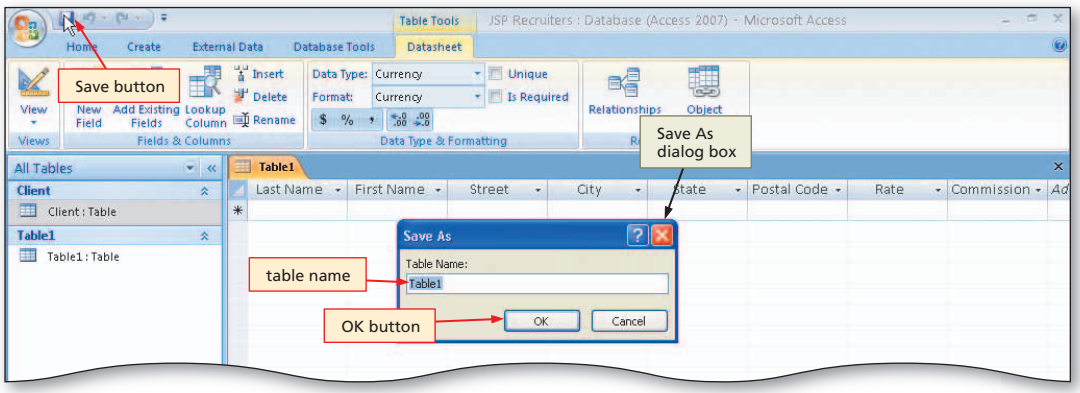


Figure 1–66

5

- Type `Recruiter` to assign a name to the table.
- Click the OK button (Figure 1–67).

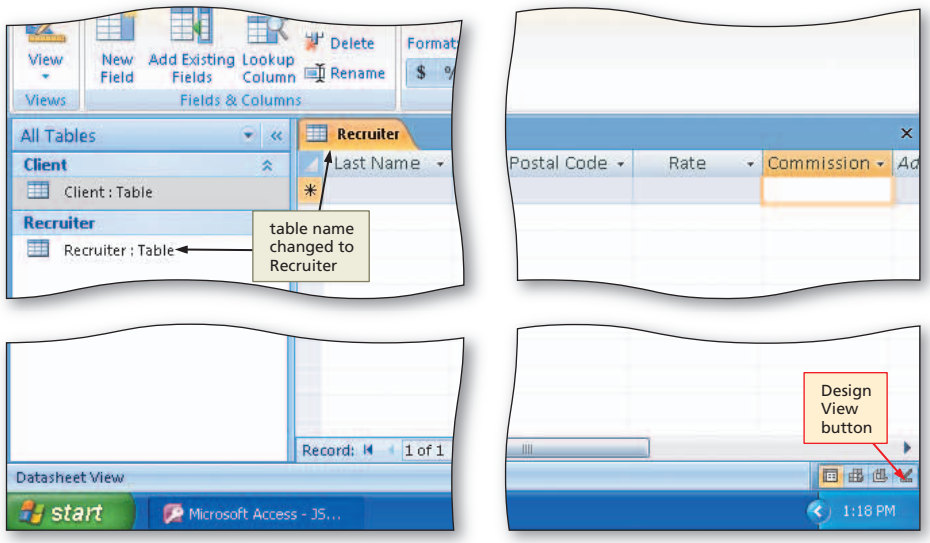


Figure 1–67

To Modify the Primary Key and Field Properties

Fields whose data type is Number often require you to change the field size. Table 1–3 shows the possible field sizes for Number fields.

Table 1–3 Field Sizes for Number Fields

Field Size	Description
Byte	Integer value in the range of 0 to 255.
Integer	Integer value in the range of -32,768 to 32,767.
Long Integer	Integer value in the range of -2,147,483,648 to 2,147,483,647.
Single	Numeric values with decimal places to seven significant digits — requires four bytes of storage.
Double	Numeric values with decimal places to more accuracy than Single — requires eight bytes of storage.
Replication ID	Special identifier required for replication.
Decimal	Numeric values with decimal places to more accuracy than Single — requires 12 bytes of storage.

Because the values in the Rate field have decimal places, only Single, Double, or Decimal would be possible choices. The difference between these choices concerns the amount of accuracy. Double is more accurate than Single, for example, but requires more storage space. Because the rates are only two decimal places, Single is a perfectly acceptable choice.

In addition to changing the field size, you should also change the format to Fixed (a fixed number of decimal places) and the number of decimal places to 2.

The following steps move to Design view, delete the ID field, and make the Recruiter Number field the primary key. They then change the field size of the Rate field to Single, the format to Fixed, and the number of decimal places to 2.

1

- Click the Design View button on the status bar to move to Design view (Figure 1–68).

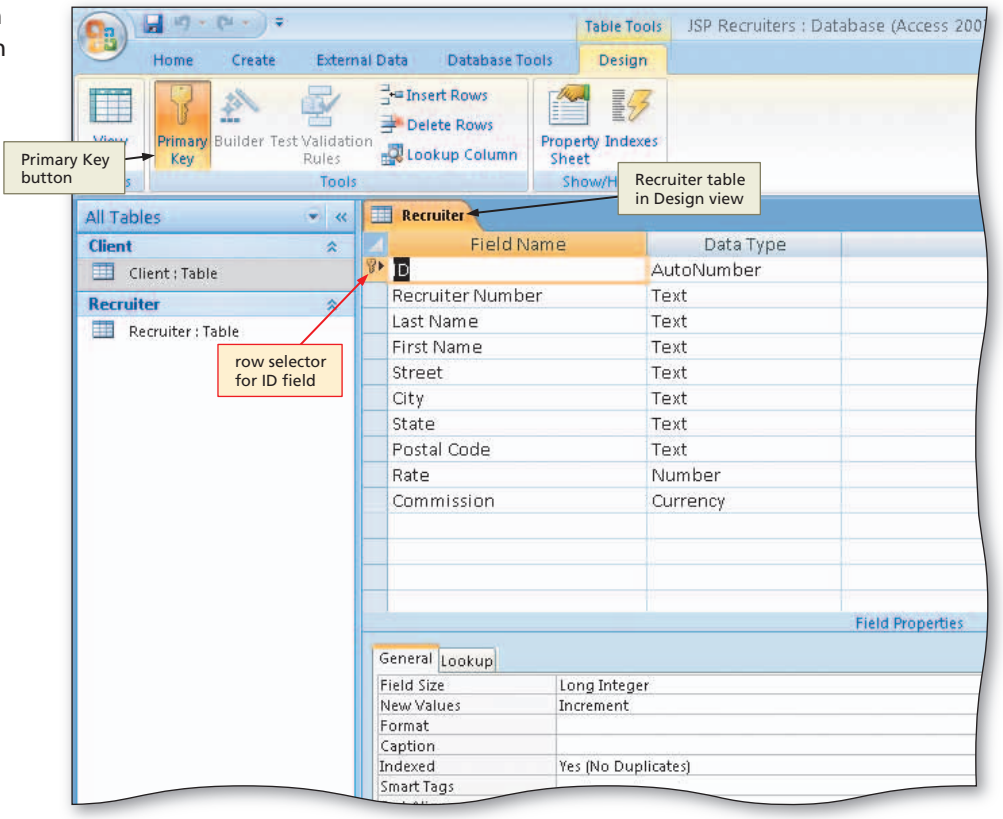


Figure 1–68

2

- Click the row selector for the ID field to select the field.
- Press the DELETE key to delete the field.
- Click the Yes button to complete the deletion of the field.
- With the Recruiter Number field selected, click the Primary Key button to designate the Recruiter Number field as the primary key.
- Click the row selector for the Rate field to select the field (Figure 1–69).

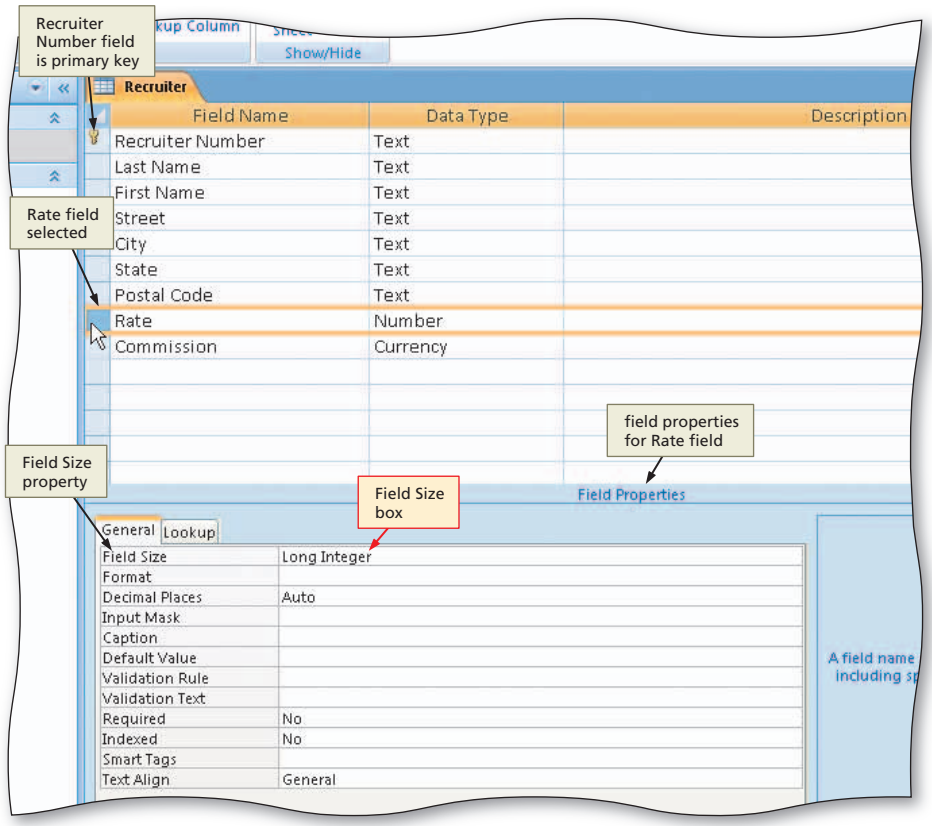


Figure 1–69

3

- Click the Field Size box to display the Field Size box arrow.
- Click the Field Size box arrow to display the Field Size box menu (Figure 1–70).

Q&A

What would happen if I left the field size set to Integer?

If the field size is Integer, no decimal places can be stored. Thus a value of .10 would be stored as 0. If you enter your rates and the values all appear as 0, chances are you did not change the field size.

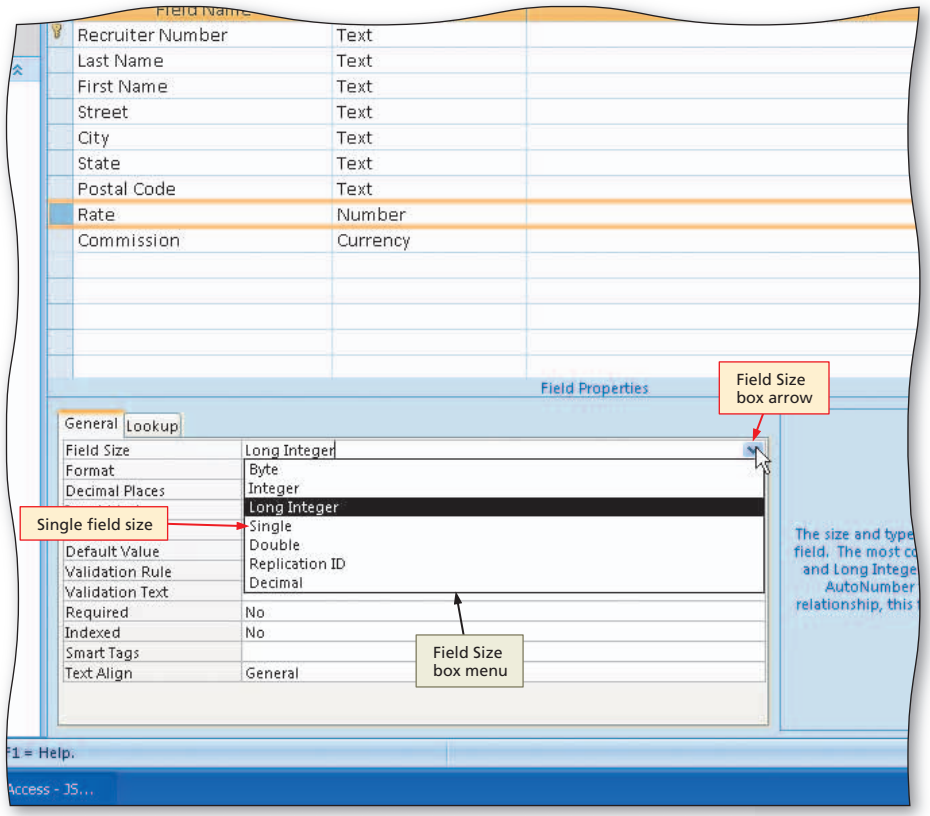


Figure 1–70

4

- Click Single to select single precision as the field size.
- Click the Format box to display the Format box arrow (Figure 1–71).
- Click the Format box arrow to open the Format box menu.

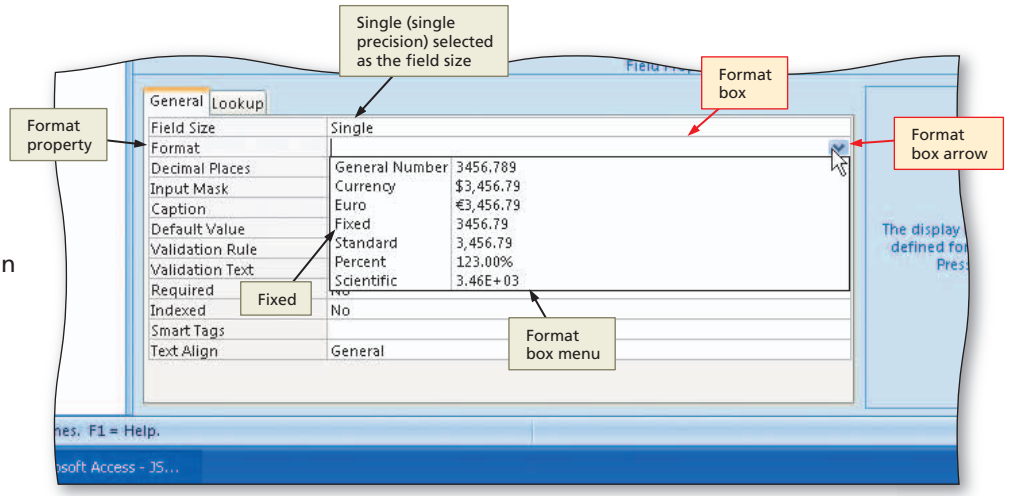


Figure 1–71

5

- Click Fixed to select fixed as the format.
- Click the Decimal Places box to display the Decimal Places box arrow.
- Click the Decimal Places box arrow to enter the number of decimal places.
- Click 2 to select 2 as the number of decimal places.
- Click the Save button to save your changes (Figure 1–72).

Q&A

What is the purpose of the error checking button?

You changed the number of decimal places. The error checking button gives you a quick way of making the same change everywhere Rate appears. So far, you have not added any data, nor have you created any forms or reports that use the Rate field, so no such changes are necessary.

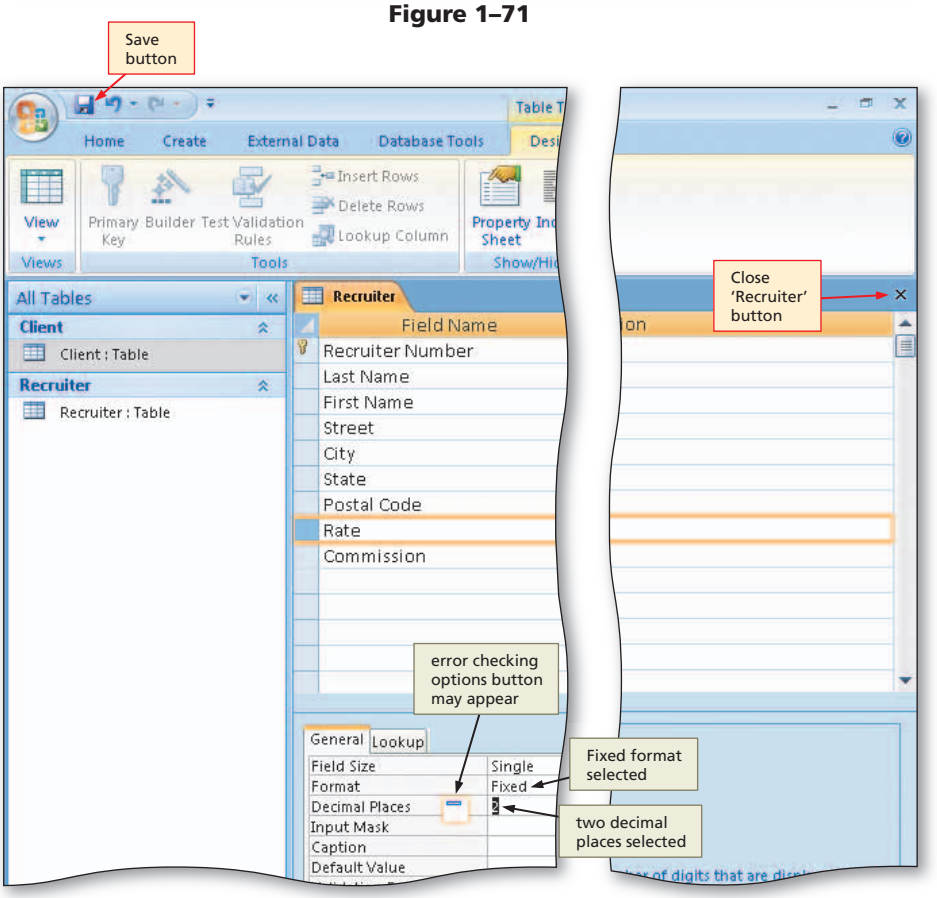


Figure 1–72

6

- Close the Recruiter table by clicking the Close 'Recruiter' button (Figure 1–73).

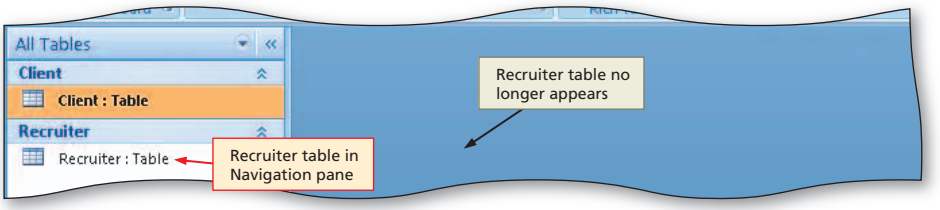


Figure 1–73

To Add Records to an Additional Table

The following steps add the records shown in Figure 1–74 to the Recruiter table.

Recruiter

Recruiter Nu	Last Name	First Name	Street	City	State	Postal Code	Rate	Commission
21	Kerry	Alyssa	261 Pointer	Tourin	CO	80416	0.10	$17,600.00
24	Reeves	Camden	3135 Brill	Denton	CO	80412	0.10	$19,900.00
27	Fernandez	Jaime	265 Maxwell	Charleston	CO	80380	0.09	$9,450.00
34	Lee	Jan	1827 Oak	Denton	CO	80413	0.08	$0.00

Figure 1–74

1

- Open the Recruiter table in Datasheet view by right-clicking the Recruiter table in the Navigation pane and then clicking Open on the shortcut menu.
- Enter the Recruiter data from Figure 1–74 (Figure 1–75).

Experiment

- Click in the Rate field on any of the records. Be sure the Datasheet tab is selected. Click the Format box arrow and then click each of the formats in the Format box menu to see the effect on the values in the Rate field. When finished, click Fixed in the Format box menu.

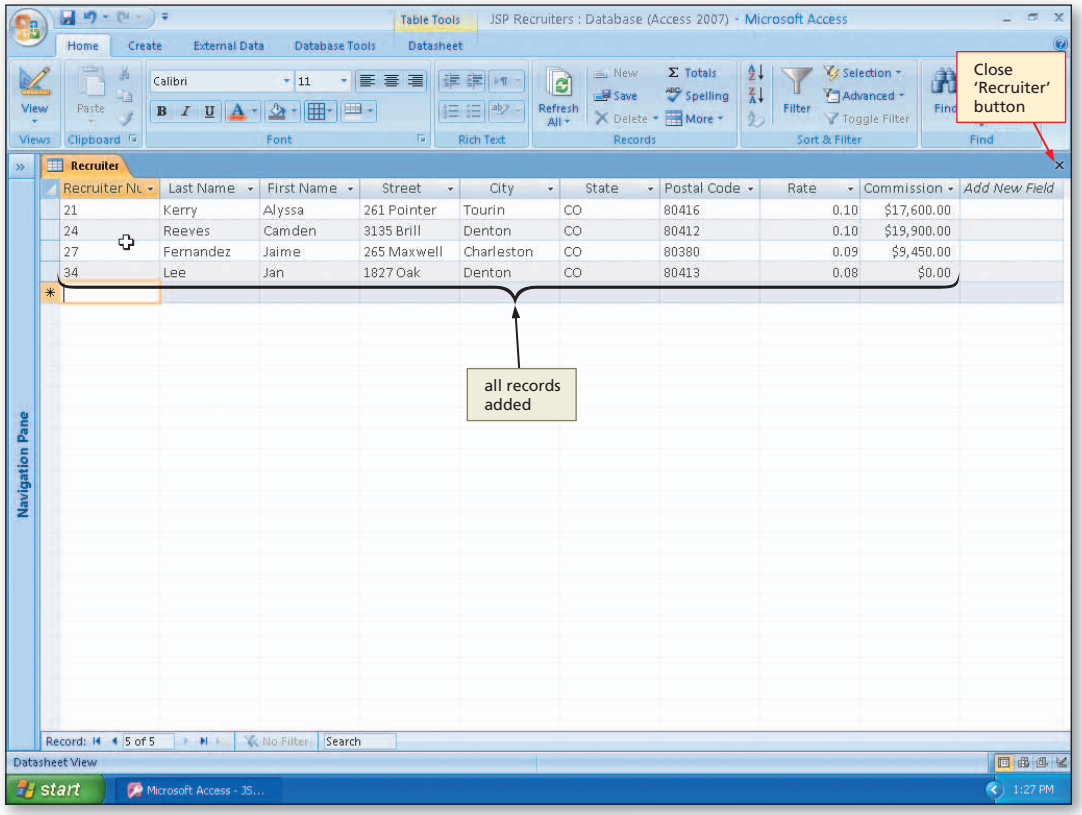


Figure 1–75

2

- Click the Close 'Recruiter' button to close the table and remove the datasheet from the screen.

Creating a Report

JSP Recruiters needs the following reports. You will create the four reports shown in Figure 1–76 in this section.

(a)

Client Financial Report

Client Number	Client Name	Amount Paid	Current Due	Recruiter Number
AC34	Alys Clinic	$0.00	$17,500.00	21
BH72	Berls Hospital	$29,200.00	$0.00	24
BL12	Benton Labs	$16,500.00	$38,225.00	24
EA45	ENT Assoc.	$12,750.00	$15,000.00	27
FD89	Ferb Dentistry	$21,000.00	$12,500.00	21
FH22	Family Health	$0.00	$0.00	24
MH56	Maun Hospital	$0.00	$43,025.00	24
PR11	Peel Radiology	$31,750.00	$0.00	21
TC37	Tarleton Clinic	$18,750.00	$31,500.00	27
WL56	West Labs	$14,000.00	$0.00	24

(b)

Client Address Report

Client Number	Client Name	Street	City	State	Postal Code
AC34	Alys Clinic	134 Central	Berridge	CO	80330
BH72	Berls Hospital	415 Main	Berls	CO	80349
BL12	Benton Labs	12 Mountain	Denton	CO	80412
EA45	ENT Assoc.	867 Ridge	Fort Stewart	CO	80336
FD89	Ferb Dentistry	34 Crestview	Berridge	CO	80330
FH22	Family Health	123 Second	Tarleton	CO	80409
MH56	Maun Hospital	76 Dixon	Mason	CO	80356
PR11	Peel Radiology	151 Valleyview	Fort Stewart	CO	80336
TC37	Tarleton Clinic	451 Hull	Tarleton	CO	80409
WL56	West Labs	785 Main	Berls	CO	80349

(c)

Recruiter Financial Report

Recruiter Number	Last Name	First Name	Rate	Commission
21	Kerry	Alyssa	0.10	$17,600.00
24	Reeves	Camden	0.10	$19,900.00
27	Fernandez	Jaime	0.09	$9,450.00
34	Lee	Jan	0.08	$0.00

(d)

Recruiter Address Report

Recruiter Number	Last Name	First Name	Street	City	State	Postal Code
21	Kerry	Alyssa	261 Pointer	Tourin	CO	80416
24	Reeves	Camden	3135 Brill	Denton	CO	80412
27	Fernandez	Jaime	265 Maxwell	Charleston	CO	80380
34	Lee	Jan	1827 Oak	Denton	CO	80413

Figure 1–76

To Create a Report

You will first create the report shown in Figure 1–76a. The records in the report are sorted (ordered) by Client Number. To ensure that the records appear in this order, you will specify that the records are to be sorted on the Client Number field. The following steps create the report in Figure 1–76a.

1

- Be sure the Client table is selected in the Navigation pane.
- Click Create on the Ribbon to display the Create tab.
- Click the Report Wizard button to display the Report Wizard dialog box (Figure 1–77).

Q&A What would have happened if the Recruiter table were selected instead of the Client table?

The list of available fields would have contained fields from the Recruiter table rather than the Client table.

Q&A If the list contained Recruiter table fields, how could I make it contain Client table fields?

Click the arrow in the Tables/Queries box and then click the Client table in the list that appears.

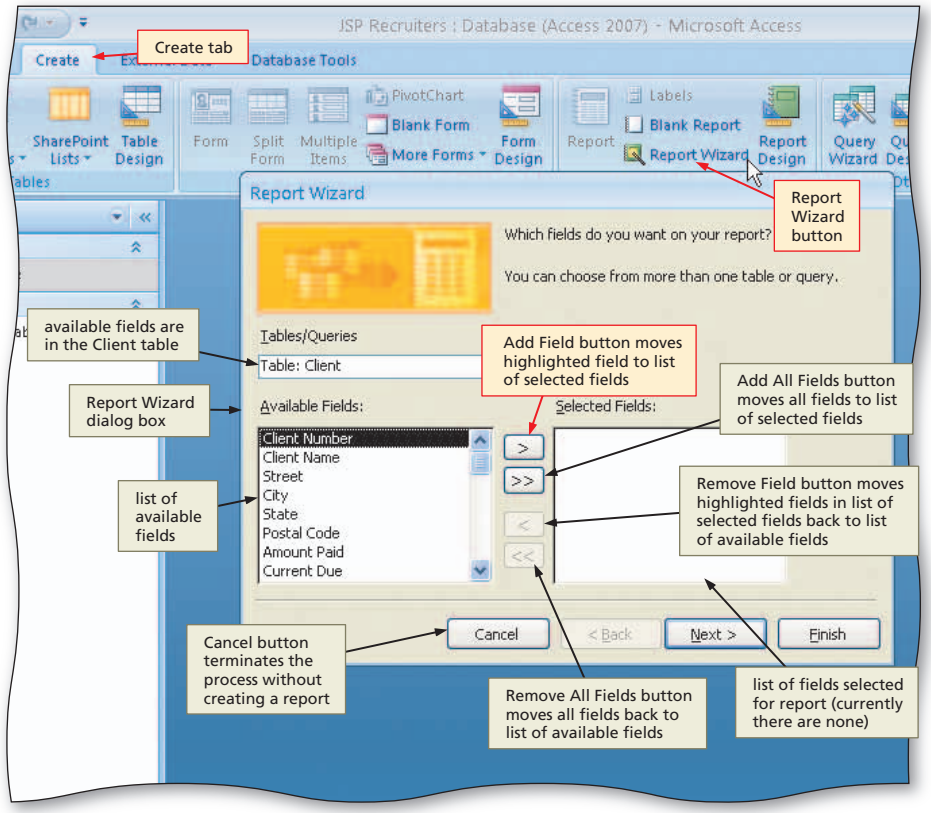


Figure 1–77

2

- Click the Add Field button to add the Client Number field.
- Click the Add Field button to add the Client Name field.
- Click the Amount Paid field, and then click the Add Field button to add the Amount Paid field.
- Click the Add Field button to add the Current Due field.
- Click the Add Field button to add the Recruiter Number field (Figure 1–78).

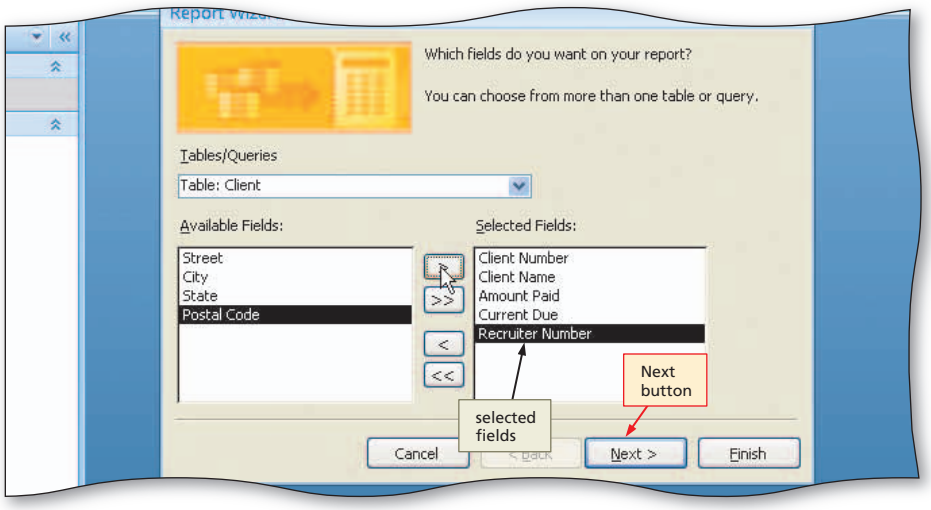


Figure 1–78

3

- Click the Next button to display the next Report Wizard screen (Figure 1–79).

Q&A What is grouping?

Grouping means creating separate collections of records sharing some common characteristic. For example, you might want to group clients in the same Postal code or that have the same recruiter.

Q&A What if I realize that I have selected the wrong fields?

You can click the Back button to return to the previous screen and then correct the list of fields. You also could click the Cancel button and start over.

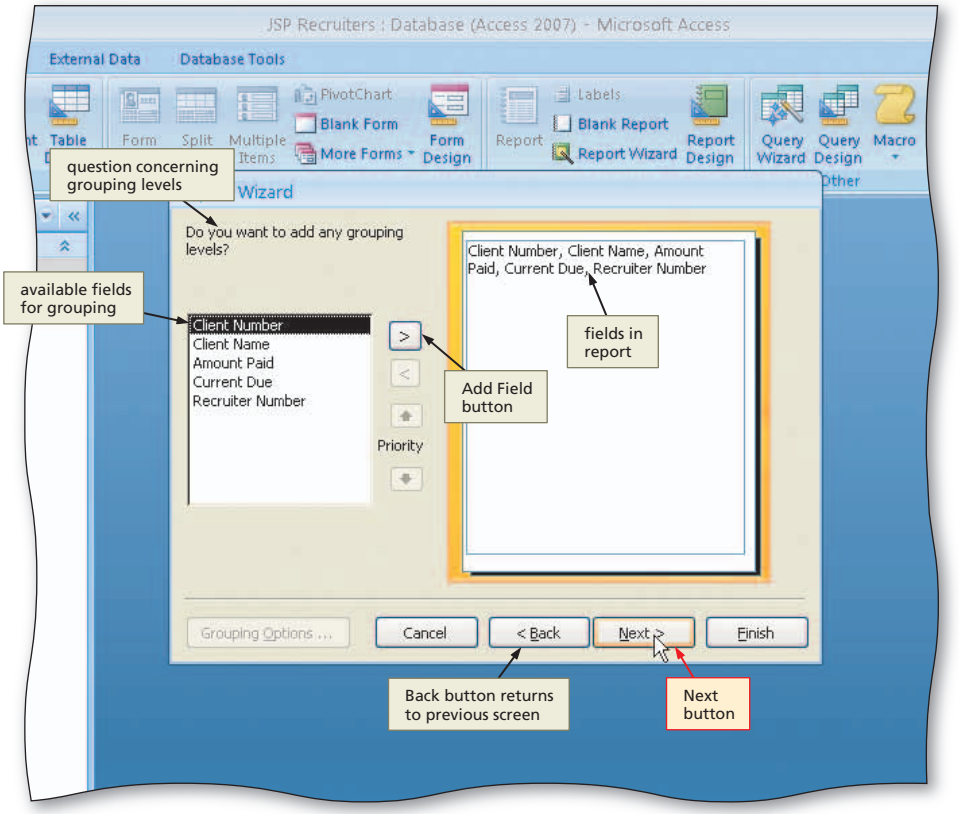


Figure 1–79

4

- Because you will not specify any grouping, click the Next button in the Report Wizard dialog box to display the next Report Wizard screen.
- Click the box arrow in the text box labeled 1 to display a list of available fields for sorting (Figure 1–80).

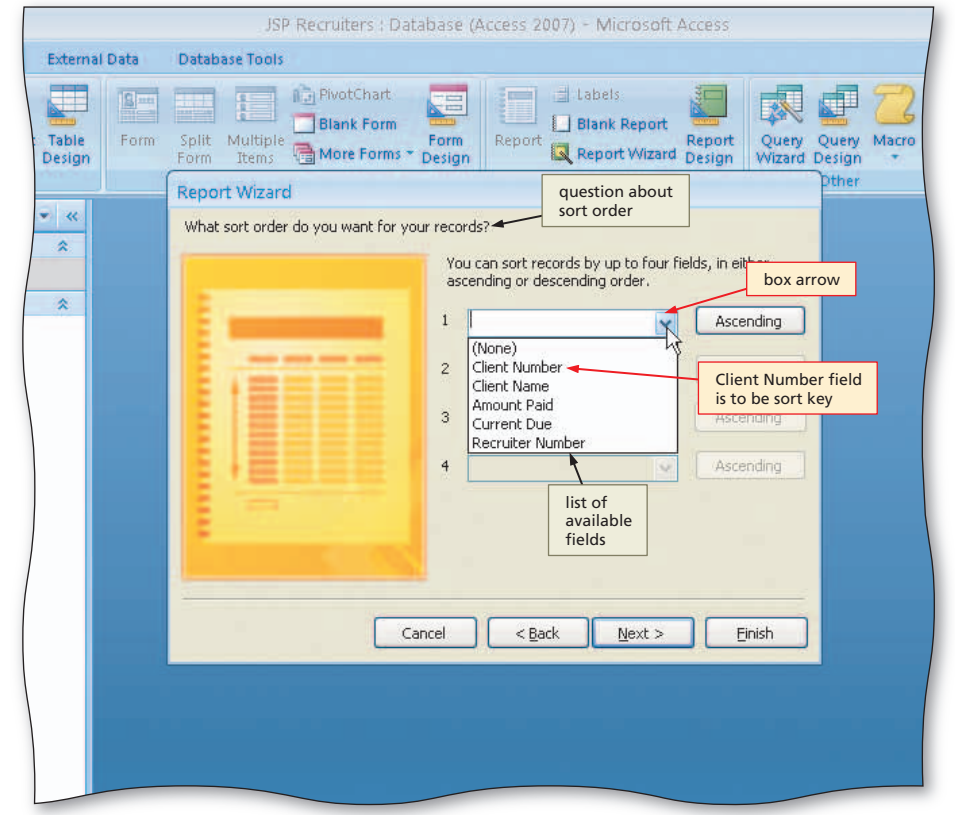


Figure 1–80

5

- Click the Client Number field to select the field as the sort key (Figure 1–81).

Q&A

What if I want Descending order?

Click the Ascending button next to the sort key to change Ascending order to Descending. If you decide you want Ascending after all, click the button a second time.

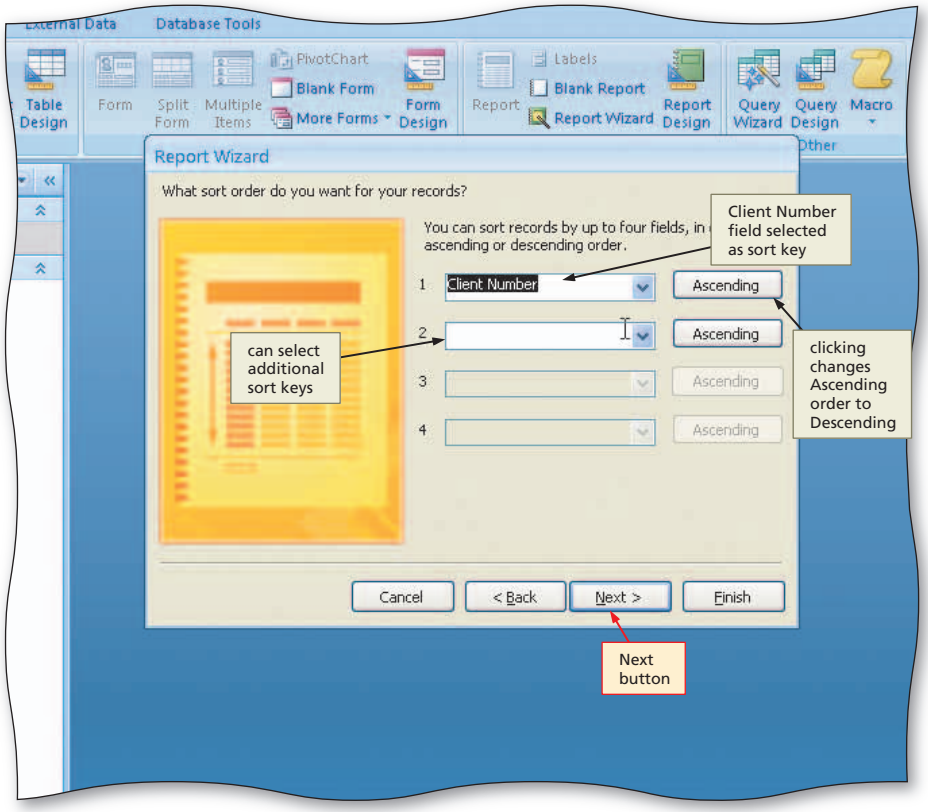


Figure 1–81

6

- Click the Next button to display the next Report Wizard screen (Figure 1–82).

Experiment

- Click different layouts and orientations and observe the effect on the sample report. When you have finished experimenting, click the Tabular option button for the layout and the Portrait option button for the orientation.

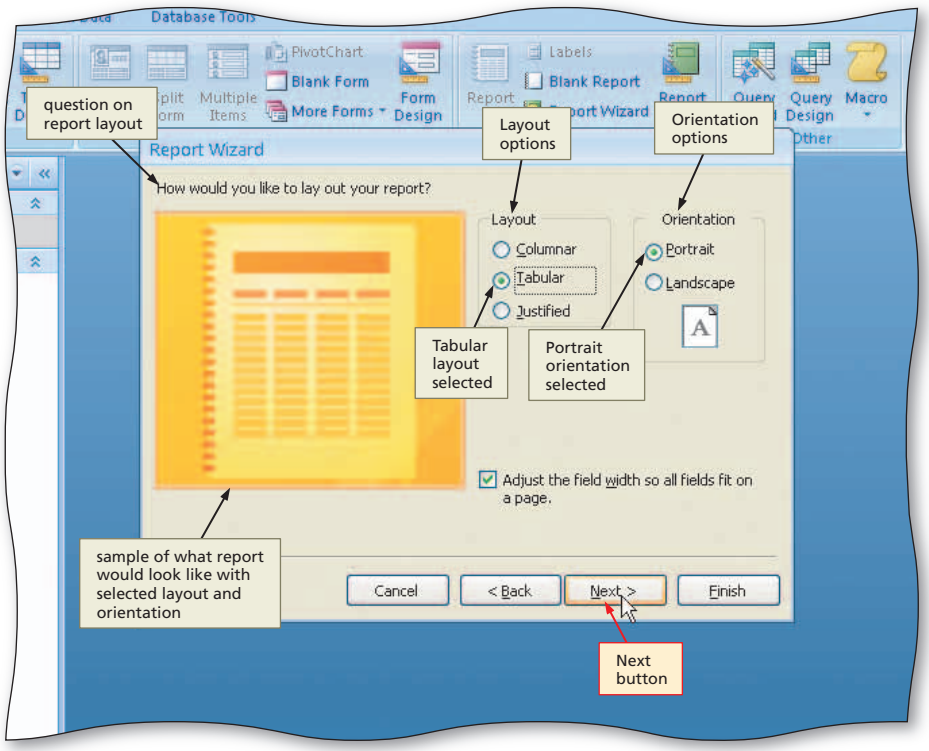


Figure 1–82

7

- Make sure that Tabular is selected as the Layout. (If it is not, click the Tabular option button to select Tabular layout.)
- Make sure Portrait is selected as the Orientation. (If it is not, click the Portrait option button to select Portrait orientation.)
- Click the Next button to display the next Report Wizard screen (Figure 1–83).

Experiment

- Click different styles and observe the effect on the sample report. When you have finished experimenting, click the Module style.

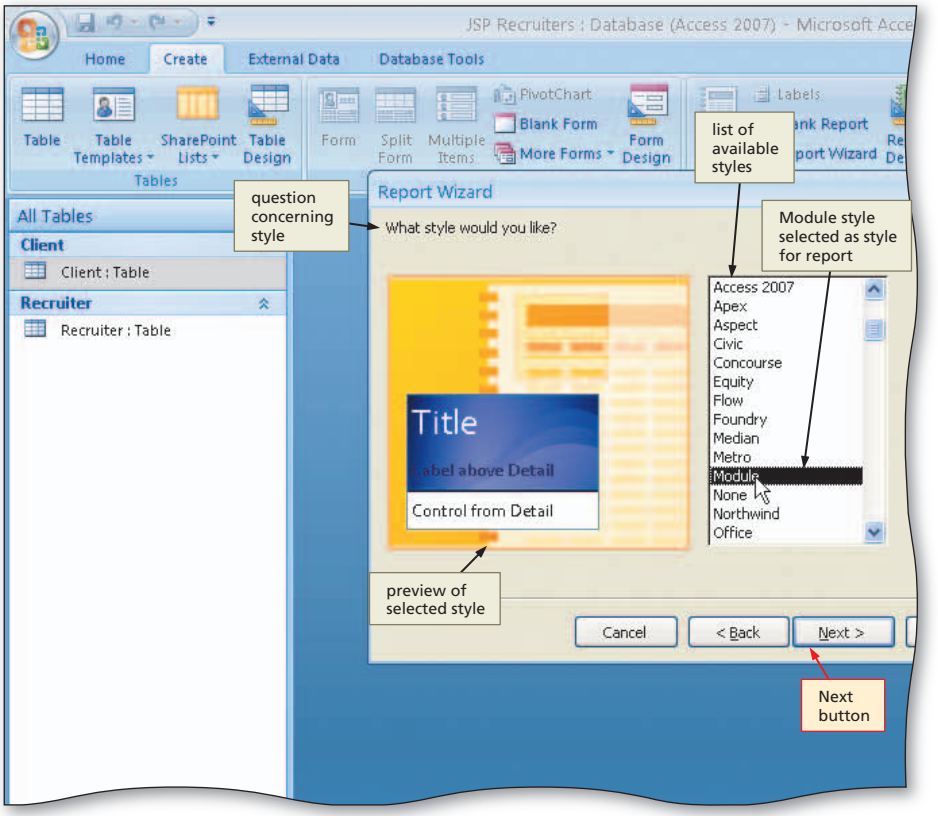


Figure 1–83

8

- Be sure the Module style is selected. (If it is not, click Module to select the Module style.)
- Click the Next button to display the next Report Wizard screen (Figure 1–84).

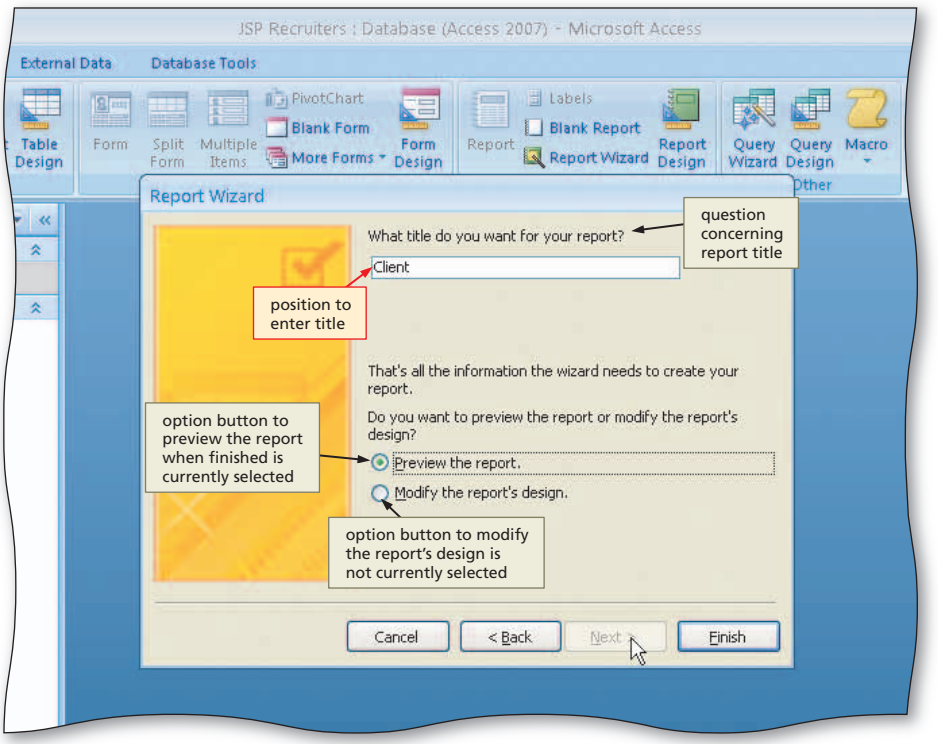


Figure 1–84

9

- Erase the current title, and then type `Client Financial Report` as the new title (Figure 1–85).

Q&A How do I erase the title?

You can highlight the existing title and then press the DELETE key. You can click at the end of the title and repeatedly press the BACKSPACE key. You can click at the beginning of the title and repeatedly press the DELETE key.

Q&A Could I just click after the word, Client, press the Spacebar, and then type Financial Report?

Yes. In general, you can edit the current title to produce the new title using the method with which you are most comfortable.

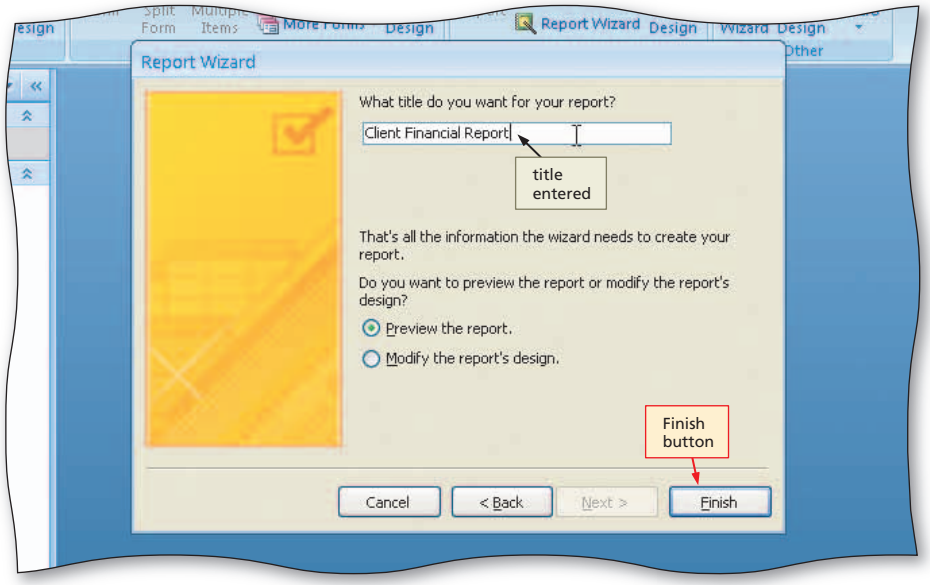


Figure 1–85

- Click the Finish button to produce the report (Figure 1–86).

10

- Click the Close 'Client Financial Report' button to remove the report from the screen.

Q&A Why didn't I have to save the report?

The Report Wizard saves the report automatically.

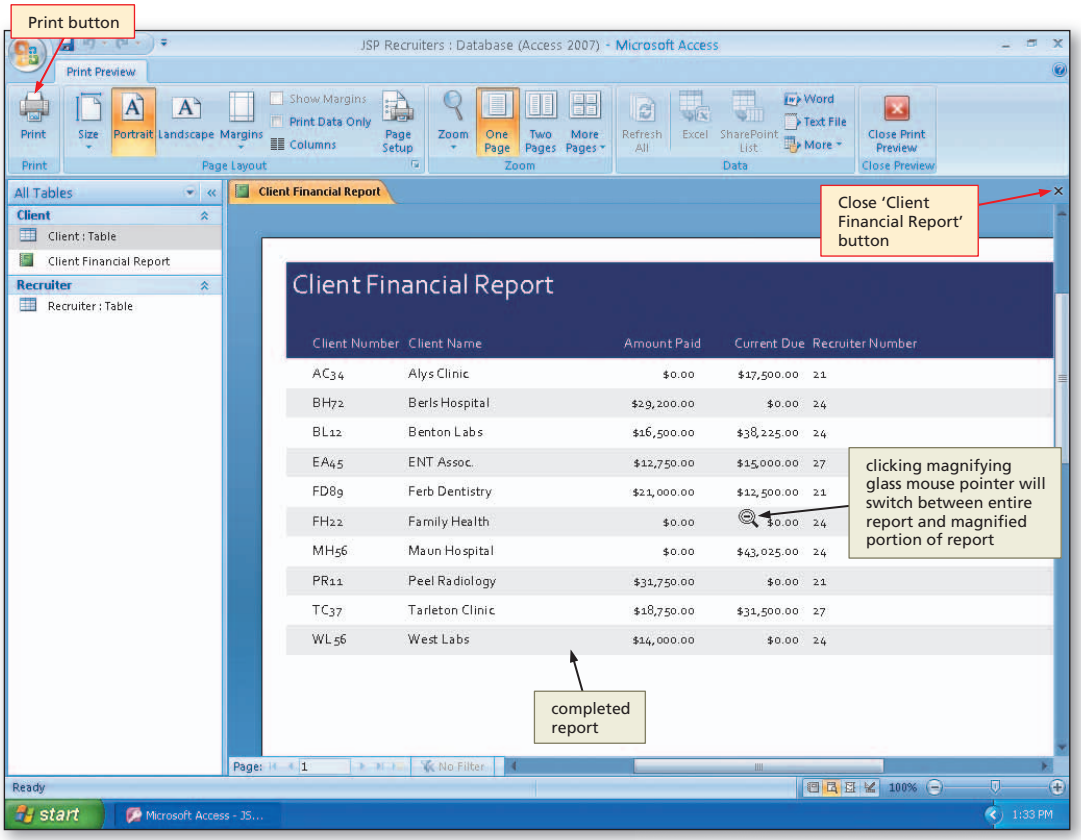


Figure 1–86

BTW

Quick Reference
For a table that lists how to complete the tasks covered in this book using the mouse, Ribbon, shortcut menu, and keyboard, see the Quick Reference Summary at the back of this book, or visit the Access 2007 Quick Reference Web page (scsite.com/ac2007/qr).

To Print a Report

Once you have created a report, you can print it at any time. The printed layout will reflect the layout you created. The data in the report will always reflect current data. The following step prints the Client Financial Report.

1. With the Client Financial Report selected in the Navigation pane, click the Office Button.
   - Point to the arrow next to Print on the Office Button menu and then click Quick Print on the Print submenu to print the report.

To Create Additional Reports

The following steps produce the reports shown in Figure 1–76b, Figure 1–76c, and Figure 1–76d on page AC 50.

1. If necessary, click Create on the Ribbon to display the Create tab, and then click the Report Wizard button to display the Report Wizard dialog box.
2. Add the Client Number, Client Name, Street, City, State, and Postal Code fields by clicking each field and then clicking the Add Field button.
3. Click the Next button to move to the screen asking about grouping, and then click the Next button a second time to move to the screen asking about sort order.
4. Click the box arrow in the text box labeled 1, click the Client Number field to select the field as the sort key, and then click the Next button.
5. Make sure that Tabular is selected as the Layout and that Portrait is selected as the Orientation, and then click the Next button.
6. Make sure the Module style is selected, and then click the Next button.
7. Enter `Client Address Report` as the title and click the Finish button to produce the report.
8. Click the Close 'Client Address Report' button to close the Print Preview window.
9. Click the Recruiter table in the Navigation pane, and then use the techniques shown in Steps 1 through 8 to produce the Recruiter Financial Report. The report is to contain the Recruiter Number, Last Name, First Name, Rate, and Commission fields. It is to be sorted by Recruiter Number. It is to have tabular layout, portrait orientation, and the Module Style. The title is to be Recruiter Financial Report.
10. With the Recruiter table selected in the Navigation pane, use the techniques shown in Steps 1 through 8 to produce the Recruiter Address Report. The report is to contain the Recruiter Number, Last Name, First Name, Street, City, State, and Postal Code fields. It is to be sorted by Recruiter Number. It is to have tabular layout, landscape orientation, and the Module Style. The title is to be Recruiter Address Report.
11. Click the Close 'Recruiter Address Report' button to close the Print Preview window.

Using a Form to View Data

In Datasheet view, you can view many records at once. If there are many fields, however, only some of the fields in each record might be visible at a time. In **Form view**, where data is displayed in a form on the screen, you usually can see all the fields, but only for one record. To get the advantages from both, many database management systems allow you to easily switch between Datasheet view and Form view while maintaining position within the database. In Access 2007, you can view both a datasheet and a form simultaneously using a split form.

To Create a Split Form

A **split form** combines both a datasheet and a form, thus giving the advantages of both views. The following steps create a split form.

1

- Select the Client table in the Navigation pane.
- If necessary, click Create on the Ribbon to display the Create tab (Figure 1–87).

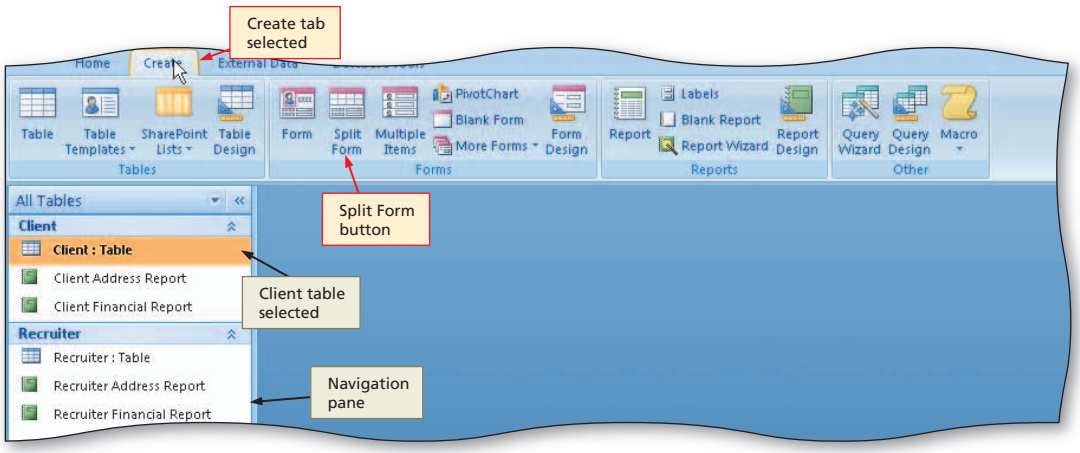


Figure 1–87

2

- Click the Split Form button to create a split form. If a Field List appears, click its Close button to remove the Field List from the screen (Figure 1–88).

Q&A

Is the form automatically saved the way the report was created when I used the Report Wizard?

No. You must take specific action if you wish to save the form.

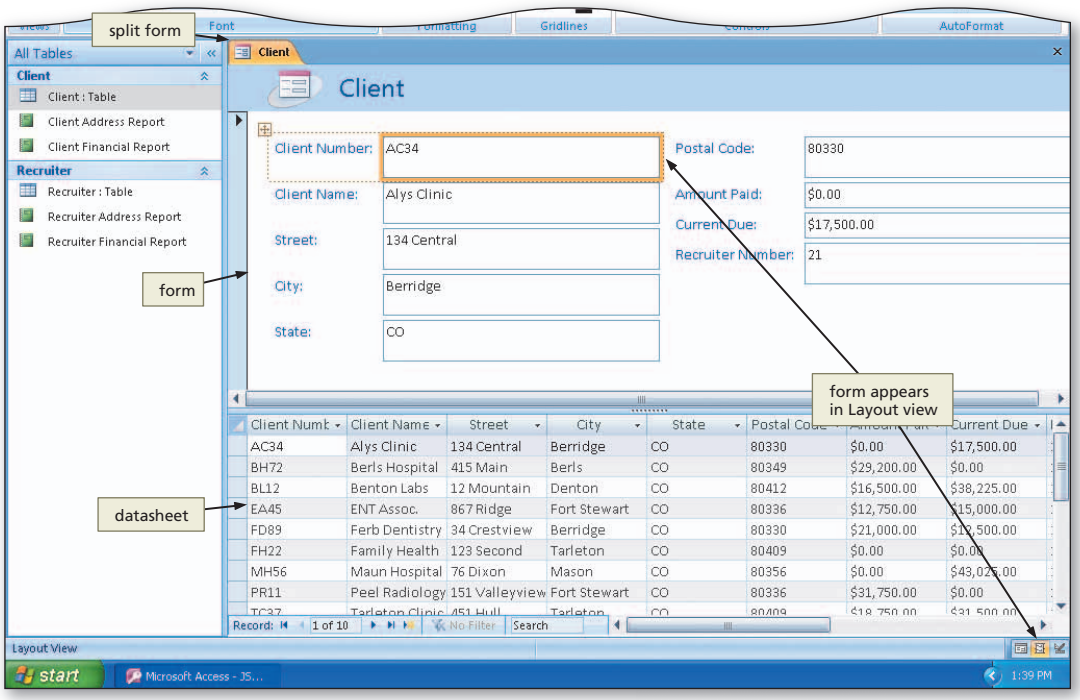


Figure 1–88

3

- Click the Save button to display the Save As dialog box (Figure 1–89).

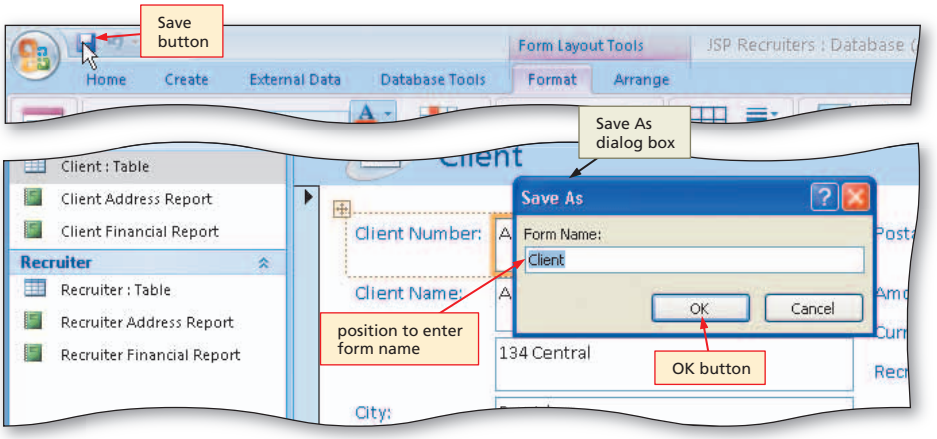


Figure 1–89

4

- Type `Client Form` as the form name, and then click the OK button to save the form.
- If the form appears in Layout view, click the Form View button on the Access status bar to display the form in Form view (Figure 1–90).

Q&A

How can I recognize Layout view?

There are three ways. The left end of the Status bar will contain the words Layout View. There will be shading around the outside of the selected field in the form. The Layout View button will be selected in the right end of the Status bar.

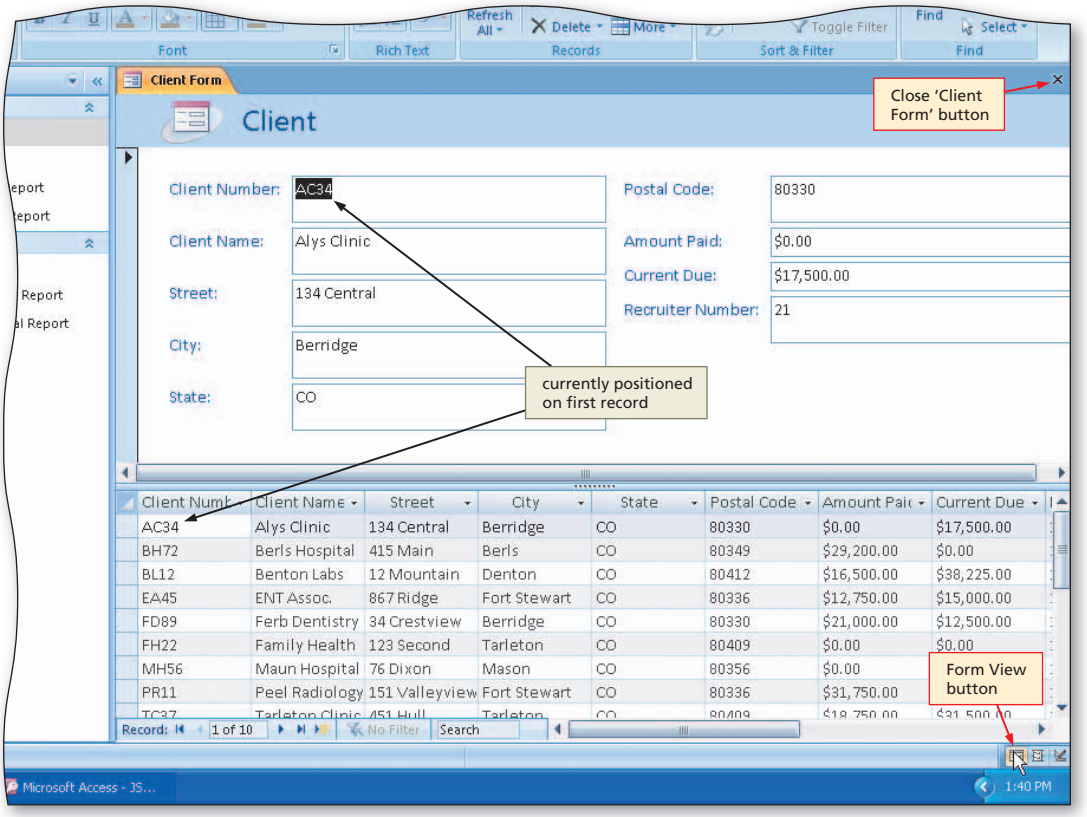


Figure 1–90

To Use a Split Form

After you have saved a form, you can use it at any time by right-clicking the form in the Navigation pane and then clicking Open in the shortcut menu. If you plan to use the form to enter data, you must ensure you are viewing the form in Form view.

1

- Click the Next Record button four times to move to record 5 (Figure 1–91).

Q&A I inadvertently closed the form at the end of the previous steps. What should I do?

Right-click the form in the Navigation pane and then click Open on the shortcut menu.

Q&A Do I have to take any special action for the form to be positioned on the same record as the datasheet?

No. The advantage to the split form is that changing the position on either the datasheet or the form automatically changes the position on the other.

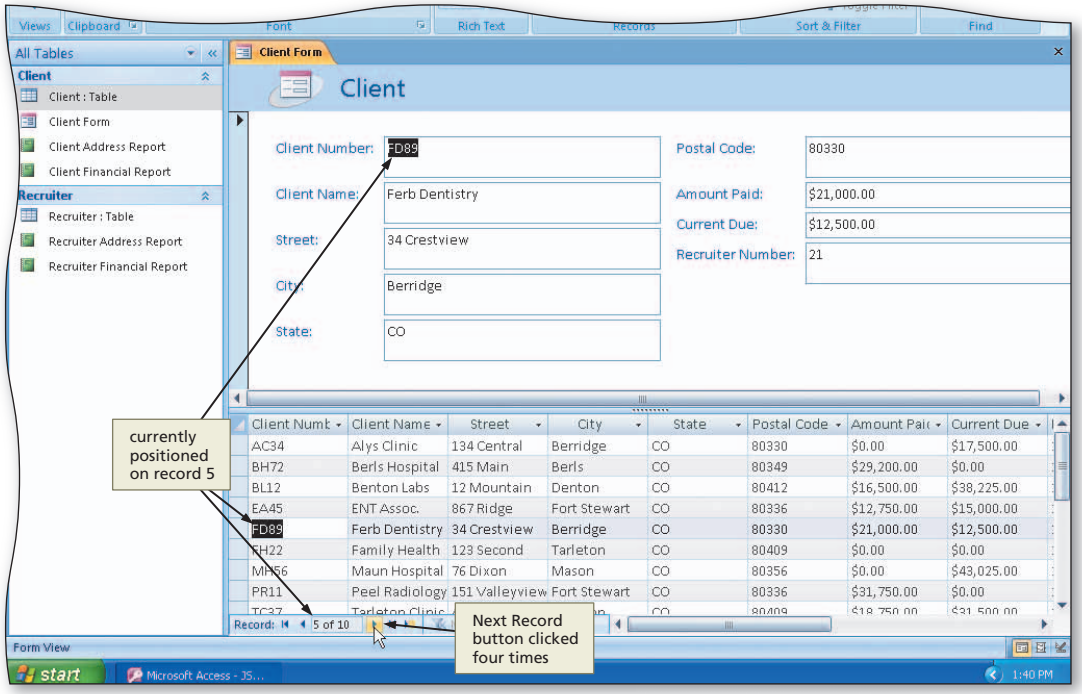


Figure 1–91

2

- Click the Postal Code field on the second record in the datasheet to select the second record in both the datasheet and the form (Figure 1–92).

Experiment

- Click several fields in various records in the datasheet and observe the effect on the form.

3

- Click the Close 'Client Form' button to remove the form from the screen.

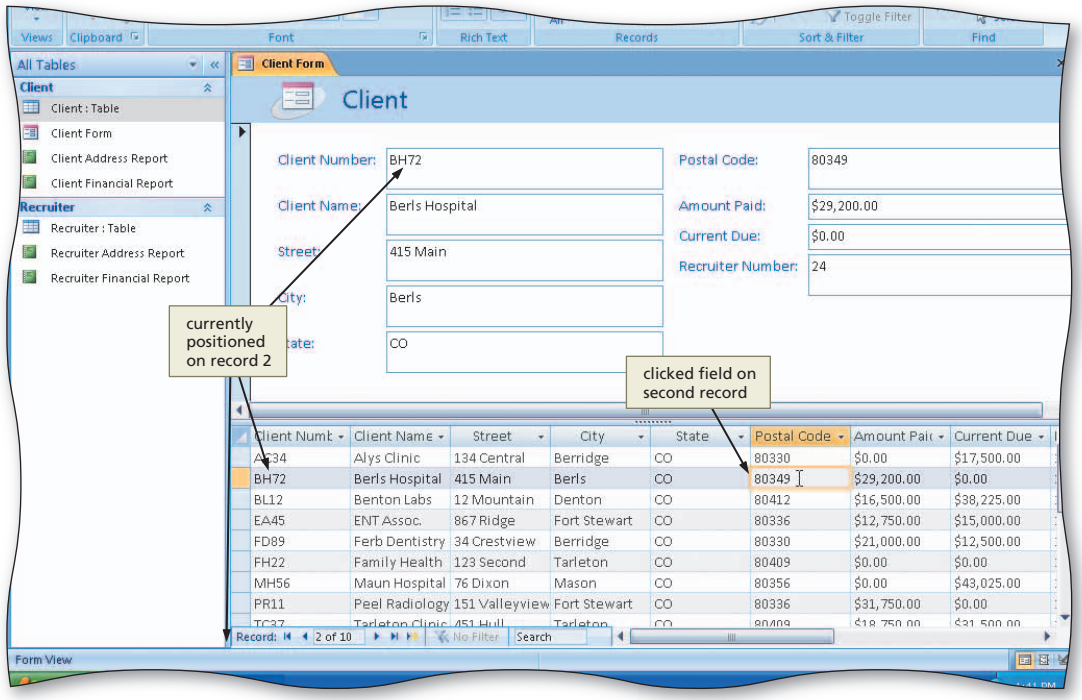


Figure 1–92

BTW

Certification
The Microsoft Certified Application Specialist (MCAS) program provides an opportunity for you to obtain a valuable industry credential — proof that you have the Access 2007 skills required by employers. For more information see Appendix F or visit the Access 2007 Certification Web page (scsite.com/ac2007/cert).

Changing Document Properties

Access helps you organize and identify your databases by using **database properties,** which are the details about a file. Database properties, also known as **metadata**, can include such information as the project author, title, or subject. **Keywords** are words or phrases that further describe the database. For example, a class name or database topic can describe the file's purpose or content.

Five different types of document properties exist, but the more common ones used in this book are standard and automatically updated properties. **Standard properties** are associated with all Microsoft Office documents and include author, title, and subject. **Automatically updated properties** include file system properties, such as the date you create or change a file, and statistics, such as the file size.

To Change Database Properties

The Database Properties dialog box contains areas where you can view and enter document properties. You can view and change information in this dialog box at any time while you are working on your database. It is a good idea to add your name and class name as database properties. The following steps use the Properties dialog box to change database properties.

1

- Click the Office Button to display the Office Button menu.
- Point to Manage on the Office Button menu to display the Manage submenu (Figure 1–93).

Q&A

What other types of actions besides changing properties can you take to prepare a database for distribution?

The Manage submenu provides commands to compact and repair a database as well as to back up a database.

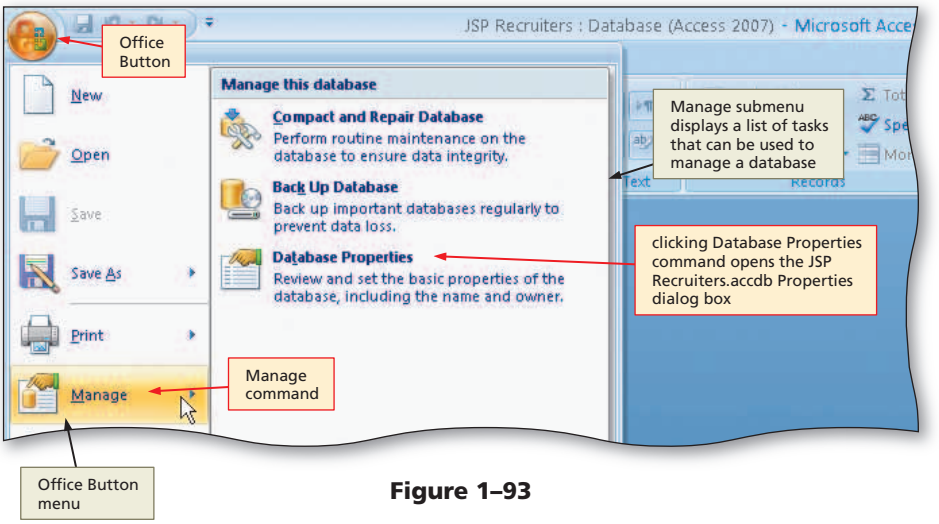


Figure 1–93

2

- Click Database Properties on the Manage submenu to display the JSP Recruiters.accdb Properties dialog box (Figure 1–94).

Q&A

Why are some of the document properties in my Properties dialog box already filled in?

The person who installed Microsoft Office 2007 on your computer or network may have set or customized the properties.

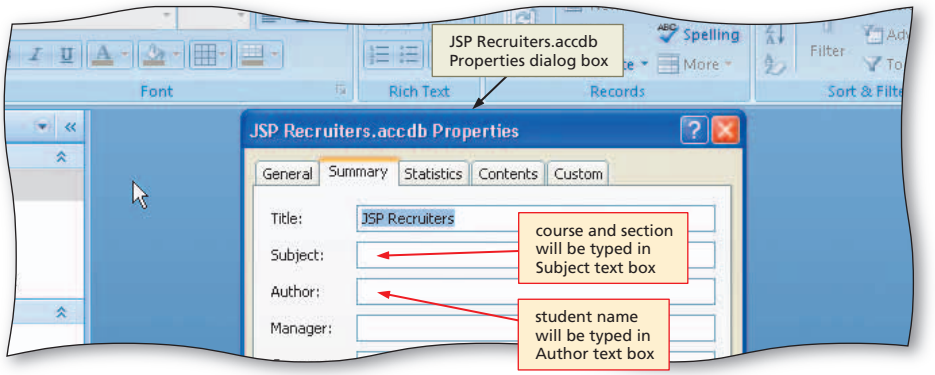


Figure 1–94

3

- If necessary, click the Summary tab.
- Click the Author text box and then type your name as the Author property. If a name already is displayed in the Author text box, delete it before typing your name.
- Click the Subject text box, if necessary delete any existing text, and then type your course and section as the Subject property.
- Click the Keywords text box, if necessary delete any existing text, and then type `Healthcare, Recruiter` as the Keywords property (Figure 1–95).

Q&A

What types of properties does Access collect automatically?

Access records such details as when the database was created, when it was last modified, total editing time, and the various objects contained in the database.

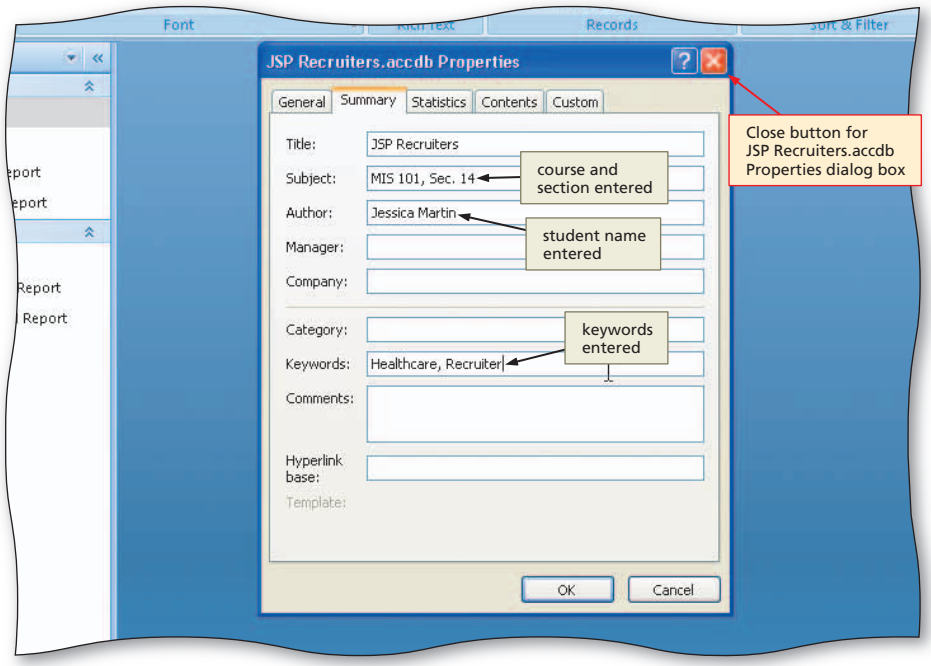


Figure 1–95

4

- Click the OK button to save your changes and remove the JSP Recruiters.accdb Properties dialog box from the screen.

Access Help

At any time while using Access, you can find answers to questions and display information about various topics through **Access Help**. Used properly, this form of assistance can increase your productivity and reduce your frustrations by minimizing the time you spend learning how to use Access.

This section introduces you to Access Help. Additional information about using Access Help is available in Appendix C.

To Search for Access Help

Using Access Help, you can search for information based on phrases, such as create a form or change a data type, or key terms, such as copy, save, or format. Access Help responds with a list of search results displayed as links to a variety of resources. The following steps, which use Access Help to search for information about creating a form, assume you are connected to the Internet.

1

- Click the Microsoft Office Access Help button near the upper-right corner of the Access window to open the Access Help window.
- Type `create a form` in the 'Type words to search for' text box at the top of the Access Help window (Figure 1–96).

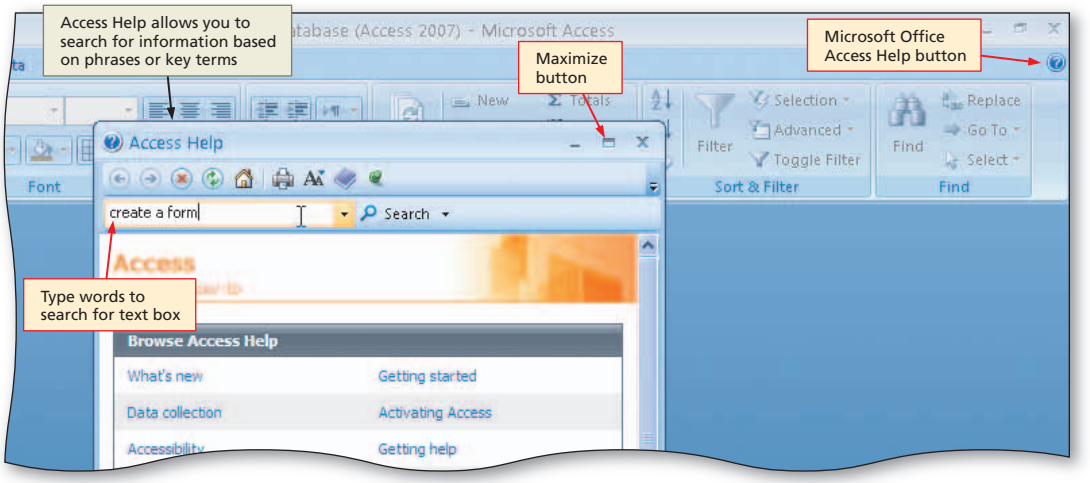


Figure 1–96

2

- Press the ENTER key to display the search results.
- Click the Maximize button on the Access Help window title bar to maximize the Help window unless it is already maximized (Figure 1–97).

Q&A

Where is the Access window with the JSP Recruiters database?

Access is open in the background, but the Access Help window sits on top of the Microsoft Access window. When the Access Help window is closed, the database will reappear.

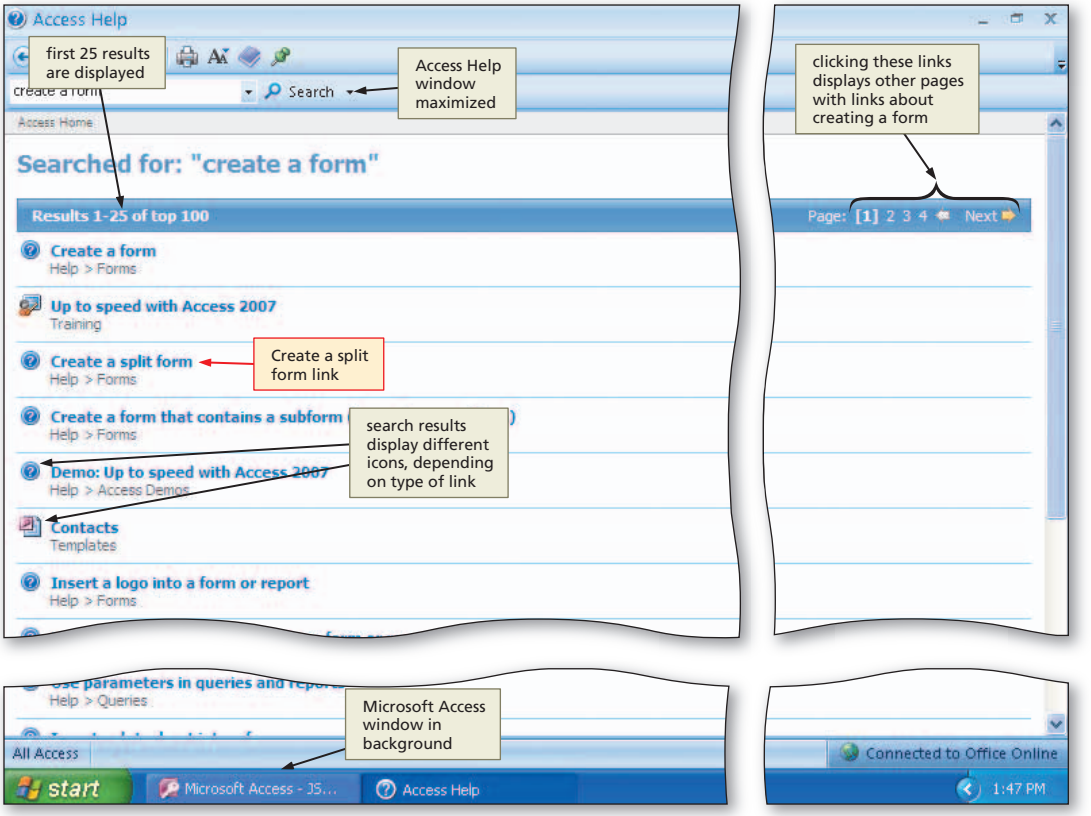


Figure 1–97

3

- Click the Create a split form link to display information regarding creating a split form (Figure 1–98).

Q&A

What is the purpose of the buttons at the top of the Access Help window?

Use the buttons in the upper-left corner of the Access Help window to navigate through the Help system, change the display, show the Access Help table of contents, and print the contents of the window.

4

- Click the Close button on the Access Help window title bar to close the Access Help window and make the database active.

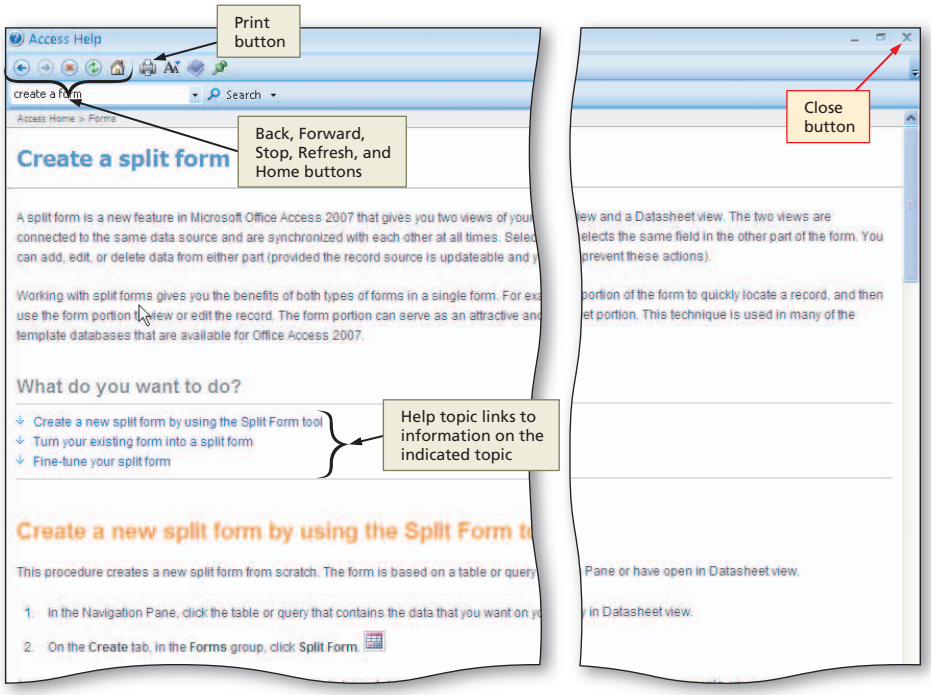


Figure 1–98

Other Ways

1. Press F1

To Quit Access

You saved all your changes and are ready to quit Access. The following step quits Access.

1 Click the Close button on the right side of the Access title bar to quit Access.

Chapter Summary

In this chapter you have learned to design a database, create an Access database, create tables and add records to them, print the contents of tables, create reports, and create forms. The items listed below include all the new Access skills you have learned in this chapter.

1. Start Access (AC 12)
2. Create a Database Using a Template (AC 13)
3. Create a Database (AC 14)
4. Define the Fields in a Table (AC 24)
5. Create a Table Using a Template (AC 26)
6. Save a Table (AC 27)
7. Change the Primary Key (AC 28)
8. Add Records to a Table (AC 30)
9. Close a Table (AC 35)
10. Quit Access (AC 36)
11. Start Access (AC 36)
12. Open a Database from Access (AC 37)
13. Add Additional Records to a Table (AC 38)
14. Preview and Print the Contents of a Table (AC 41)
15. Create an Additional Table (AC 44)
16. Modify the Primary Key and Field Properties (AC 46)
17. Add Records to an Additional Table (AC 49)
18. Create a Report (AC 51)
19. Print a Report (AC 56)

20. Create Additional Reports (AC 56)
21. Create a Split Form (AC 57)
22. Use a Split Form (AC 58)
23. Change Database Properties (AC 60)
24. Search for Access Help (AC 62)
25. Quit Access (AC 63)

If you have a SAM user profile, you may have access to hands-on instruction, practice, and assessment. Log in to your SAM account (http://sam2007.course.com) to launch any assigned training activities or exams that relate to the skills covered in this chapter.

Learn It Online

Test your knowledge of chapter content and key terms.

Instructions: To complete the Learn It Online exercises, start your browser, click the Address bar, and then enter the Web address `scsite.com/ac2007/learn`. When the Access 2007 Learn It Online page is displayed, click the link for the exercise you want to complete and then read the instructions.

Chapter Reinforcement TF, MC, and SA
A series of true/false, multiple choice, and short answer questions that test your knowledge of the chapter content.

Flash Cards
An interactive learning environment where you identify chapter key terms associated with displayed definitions.

Practice Test
A series of multiple choice questions that test your knowledge of chapter content and key terms.

Who Wants To Be a Computer Genius?
An interactive game that challenges your knowledge of chapter content in the style of a television quiz show.

Wheel of Terms
An interactive game that challenges your knowledge of chapter key terms in the style of the television show *Wheel of Fortune*.

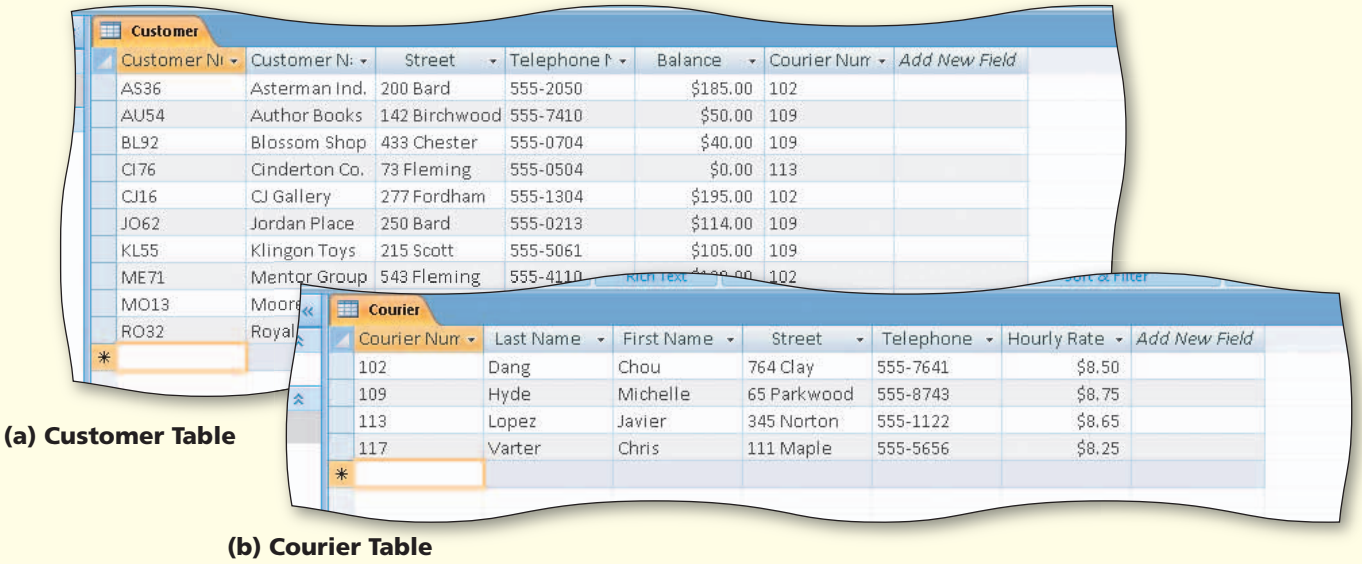
Crossword Puzzle Challenge
A crossword puzzle that challenges your knowledge of key terms presented in the chapter.

Apply Your Knowledge

Reinforce the skills and apply the concepts you learned in this chapter.

Changing Data, Creating a Form, and Creating a Report
Instructions: Start Access. Open the The Bike Delivers database. See the inside back cover of this book for instructions for downloading the Data Files for Students, or see your instructor for information on accessing the files required in this book.

The Bike Delivers uses motorbikes to provide courier services for local businesses. The Bike Delivers has a database that keeps track of its couriers and customers. The database has two tables. The Customer table (Figure 1–99a) contains data on the customers who use the services of The Bike Delivers. The Courier table (Figure 1–99b) contains data on the individuals employed by The Bike Delivers.



Customer

Customer Nı	Customer N:	Street	Telephone N	Balance	Courier Num	Add New Field
AS36	Asterman Ind.	200 Bard	555-2050	$185.00	102	
AU54	Author Books	142 Birchwood	555-7410	$50.00	109	
BL92	Blossom Shop	433 Chester	555-0704	$40.00	109	
CI76	Cinderton Co.	73 Fleming	555-0504	$0.00	113	
CJ16	CJ Gallery	277 Fordham	555-1304	$195.00	102	
JO62	Jordan Place	250 Bard	555-0213	$114.00	109	
KL55	Klingon Toys	215 Scott	555-5061	$105.00	109	
ME71	Mentor Group	543 Fleming	555-4110		102	
MO13	Moore					
RO32	Royal					

(a) Customer Table

Courier

Courier Num	Last Name	First Name	Street	Telephone	Hourly Rate	Add New Field
102	Dang	Chou	764 Clay	555-7641	$8.50	
109	Hyde	Michelle	65 Parkwood	555-8743	$8.75	
113	Lopez	Javier	345 Norton	555-1122	$8.65	
117	Varter	Chris	111 Maple	555-5656	$8.25	

(b) Courier Table

Figure 1–99

Perform the following tasks:

1. Open the Customer table and change the Courier Number for customer KL55 to 113.
2. Close the Customer table.
3. Create a split form for the Courier table. Use the name Courier for the form.
4. Open the form you created and change the street address for Michelle Hyde to 65 Park.
5. Close the Courier form.
6. Create the report shown in Figure 1–100 for the Customer table. The report uses the Module style.
7. Change the database properties, as specified by your instructor. Submit the revised database in the format specified by your instructor.

Balance Due Report

Customer Number	Customer Name	Balance
AS36	Asterman Ind.	$185.00
AU54	Author Books	$50.00

Figure 1–100

Extend Your Knowledge

Extend the skills you learned in this chapter and experiment with new skills. You may need to use Help to complete the assignment.

Changing Formats and Creating Grouped and Sorted Reports

Instructions: Start Access. Open the Camden Scott College database. See the inside back cover of this book for instructions for downloading the Data Files for Students, or see your instructor for information on accessing the files required in this book.

Continued >

Extend Your Knowledge *continued*

Camden Scott College is a small liberal arts college. The Human Resources Director has created an Access database in which to store information about candidates applying for faculty positions. You will make some changes to the Candidate table so that it looks like that shown in Figure 1–101 and create a report that both groups records and sorts them in ascending order.

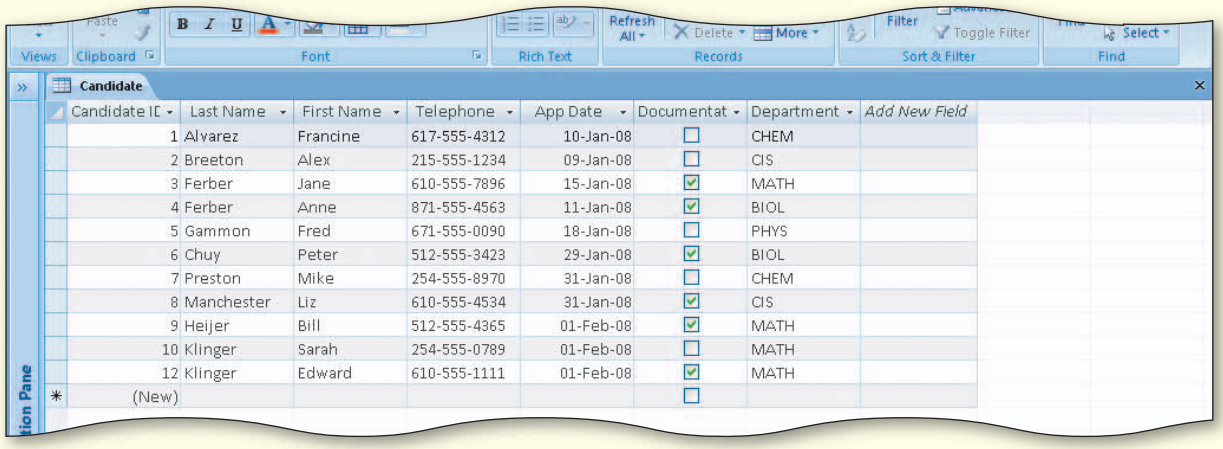


Figure 1–101

Perform the following tasks:

1. Open the Candidate table in Datasheet view and change the column heading for the ID field to Candidate ID.
2. Save the change and open the table in Design view.
3. Select a format for the App Date field that will produce the look shown in Figure 1–101.
4. Change the data type for the Documentation field so that it will match that shown in Figure 1–101.
5. Save the changes.
6. Open the table in Datasheet view. The Human Resources department has received an application from Edward Klinger. Edward applied for the same position as Sarah Klinger on the same date as Sarah. Edward's phone number is 610-555-1111. He did submit all his documentation with his application. Add this record.
7. Add the Quick Print button to the Quick Access Toolbar.
8. Create a report for the Candidate table that lists the Department Code, App Date, Last Name, and First Name. Group the report by Department Code. Sort the report by App Date, Last Name, and then First Name. Choose your own report style and use Candidate by Department as the title of the report.
9. Remove the Quick Print button from the Quick Access Toolbar.
10. Change the database properties, as specified by your instructor. Submit the revised database in the format specified by your instructor.

Make It Right

Analyze a database and correct all errors and/or improve the design.

Correcting Errors in the Table Structure

Instructions: Start Access. Open the SciFi Scene database. See the inside back cover of this book for instructions for downloading the Data Files for Students, or see your instructor for information on accessing the files required in this book.

SciFi Scene is a database containing information on science fiction books. The Book table shown in Figure 1–102 contains a number of errors in the table structure. You are to correct these errors before any additional records can be added to the table. Book Code, not ID, is the primary key for the Book table. The column heading Titel is misspelled. The On Hand field represents the number of books on hand. The field will be used in arithmetic operations. Only whole numbers should be stored in the field. The Price field represents the price of the book. The current data type does not reflect this information.

Change the database properties, as specified by your instructor. Submit the revised database in the format specified by your instructor.

Book

ID	Book Code	Titel	On Hand	Price	Year Publish	Publisher Cc	Add New Field
1	0488	Robot Wars	1	6	1997	SI	
*	(New)						

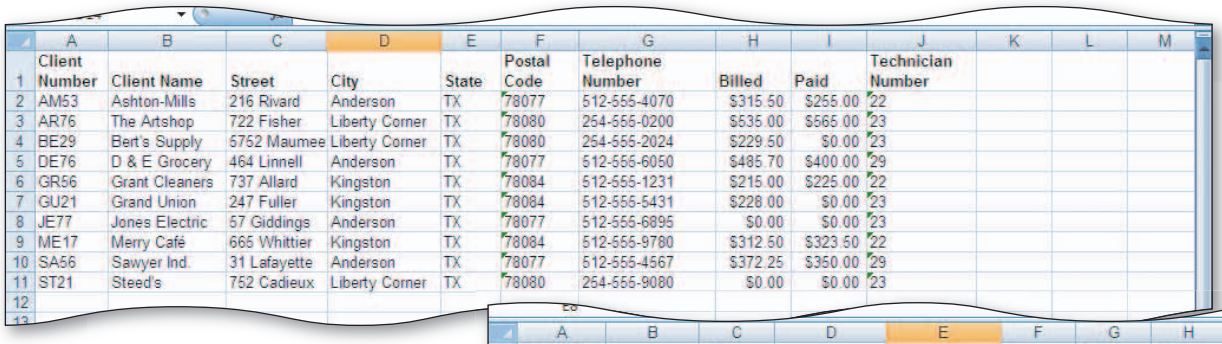
Figure 1–102

In the Lab

Design, create, modify, and/or use a database using the guidelines, concepts, and skills presented in this chapter. Labs are listed in order of increasing difficulty.

Lab 1: Creating the JMS TechWizards Database

Problem: JMS TechWizards is a local company that provides technical services to several small businesses in the area. The company currently keeps its records in two Excel workbooks. One Excel workbook (Figure 1–103a) contains information on the clients that JMS TechWizards serves. The other Excel workbook (Figure 1–103b) contains information on the technicians that JMS employs. JMS would like to store this data in a database and has asked for your help.



Client Number	Client Name	Street	City	State	Postal Code	Telephone Number	Billed	Paid	Technician Number
AM53	Ashton-Mills	216 Rivard	Anderson	TX	78077	512-555-4070	$315.50	$255.00	22
AR76	The Artshop	722 Fisher	Liberty Corner	TX	78080	254-555-0200	$535.00	$565.00	23
BE29	Bert's Supply	5752 Maumee	Liberty Corner	TX	78080	254-555-2024	$229.50	$0.00	23
DE76	D & E Grocery	464 Linnell	Anderson	TX	78077	512-555-6050	$485.70	$400.00	29
GR56	Grant Cleaners	737 Allard	Kingston	TX	78084	512-555-1231	$215.00	$225.00	22
GU21	Grand Union	247 Fuller	Kingston	TX	78084	512-555-5431	$228.00	$0.00	23
JE77	Jones Electric	57 Giddings	Anderson	TX	78077	512-555-6895	$0.00	$0.00	23
ME17	Merry Café	665 Whittier	Kingston	TX	78084	512-555-9780	$312.50	$323.50	22
SA56	Sawyer Ind.	31 Lafayette	Anderson	TX	78077	512-555-4567	$372.25	$350.00	29
ST21	Steed's	752 Cadieux	Liberty Corner	TX	78080	254-555-9080	$0.00	$0.00	23

(a) Client Data (Excel Workbook)

Technician Number	Last Name	First Name	Street	City	State	Postal Code	Hourly Rate	YTD Earnings
22	Levin	Joe	26 Cotton	Anderson	TX	78077	$25.00	$8,245.00
23	Rogers	Brad	79 Marsden	Liberty Corner	TX	78080	$30.00	$9,143.30
29	Rodriguez	Maria	263 Topper	Kingston	TX	78084	$35.00	$9,745.50
32	Torres	Lee	34 Red Poppy	Liberty Corner	TX	78080	$23.00	$0.00

(b) Technician Data (Excel Workbook)

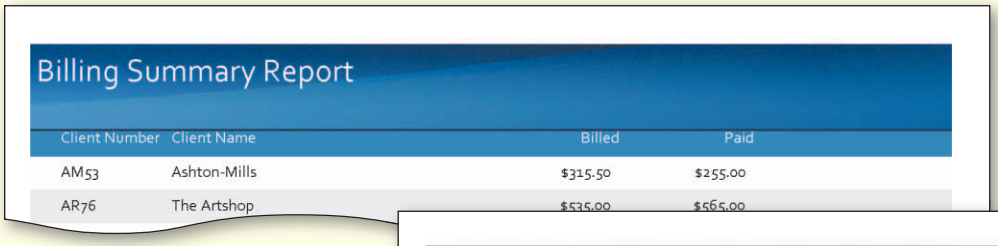
Figure 1–103

Continued >

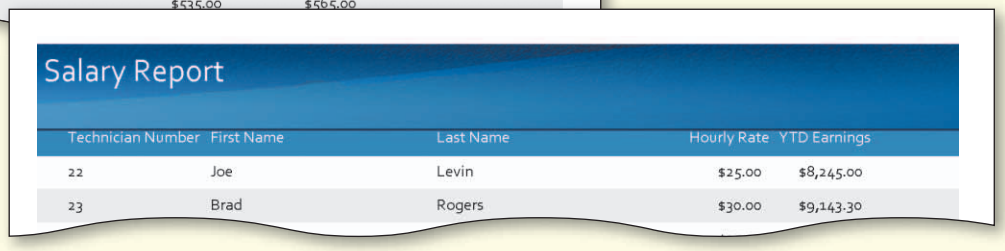
In the Lab *continued*

Instructions: Perform the following tasks:

1. Create a new database in which to store all the objects related to the technical services data. Call the database JMS TechWizards.
2. Create a table in which to store the data related to clients. Use the name Client for the table. The fields for the Client table are: Client Number, Client Name, Street, City, State, Postal Code, Telephone Number, Billed, Paid, and Technician Number. Client Number is the primary key. The Billed and Paid fields are currency data type.
3. Create a table in which to store the data related to technicians. Use the name Technician for the table. The fields for the Technician table are: Technician Number, Last Name, First Name, Street, City, State, Postal Code, Hourly Rate, and YTD Earnings. The primary key for the Technician table is Technician Number. Hourly rate and YTD Earnings are currency data type.
4. Add the data from the Client workbook in Figure 1–103a to the Client table.
5. Add the data from the Technician workbook in Figure 1–103b to the Technician table.
6. Create and save the reports shown in Figure 1–104a for the Client table and Figure 1–104b for the Technician table.
7. Change the database properties, as specified by your instructor. Submit the revised database in the format specified by your instructor.



(a) Billing Summary Report



(b) Salary Report

Figure 1–104

In the Lab

Lab 2: Creating the Hockey Fan Zone Database

Problem: Your town has a minor league hockey team. The team store sells a variety of items with the team logo. The store purchases the items from suppliers that deal in specialty items for sports teams. Currently, the information about the items and suppliers is stored in the Excel workbook shown in Figure 1–105. You work part-time at the store, and your boss has asked you to create a database that will store the item and supplier information. You have already determined that you need two tables: an Item table and a Supplier table in which to store the information.

Instructions: Perform the following tasks:

1. Design a new database in which to store all the objects related to the items for sale. Call the database Hockey Fan Zone.

2. Use the information shown in Figure 1–105 to determine the primary keys and determine additional fields. Then, determine the relationships among tables and the data types.
3. Create the Item table using the information shown in Figure 1–105.
4. Create the Supplier table using the information shown in Figure 1–105.
5. Add the appropriate data to the Item table.

	A	B	C	D	E	F	G	H
1	Item Number	Description	On Hand	Cost	Selling Price	Supplier Code	Supplier Name	Telephone Number
2	3663	Ball Cap	30	$11.15	$18.95	LG	Logo Goods	517-555-3853
3	3683	Bumper Sticker	50	$0.95	$1.50	MN	Mary's Novelties	317-555-4747
4	4563	Earrings	10	$4.50	$7.00	LG	Logo Goods	517-555-3853
5	4593	Foam Finger	25	$2.95	$5.00	LG	Logo Goods	517-555-3853
6	5923	Jersey	12	$21.45	$24.75	AC	Ace Clothes	616-555-9228
7	6189	Koozies	35	$2.00	$4.00	MN	Mary's Novelties	317-555-4747
8	6343	Note Cube	7	$5.75	$8.00	MN	Mary's Novelties	317-555-4747
9	7810	Tee Shirt	32	$9.50	$14.95	AC	Ace Clothes	616-555-9228
10	7930	Visor	9	$11.95	$17.00	LG	Logo Goods	517-555-3853
11								

Figure 1–105

6. Add the appropriate data to the Supplier table.
7. Create a split form for the Item table. Use the name Item for the form.
8. Create the report shown in Figure 1–106 for the Item table.
9. Change the database properties, as specified by your instructor. Submit the database in the format specified by your instructor.

Inventory Status Report

Item Number	Description	On Hand	Cost
3663	Ball Cap	30	$11.15
3683	Bumper Sticker	50	$0.95

Figure 1–106

In the Lab

Lab 3: Creating the Ada Beauty Supply Database

Problem: A distribution company supplies local beauty salons with items needed in the beauty industry. The distributor employs sales representatives who receive a base salary as well as a commission on sales. Currently, the distributor keeps data on customers and sales reps in two Word documents and two Excel workbooks.

Instructions: Using the data shown in Figure 1–107, design the Ada Beauty Supply database. Use the database design guidelines in this chapter to help you in the design process.

Continued >

In the Lab *continued*

Customer Number	Customer Name	Street	Telephone
AM23	Amy's Salon	223 Johnson	555-2150
BB34	Bob the Barber	1939 Jackson	555-1939
BL15	Blondie's	3294 Devon	555-7510
CM09	Cut Mane	3140 Halsted	555-0604
CS12	Curl n Style	1632 Clark	555-0804
EG07	Elegante	1805 Boardway	555-1404
JS34	Just Cuts	2200 Lawrence	555-0313
LB20	Le Beauty	13 Devon	555-5161
NC25	Nancy's Place	1027 Wells	555-4210
RD03	Rose's Day Spa	787 Monroe	555-7657
TT21	Tan and Tone	1939 Congress	555-6554

(a) Customer Address Information (Word table)

	A	B	C	D	E
1	Customer Number	Customer Name	Balance	Amount Paid	
2	AM23	Amy's Salon	$195.00	$1,695.00	
3	BB34	Bob the Barber	$150.00	$0.00	
4	BL15	Blondie's	$555.00	$1,350.00	
5	CM09	Cut Mane	$295.00	$1,080.00	
6	CS12	Curl n Style	$145.00	$710.00	
7	EG07	Elegante	$0.00	$1,700.00	
8	JS34	Just Cuts	$360.00	$700.00	
9	LB20	Le Beauty	$200.00	$1,250.00	
10	NC25	Nancy's Place	$240.00	$550.00	
11	RD03	Rose's Day Spa	$0.00	$975.00	
12	TT21	Tan and Tone	$160.00	$725.00	
13					
14					
15					
16					

(c) Customer Financial Information (Excel Workbook)

Sales Rep Number	Last Name	First Name	Street	City	State	Postal Code
44	Jones	Pat	43 Third	Lawncrest	WA	98084
49	Gupta	Pinn	678 Hillcrest	Manton	WA	98085
51	Ortiz	Gabe	982 Victoria	Lawncrest	WA	98084
55	Sinson	Terry	45 Elm	Manton	WA	98084

(b) Sales Rep Address Information (Word table)

	A	B	C	D	E	F
1	Sales Rep Number	Last Name	First Name	Salary	Comm Rate	Commission
2	44	Jones	Pat	$ 23,000.00	0.05	$613.50
3	49	Gupta	Pinn	$ 24,000.00	0.06	$616.60
4	51	Ortiz	Gabe	$ 22,500.00	0.05	$492.75
5	55	Sinson	Terry	$ 20,000.00	0.05	$0.00
6						

(d) Sales Rep Financial Information (Excel Workbook)

Figure 1–107

When you have completed the database design, create the database, create the tables, and add the data to the appropriate tables. Be sure to determine the correct data types.

Finally, prepare the Customer Status Report shown in Figure 1–108a and the Sales Rep Salary Report shown in Figure 1–108b. Change the database properties, as specified by your instructor. Submit the database in the format specified by your instructor.

Customer Status Report

Customer Name	Telephone	Balance	Amount Paid	Sales Rep Number
Amy's Salon	555-2150	$195.00	$1,695.00	44
Blondie's	555-7510	$555.00	$1,350.00	49

(a) Customer Status Report

Sales Rep Salary Report

Last Name	First Name	Salary	mm Rate	Commission
Gupta	Pinn	$24,000.00	0.06	$616.60
Jones	Pat	$23,000.00	0.05	$613.50

(b) Sales Rep Salary Report

Figure 1–108

Cases and Places

Apply your creative thinking and problem solving skills to design and implement a solution.

• Easier •• More Difficult

• 1: Design and Create an E-Commerce Database

Students often have very little money to furnish dorm rooms and apartments. You and two of your friends have decided to use the skills you learned in your e-Commerce class to create a Web site specifically for college students to buy and sell used household furnishings.

Design and create a database to store the data that you need to manage this new business. Then create the necessary tables and enter the data from the Case 1-1 Second-Hand Goods document. See the inside back cover of this book for instructions for downloading the Data Files for Students, or see your instructor for information on accessing the files required in this book. Submit your assignment in the format specified by your instructor.

• 2: Design and Create a Rental Database

You are a part-time employee of BeachCondo Rentals. BeachCondo Rentals provides a rental service for condo owners who want to rent their units. The company rents units by the week. Currently, the company keeps information about its rentals in an Excel workbook.

Design and create a database to store the rental data. Then create the necessary tables and enter the data from the Case 1-2 BeachCondo Rentals workbook. See the inside back cover of this book for instructions for downloading the Data Files for Students, or see your instructor for information on accessing the files required in this book. Create an Available Rentals Report that lists the unit number, weekly rate, and owner number. Submit your assignment in the format specified by your instructor.

•• 3: Design and Create a Restaurant Database

Your school is sponsoring a conference that will draw participants from a wide geographical area. The conference director has asked for your help in preparing a database of restaurants that might be of interest to the participants. At a minimum, she needs to know the following: the type of restaurant (vegetarian, fast-food, fine dining, and so on), street address, telephone number, and opening and closing times and days. Because most of the participants will stay on campus, she also would like to know the approximate distance from campus. Additionally, she would like to know about any unique or special features the restaurants may have.

Design and create a database to meet the conference director's needs. Create the necessary tables, determine the necessary fields, enter some sample data, and prepare a sample report to show the director. Submit your assignment in the format specified by your instructor.

•• 4: Design and Create a Database to Help You Find a Job

Make It Personal

Conducting a job search requires careful preparation. In addition to preparing a resume and cover letter, you will need to research the companies for which you are interested in working and contact these companies to let them know of your interest and qualifications.

Microsoft Access includes a Contacts table template that can create a table that will help you keep track of your job contacts. Create a database to keep track of the companies that are of interest to you. Submit your assignment in the format specified by your instructor.

Continued >

•• 5: Design a Database that Tracks Student Data

Working Together

Keeping track of students is an enormous task for school administrators. Microsoft Access can help school administrators manage student data. The Database Wizard includes a Students template that can create a database that will maintain many different types of data on students, such as allergies, medications, and emergency contact information.

Have each member of your team explore the features of the Database Wizard and determine individually which tables and fields should be included in a Students database. As a group, review your choices and decide on one common design. Prepare a short paper for your instructor that explains why your team chose the particular database design.

After agreeing on the database design, assign one member to create the database using the Database Wizard. Every other team member should contribute data and add the data to the database. Submit your assignment in the format specified by your instructor.