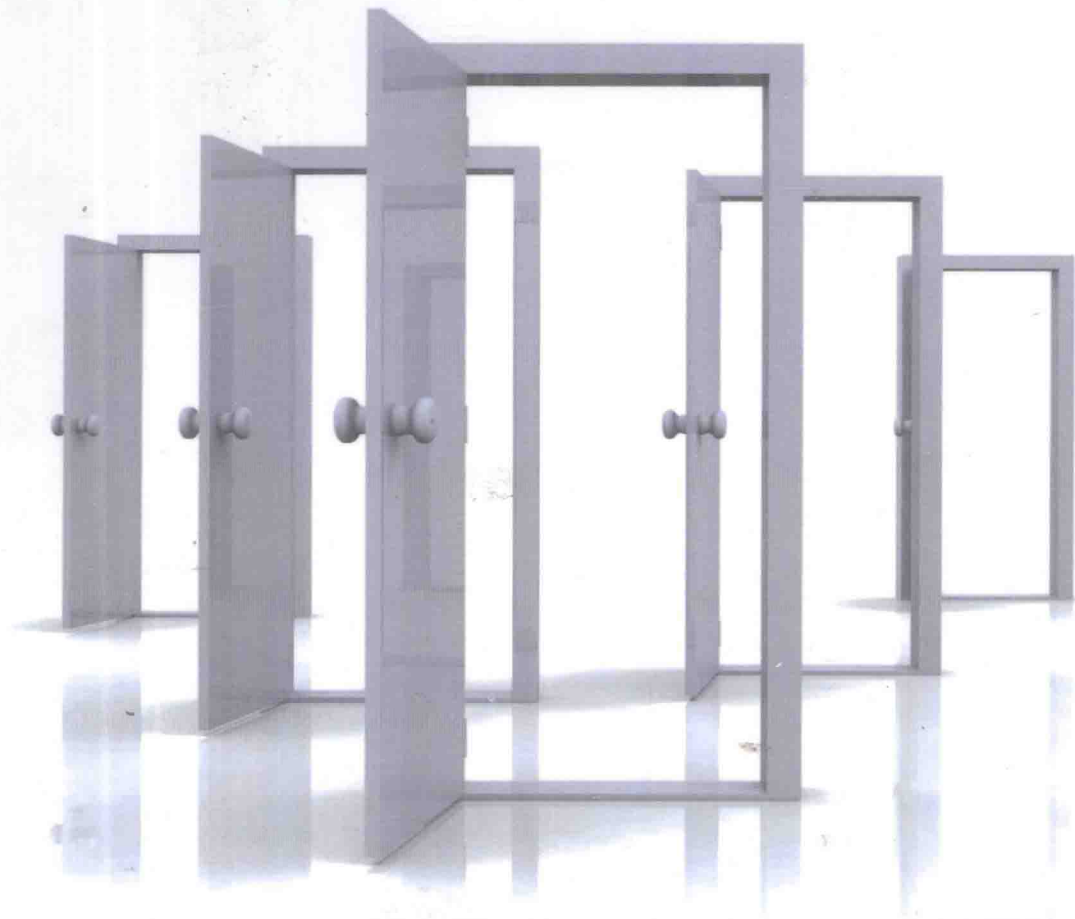


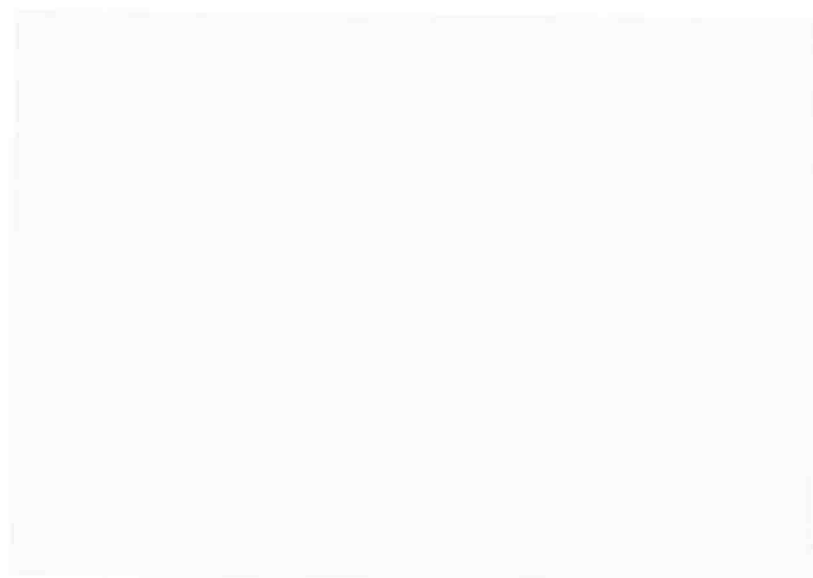
The Prentice Hall Custom Program for **CIS**



Southern Utah University
Computer Science and Information Systems
Connie W. Nyman

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Getting Started with Access Databases and Tables

OBJECTIVES

At the end of this chapter you will be able to:

1. Start Access and Create a New Blank Database
2. Add Records to a Table
3. Rename Table Fields in Datasheet View
4. Modify the Design of a Table
5. Add a Second Table to a Database
6. Print a Table
7. Create and Use a Query
8. Create and Use a Form
9. Create and Print a Report
10. Close and Save a Database

OUTCOMES

Mastering these objectives will enable you to:

PROJECT 12A

Create a New Blank Database

11. Create a Database Using a Template
12. Organize Database Objects in the Navigation Pane
13. Create a New Table in a Database Created With a Template
14. View a Report and Print a Table in a Database Created With a Template
15. Use the Access Help System

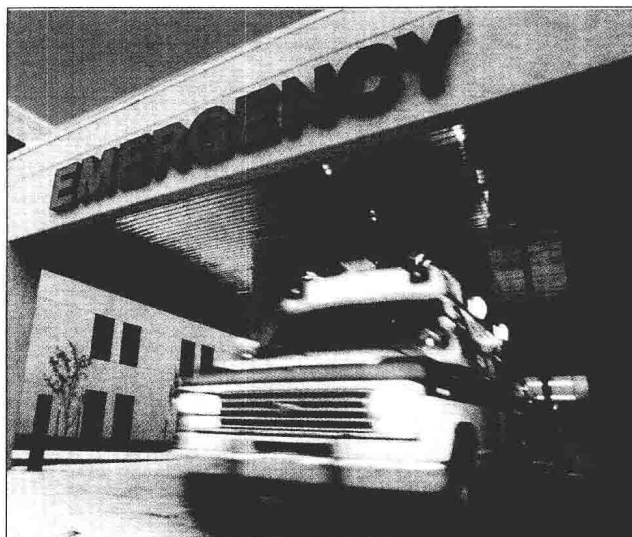
PROJECT 12B

Create a Database from a Template

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Texas Lakes Medical Center

Texas Lakes Medical Center is an urban hospital serving the city of Austin and surrounding Travis County, an area with a population of over 1 million people. Texas Lakes is renowned for its cardiac care unit, which is rated among the top 10 in Texas. The hospital also offers state-of-the-art maternity and diagnostic services, a children's center, a Level II trauma center, and a number of specialized outpatient services. Physicians, nurses, scientists, and researchers from around the world come together at Texas Lakes to provide the highest quality patient care.



Index Stock Imagery, Inc.

Getting Started with Access Databases and Tables

Do you have a collection of belongings that you like, such as a coin or stamp collection, a box of favorite recipes, or a stack of music CDs? Do you have an address book with the names, addresses, and phone numbers of your friends, business associates, and family members? If you collect something, chances are you have made an attempt to keep track of and organize the items in your collection. If you have an address book, you have probably wished it was better organized. A program like Microsoft Office Access can help you organize and keep track of information.

Microsoft Office Access 2007 is a program to organize a collection of related information about a particular topic, such as an inventory list, a list of people in an organization, or the students who are enrolled in classes in a college. Whether you use Access for personal or business purposes, it is a powerful program that helps you organize, search, sort, retrieve, and present information about a particular subject in an organized manner.

Project 12A Doctor and Patient Contact Information

In Activities 12.1 through 12.14, you will assist June Liu, Chief Administrative Officer at Texas Lakes Medical Center, in creating a new database for tracking the contact information for doctors and patients. June has a list of doctors and their contact information and a list of patients and their contact information. Using June's lists, you will create an Access database to track this information and use it to prepare a report. Your results will look similar to Figure 12.1.

For Project 12A, you will need the following file:

New blank Access database

You will save your database as
12A_Contact_Information_Firstname_Lastname

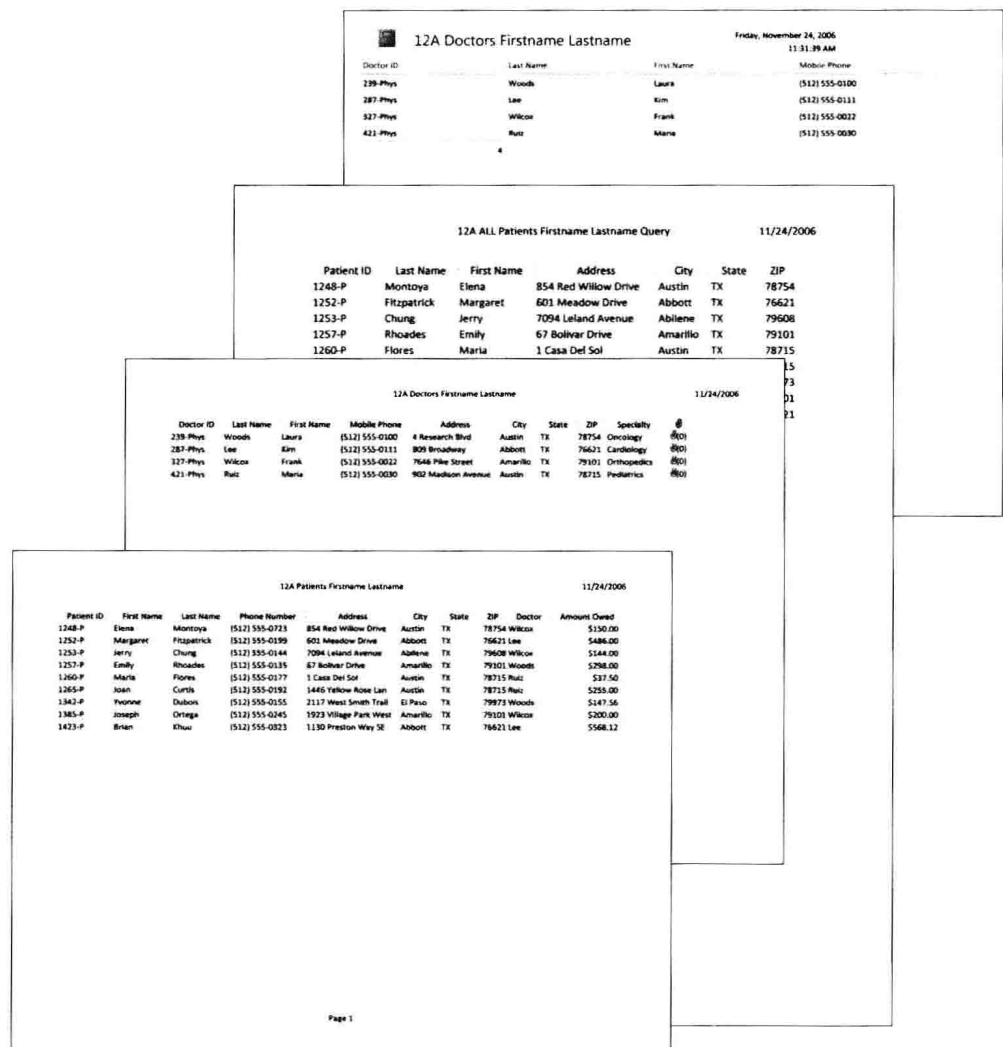


Figure 12.1
Project 12A—Contact Information

Objective 1

Start Access and Create a New Blank Database

A **database** collects and organizes **data**—facts about people, events, things, or ideas—related to a particular topic or purpose. Data that has been organized in a useful manner is referred to as **information**.

Many databases start as a simple list on paper, in a Word document, or in an Excel spreadsheet. As the list grows bigger and the data becomes more difficult to keep track of, it is a good idea to transfer the data to a database management system (**DBMS**) such as Access.

Examples of data that could be in a database include the titles and artists of all the CDs in a collection or the names and addresses of all the doctors and patients at a medical facility. A database includes not only the data, but also the tools for organizing the data in a way that is useful to you.

The first step in creating a new database from data that you already have is to plan your database on paper. Determine what information you want to track, and then ask yourself, *What questions should this database be able to answer for me?*

For example, in the Contact Information database for the Texas Lakes Medical Center, the questions to be answered may include:

- How many doctors and patients are there at the Texas Lakes Medical Center?
- Which and how many patients live in Austin?
- Is any doctor or patient listed twice?
- Which and how many patients have a balance owed?

Activity 12.1 Starting Access, Creating and Naming a Folder, and Creating a Database from a New Blank Database

There are two methods to create a new Access database: create a new database using a **template**—a preformatted database designed for a specific purpose—or create a new **blank database**. A blank database has no data and has no database tools; you create the data and the tools as you need them. In this activity, you will create a new blank database.

Regardless of which method you use, you must name and save the database before you can create any **objects** in the database. Objects are the basic parts of a database; you will create objects to store your data and work with your data. Think of an Access database as a container for the database objects that you will create.

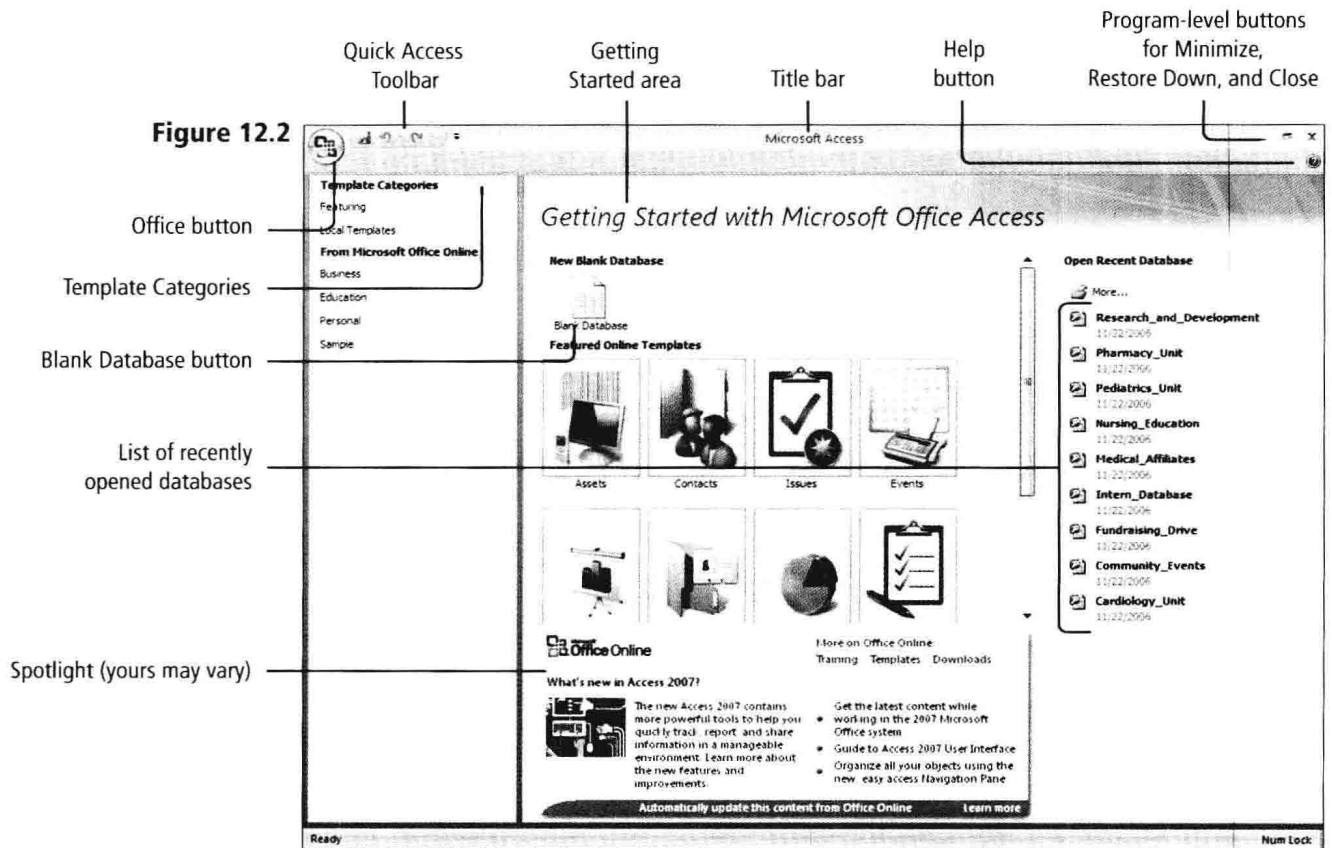
- 1** On the left side of the Windows taskbar, click the **Start** button



, determine where the **Access** program is located, point to **Microsoft Office Access 2007**, and then click one time to open the

program. Take a moment to compare your screen with Figure 12.2 and study the parts of the Microsoft Access window described in the table in Figure 12.3.

From this Access starting point, you can open an existing database, start a new blank database, or begin a new database from one of the available database templates.



The Access Getting Started Screen

Window Part	Description
Blank Database button	Starts a new blank database.
Getting Started area	Contains the starting point to begin a New Blank Database or view new information from Microsoft Office Online.
Help button	Displays the Access Help window.
Open Recent Database	Displays a list of the most recently opened databases on the computer at which you are working.
Office button	Displays a menu of commands related to things you can do <i>with</i> a database, such as opening, saving, printing, or managing.
Program-level buttons for Minimize, Restore Down, and Close	Minimizes, restores, or closes the Access program.

(Continued)

(Continued)

Window Part

Description

Quick Access Toolbar

Displays buttons to perform frequently used commands with a single click. Frequently used commands in Access include Save, Undo, and Redo. You can add commands that you use frequently to the Quick Access Toolbar.

Spotlight

Displays the latest online content, such as new templates, articles about Access, and tips from Microsoft's Web site.

Template Categories

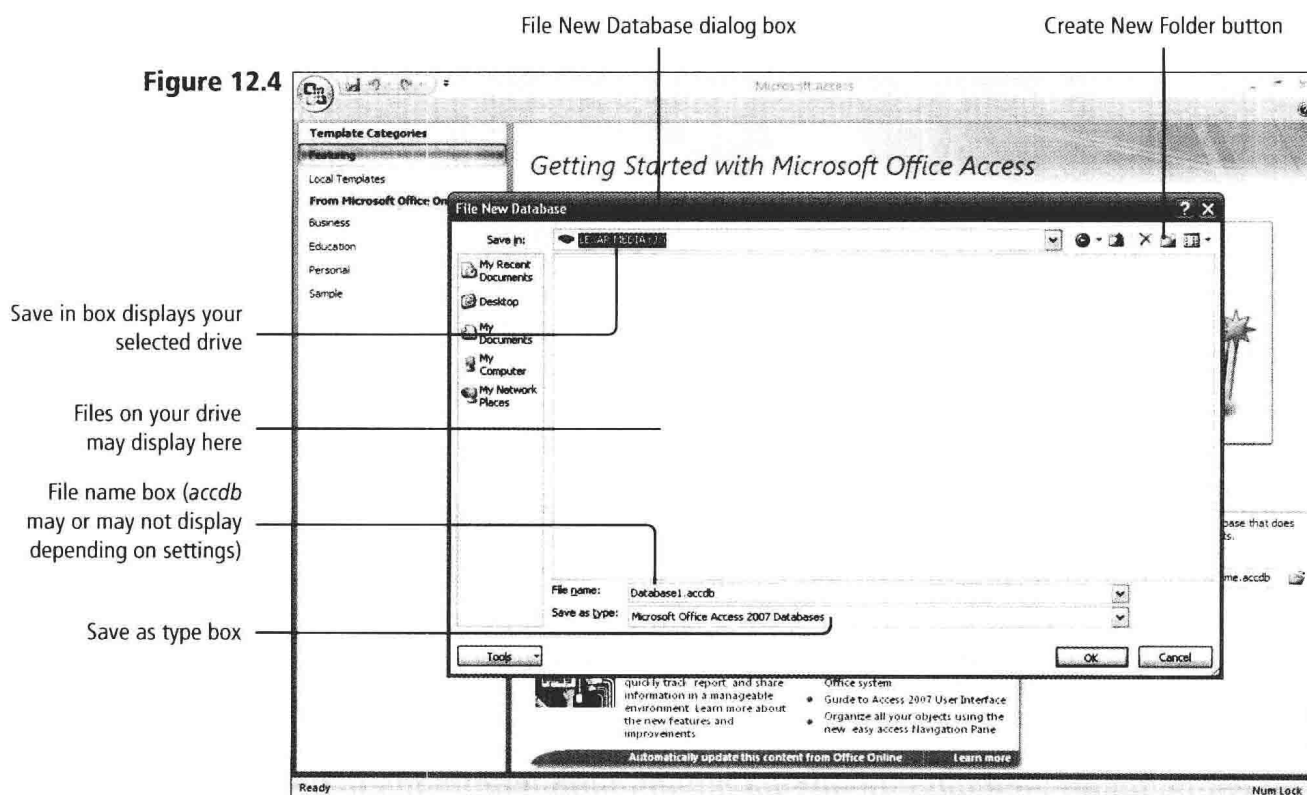
Displays a list of available database templates.


Title bar

Displays the program name and the program-level buttons.

Figure 12.3

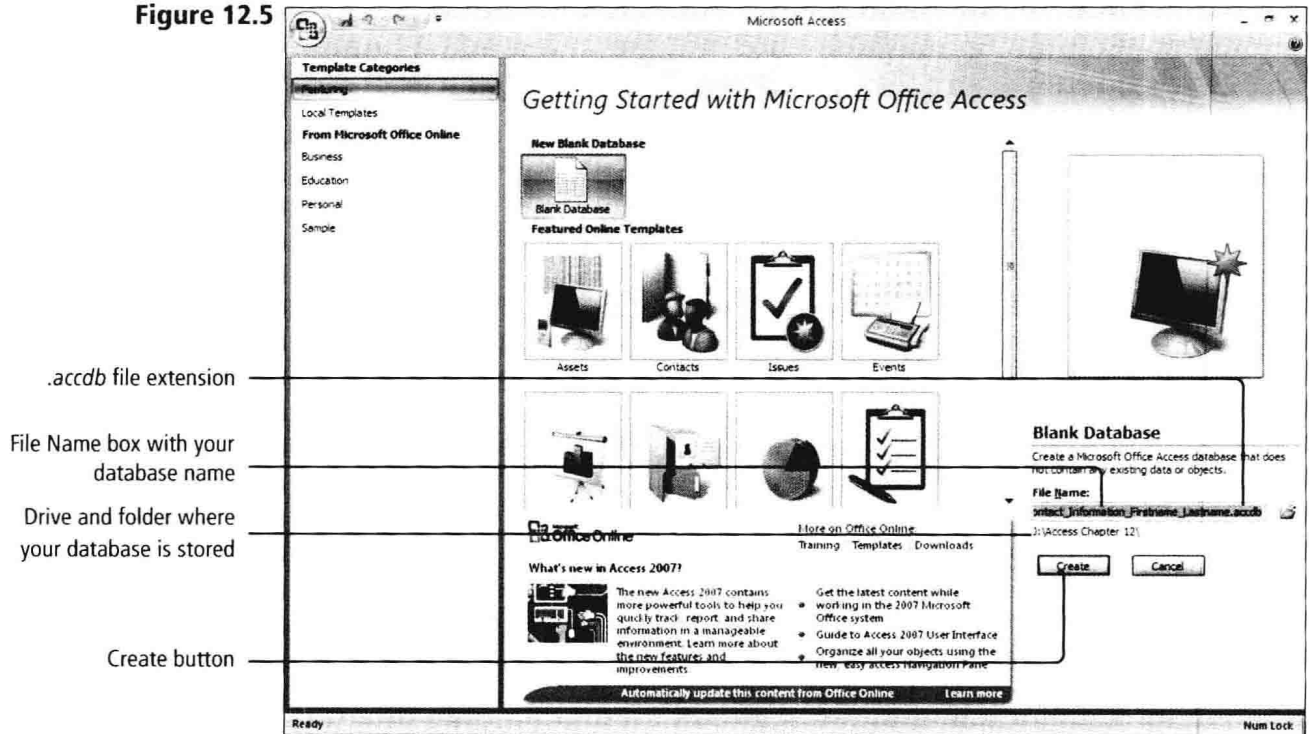
- 2** In the **Getting Started with Microsoft Office Access** area, under **New Blank Database**, click **Blank Database**.
- 3** In the lower right portion of the screen, to the right of the **File Name** box, point to the **open file folder icon** to display the words *Browse for a location to put your database*, and then click the file folder icon.
- 4** In the displayed **File New Database dialog box**—a window containing commands or that asks you to make a decision—click the **Save in arrow**. From the displayed list, navigate to the drive where you are storing your projects for this chapter, for example, *Removable Disk (J:) drive*. Be sure the drive name and letter display in the **Save in** box, and then compare your screen with Figure 12.4.



- 5** In the upper right corner of the **File New Database** dialog box, click the **Create New Folder** button . In the displayed **New Folder** dialog box, type **Access Chapter 12** and then click **OK**. At the bottom of the dialog box, in the **File name** box, select the existing text, and then type **12A_Contact_Information_Firstname_Lastname**. Press **Enter**, and then compare your screen with Figure 12.5.

Text that you select is replaced by new text that you type. The Microsoft Windows operating system recognizes file names with spaces. However, some Internet file transfer programs do not. To facilitate sending your files over the Internet, in this textbook you will save files using an underscore rather than a space. On most keyboards, the underscore key is the shift of the hyphen key, which is to the right of the zero key.

Figure 12.5



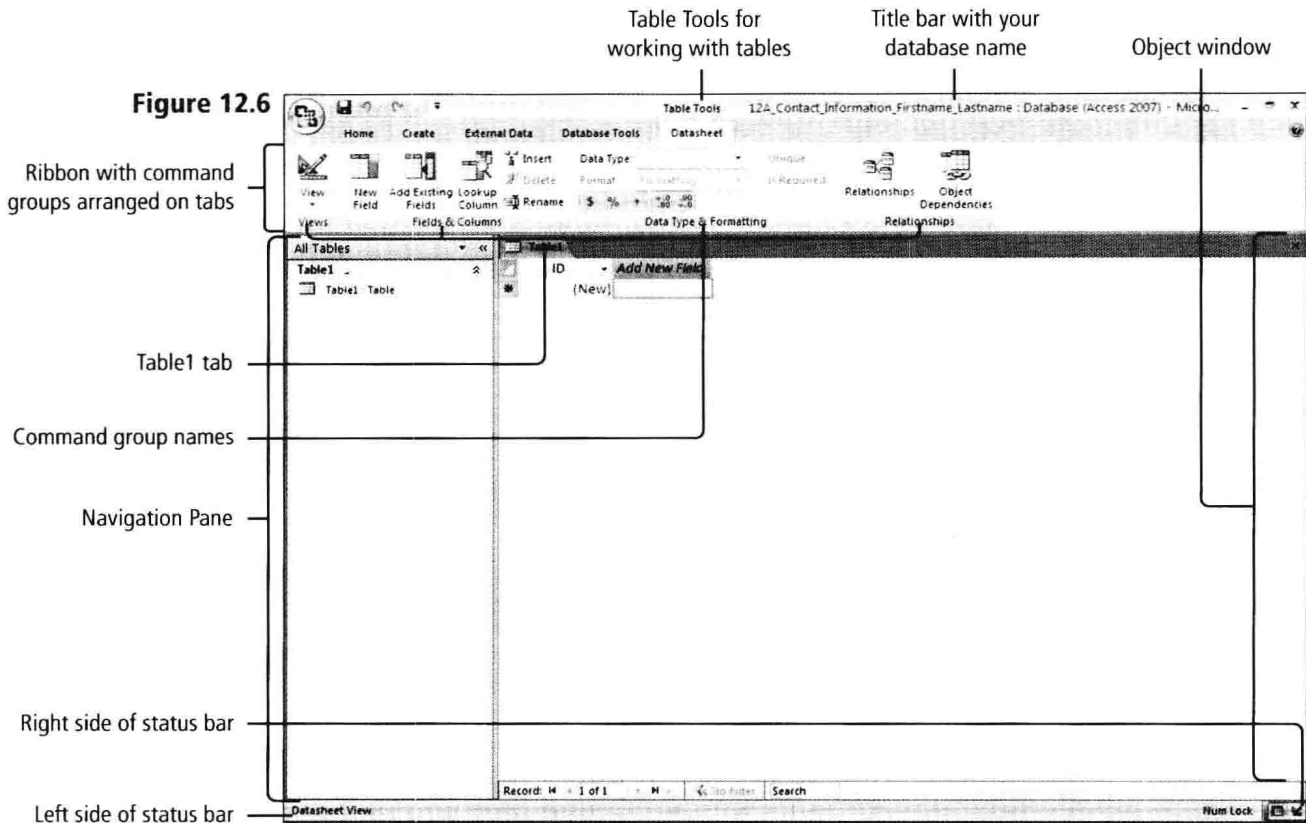
- 6** In the lower right corner, click the **Create** button, compare your screen with Figure 12.6, and then take a moment to study the screen elements described in the table in Figure 12.7.

Access creates the new database and opens a **table** named **Table1**. A table is the Access object that stores your data organized in an arrangement of columns and rows. Recall that *object* is the term used to refer to the parts of an Access database that you will use to store and work with your data.

Table objects are the foundation of your Access database because tables store the actual data.

Note — Comparing Your Screen With the Figures in This Textbook

Your screen will match the figures shown in this textbook if you set your screen resolution to 1024 × 768. At other resolutions, your screen will closely resemble, but not match, the figures shown. To view your screen's resolution, on the Windows desktop, right-click in a blank area, click Properties, and then click the Settings tab.



Parts of the Access Window

Window Part	Description
Command group names	Contains groups of related command buttons associated with the selected command tab.
Left side of status bar	Indicates the active view and the status of actions occurring within the database.
Navigation Pane	Displays the database objects; from here you open the database objects to display in the object window at the right.
Object window	Displays the open table object.
Ribbon with command groups arranged on tabs	Groups the commands for performing related database tasks on tabs.
Right side of status bar	Provides buttons to switch between Datasheet View and Design View.
Table Tools for working with tables	Provides tools for working with a table object; Table Tools display only when a table is displayed.
Table1 tab	Enables you to select the table object.
Title bar with your database name	Displays the name of your database.

Figure 12.7

7 Leave your database open for the next activity.

Objective 2

Add Records to a Table

After you have saved and named the database, the next step is to plan and create the tables in which to record your data. Recall that tables are the foundation of your database because the actual data is stored there.

Limit the data in each table to one subject. For example, think of all the data at your college; there is likely one table for student information, another table for course information, another table for classroom information, and so on.

Within each table, create columns that are broken down into the smallest usable part. For example, instead of a complete address, break the address down into a part for the street address, a part for the city, a part for the state, and a part for the postal code. With small usable parts, you can, for example, find all of the people who live in a particular city or state or postal code.

To answer all the questions you want your database to answer, in this project you will create a database with two tables. One table will list the names and contact information for patients at Texas Lakes Medical Center and the other table will list the names and contact information for doctors at Texas Lakes Medical Center.

Activity 12.2 Adding Records to a Table

In a table object, each column contains a category of data called a **field**. Fields are categories that describe each piece of data stored in the table. You can add the field names, which display at the top of each column of the table, before or while you are entering your data. Each row in a table contains a **record**—all of the categories of data pertaining to one person, place, thing, event, or idea. Your **table design** refers to the number of fields, the names of fields, and the type of content within a field, for example numbers or text.

There are two ways to view a table—in **Datasheet view** or in **Design view**. Datasheet view displays the table data organized in a format of columns and rows similar to an Excel spreadsheet. Design view displays the underlying structure of the table object.

When you buy a new address book, it is not very useful until you fill it with names, addresses, and phone numbers. Likewise, a new database is not useful until you **populate**, or fill, a table with data. You can populate a table with records by typing data directly into the table.

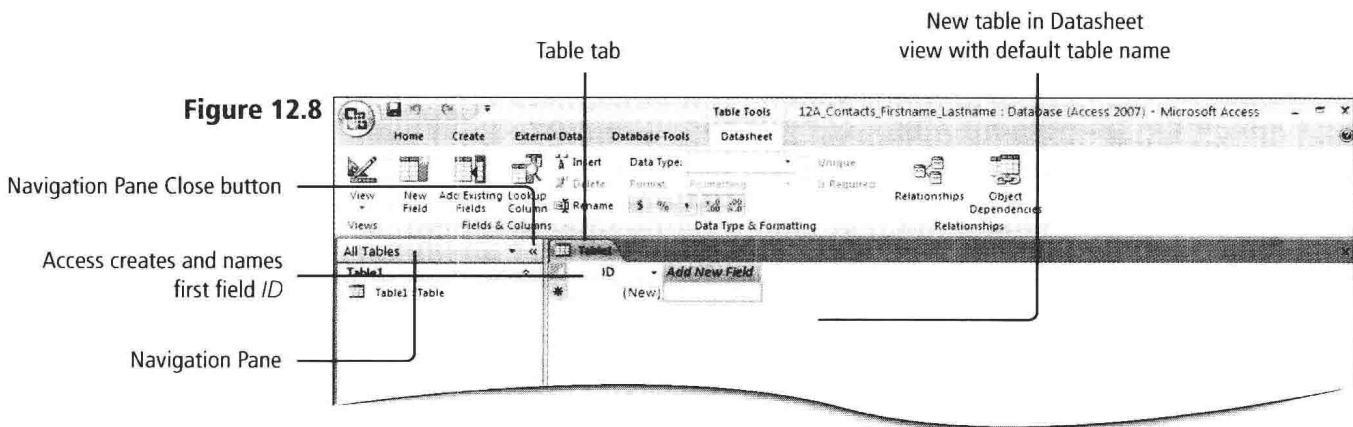
In this activity, you will populate a table in Datasheet view that will list contact information for patients at Texas Lakes Medical Center.


- 1 Look at your screen and notice that the Datasheet view for a table displays. Then, take a moment to study the elements of the table object window as shown in Figure 12.8.

When you create a new blank database, only one object—a new blank table—is created. You will create the remaining database objects as you need them.

Because you have not yet named this table, the Table tab indicates the default name *Table1*. Access creates the first field and names it *ID*. In the ID field, Access will assign a unique sequential number—each number incremented by one—to each record as you type it into the table.

Figure 12.8



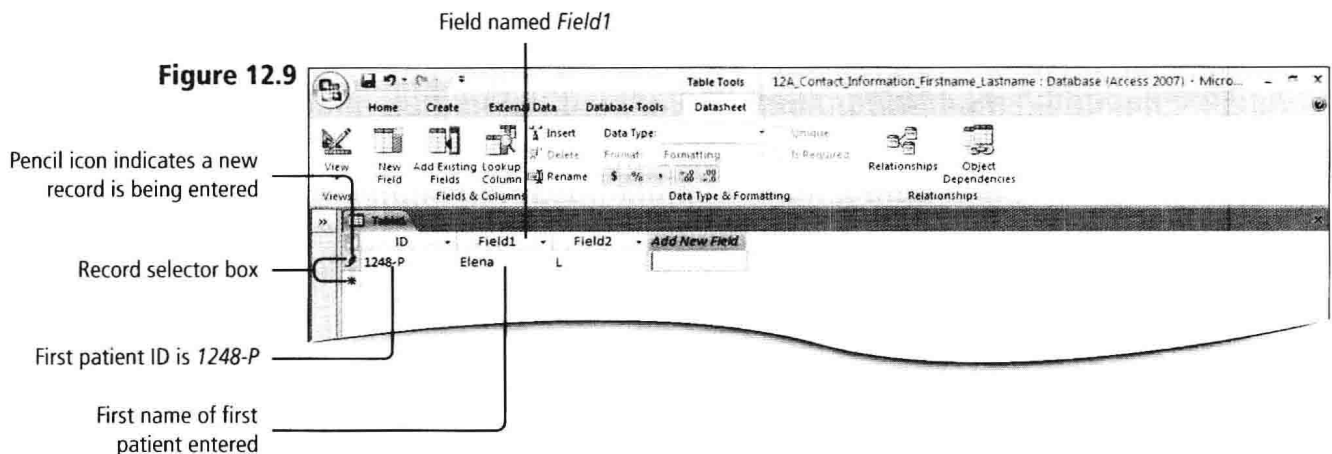
- 2** In the **Navigation Pane**, click the **Open/Close** button  to collapse the **Navigation Pane** into a narrow bar at the left side of your screen.

Collapsing the Navigation Pane in this manner gives you more screen space in which to work with your database.

- 3** In the second column, click in the **cell**—the box formed by the intersection of a row and a column—under *Add New Field*, type **Elena** and then press **Tab** or **Enter**. Click in the **ID** field. On the **Datasheet** tab, in the **Data Type & Formatting** group, click the **Data Type** arrow, and then click **Text**. Type **1248-P** and then to the right of *Elena*, click in the **Add New Field** cell, and type **L**. Press **Tab**. Compare your screen with Figure 12.9.

As soon as information is entered, Access assigns the name *Field1* to the field and enters an AutoNumber of 1 in the ID field. The ID field is automatically created by Access. By default, Access creates this field for all new tables and sets the data type for the field to **AutoNumber**, which sequentially numbers each entry. Changing the ID field data type from *AutoNumber* to *Text* lets you enter a custom patient number. As you enter data, Access assigns field names as *Field1*, *Field2*, and so on; you can rename the fields when it is convenient for you to do so.

The pencil icon in the **record selector box**—the small box at the left of a record in Datasheet view which, when clicked, selects the entire record—indicates that a new record is being entered.



- 4** With the insertion point positioned in the fourth column, in the cell under *Add New Field*, type **Montoya** and then press **Tab** or **Enter**.
- 5** Type **(512) 555-0723** and then press **Enter**. Type **854 Red Willow Drive** and then press **Enter** to form *Field5*.

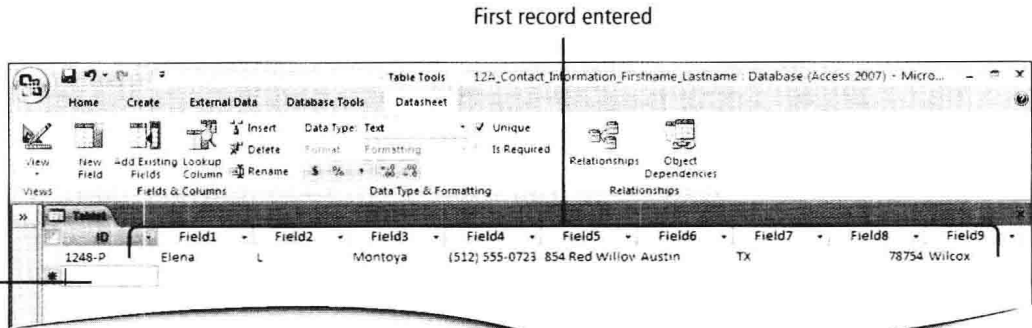
Do not be concerned if the data does not completely display in the column. As you progress in your study of Access, you will adjust the column widths so that you can view the data.

- 6** Type **Austin** and then press **Enter** to form *Field6*. Type **TX** and then press **Enter** to form *Field7*.

- 7** Type **78754** and then press **Enter** to form *Field8*. Type **Wilcox** and then press **Enter** to form *Field9*. Type **150** and then press **Enter** two times. Compare your screen with Figure 12.10.

To move across the row, you can press **Tab** or **Enter**. Pressing **Enter** two times moves the insertion point to the next row to begin a new record. As soon as you move to the next row, the record is saved—you do not have to take any specific action to save the record.

Figure 12.10



Note — Correct Typing Errors by Using Techniques Similar to Documents and Worksheets

If you make a mistake while entering data, you can correct the error by using **←Bksp** to remove characters to the left, **Delete** to remove characters to the right, or select the text you want to replace and type the correct information. You can also press **Esc** to exit out of a new record.

- 8** Beginning with the record for *Margaret E Fitzpatrick*, and using the technique you just practiced, enter the contact information for three additional patients, pressing **Enter** as necessary after entering the information in *Field10*. Then compare your screen with Figure 12.11.

ID	Field1	Field2	Field3	Field4	Field5	Field6	Field7	Field8	Field9	Field10
1248-P	Elena	L	Montoya	(512) 555-0723	854 Red Willow Drive	Austin	TX	78754	Wilcox	150
1252-P	Margaret	E	Fitzpatrick	(512) 555-0199	601 Meadow Drive	Abbott	TX	76621	Lee	486
1253-P	Jerry	R	Chung	(512) 555-0144	7094 Leland Avenue	Abilene	TX	79608	Wilcox	144
1257-P	Emily	A	Rhoades	(512) 555-0135	67 Bolivar Drive	Amarillo	TX	79101	Woods	298

Field 10 out of view (your screen may vary in how many columns are shown)

Figure 12.11

Records for four patients entered

ID	Field1	Field2	Field3	Field4	Field5	Field6	Field7	Field8	Field9
1248-P	Elena	L	Montoya	(512) 555-0723	854 Red Willow Austin	TX		78754 Wilcox	
1252-P	Margaret	E	Fitzpatrick	(512) 555-0199	601 Meadow D Abbott	TX		76621 Lee	
1253-P	Jerry	R	Chung	(512) 555-0144	7094 Leland Av Abilene	TX		79608 Wilcox	
1257-P	Emily	A	Rhoades	(512) 555-0135	67 Bolivar Driv Amarillo	TX		79101 Woods	

More Knowledge

Format for Typing Telephone Numbers in Access

Access does not require any specific format for entering telephone numbers in a database. The examples in this project use the format used in Microsoft Outlook. Using such a format facilitates easy transfer of Outlook information to and from Access.


Objective 3

Rename Table Fields in Datasheet View

Recall that each column in a table contains a category of data called a *field*, and that field names display at the top of each column of the table. Recall also that each row contains a *record*—all of the data pertaining to one person, place, thing, event, or idea—and that each record is broken up into small parts—the *fields*.

Activity 12.3 Renaming the Fields In a Table in Datasheet View

In this activity, you will rename fields in your table to give the fields more meaningful names.

- At the top of the second column, point to the text *Field1* to display the  pointer and click. Compare your screen with Figure 12.12.