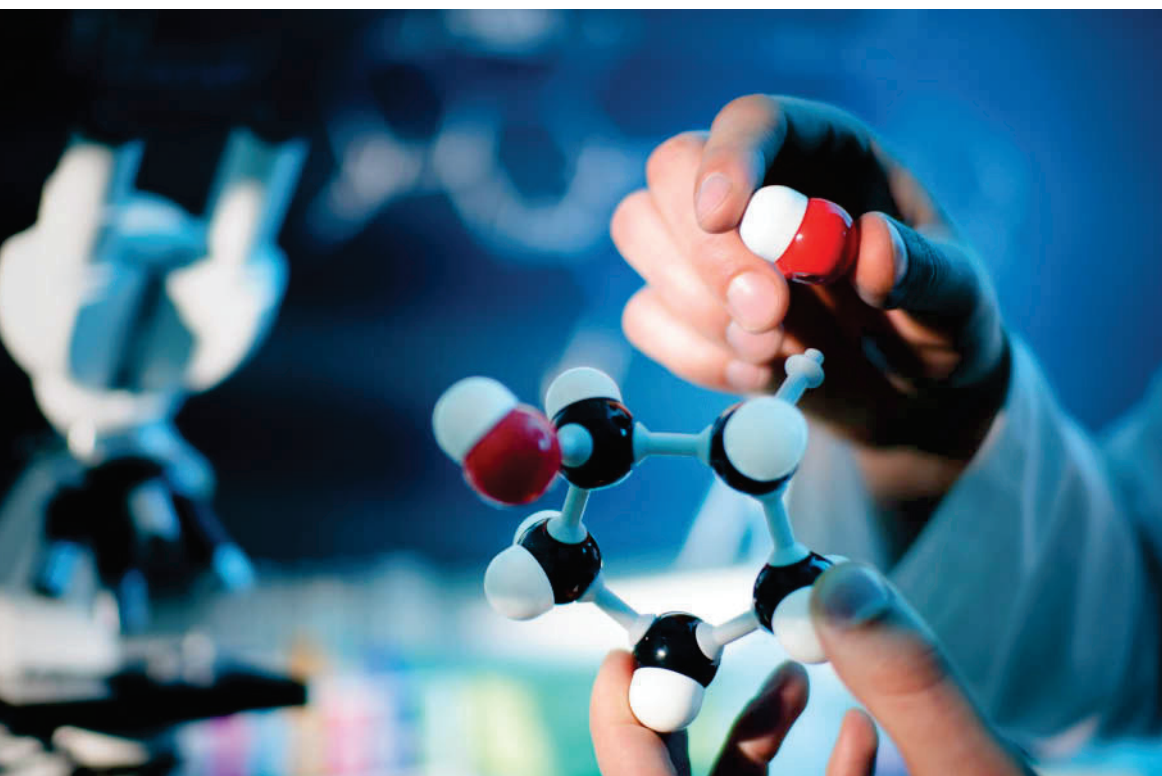


Create Database Tables 2

LESSON SKILL MATRIX

Skill	Exam Objective	Objective Number
Creating a Database	Create databases using templates	1.1.2
	Create new databases	1.1.1
Creating a Table	Create tables from templates and application parts	2.1.5
	Create new tables	2.1.1
	Create reports with application parts	5.1.2
Saving a Database Object		

WILEY



KEY TERMS

- Application Parts
- Quick Start
- template

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As an assistant curator at the Baldwin Museum of Science, you are responsible for the day-to-day management of the insect collection, including duties such as sorting and organizing specimens and supervising the mounting and labeling of the insects. The insect collection catalog has never been transferred to an electronic database. Because you have experience with database management, part of your responsibility is to create a database to store the information about the specimens, collections, museum exhibits, and events—a task perfectly suited to Access 2013. In this lesson, you learn how to create a blank database and how to use a template to create a database. You also learn how to use Application Parts to

create a table from a template, how to create a table by copying the structure from another table, and how to save a database object.

SOFTWARE ORIENTATION

Getting Started with Microsoft Access

The Access startup screen shown in Figure 2-1 provides options for opening a preexisting database and creating a new blank database or a new database from a template. This is the default view after starting Access. Use this figure as a reference throughout this lesson as well as the rest of this book.



Figure 2-1
The Access startup screen

The Bottom Line

CREATING A DATABASE

In Access 2013, the process of creating a new database is easier than ever. You can create a database using one of the many available **templates** (ready-to-use databases that contain all of the tables, queries, forms, and reports needed for performing specific tasks) or by creating a new blank database.

Using a Template to Create a Database

Access offers a variety of templates to help get you started. Some templates are immediately available for your use because they are built into Access while others can be easily downloaded from Office.com. Built-in and Office.com templates are available that can be used to track issues, manage contacts, or keep a record of expenses. Some templates contain a few sample records to help demonstrate their use. You can use templates as-is or you can customize them to better suit your purposes. In this exercise, you use one of the many available templates to create a database.

STEP BY STEP

Use a Template to Create a Database

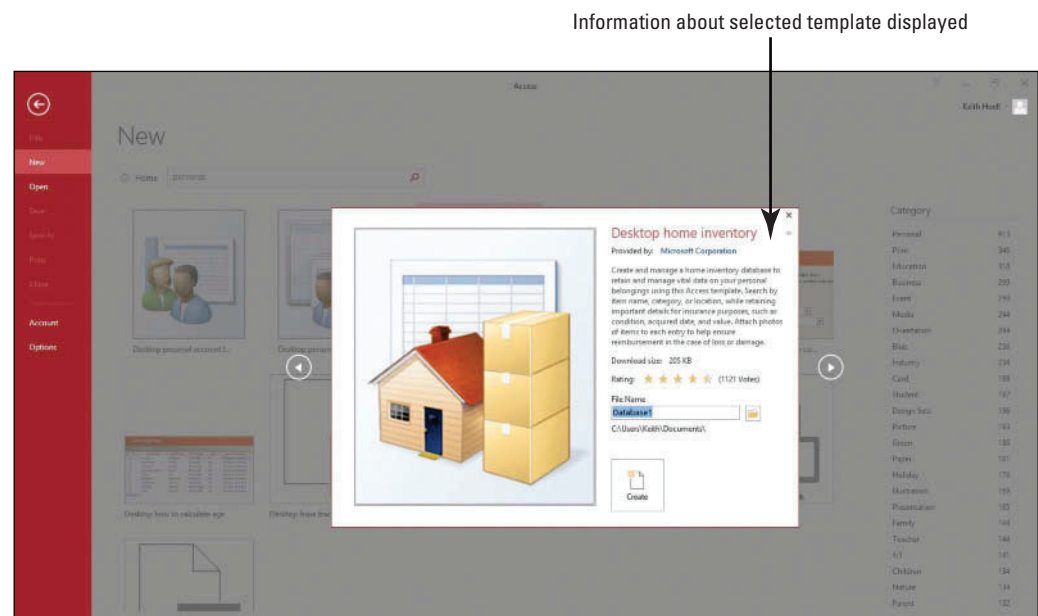


GET READY. Before you begin these steps, be sure that you are logged on to the Internet.
LAUNCH Microsoft Access to display the startup screen.

1. On the top center of the startup screen window, in the *Search for online templates* search box, key **personal** and then press **Enter**.
2. In the list of Personal templates that appears in the middle of the startup screen results pane, click **Desktop home inventory**. A preview screen of the selected template appears in the center of the startup screen, as shown in Figure 2-2. Close the Desktop home inventory template preview screen.

Figure 2-2

The Desktop home inventory template preview screen

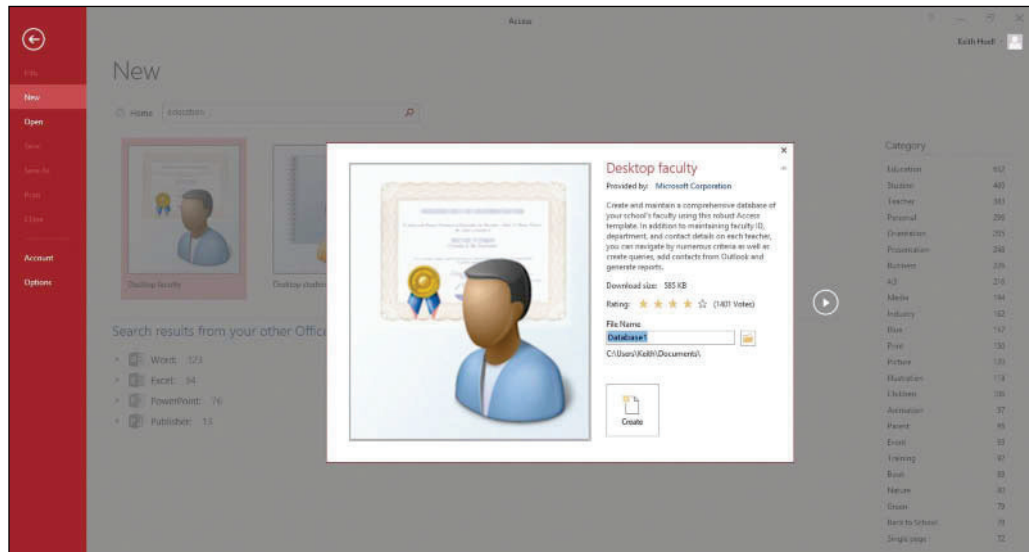


Clip art used with permission from Microsoft

3. In the *Search for online templates* search box, key **education** and then press **Enter**.
4. In the list of Education templates that appears, click **Desktop faculty**. Your screen should look similar to Figure 2-3. Close the Desktop faculty template preview screen.

Figure 2-3

The Desktop faculty template preview screen

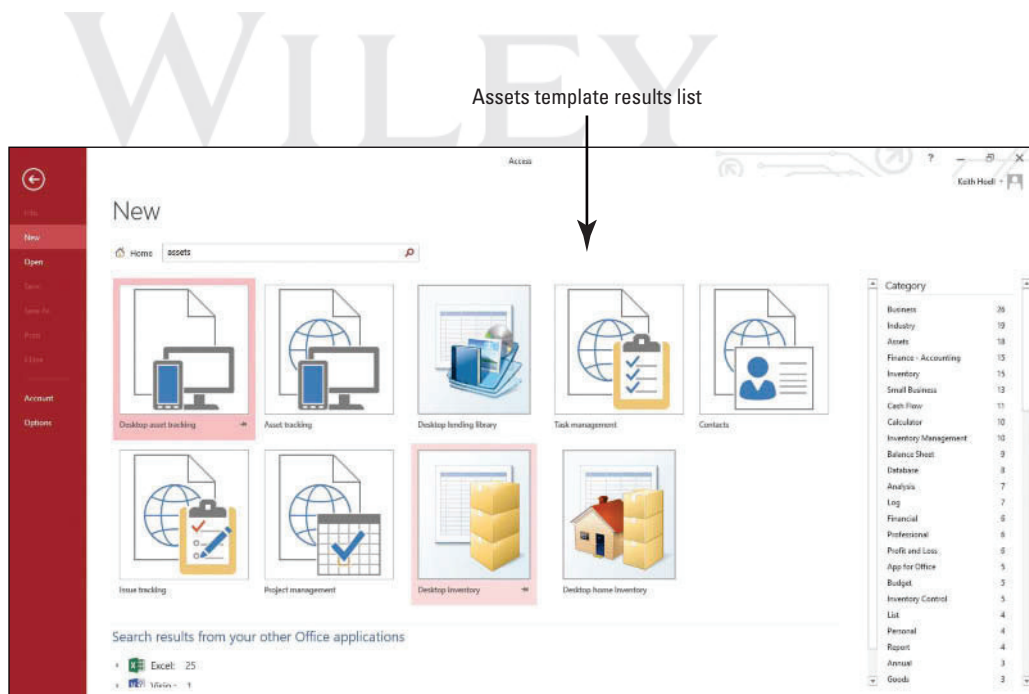


Clip art used with permission from Microsoft

5. In the *Search for online templates* search box, key in **assets** and then press **Enter**.
6. In the Assets template results list shown in Figure 2.4, click the **Desktop asset tracking** database. The Desktop asset tracking template preview screen appears.

Figure 2-4

Assets templates

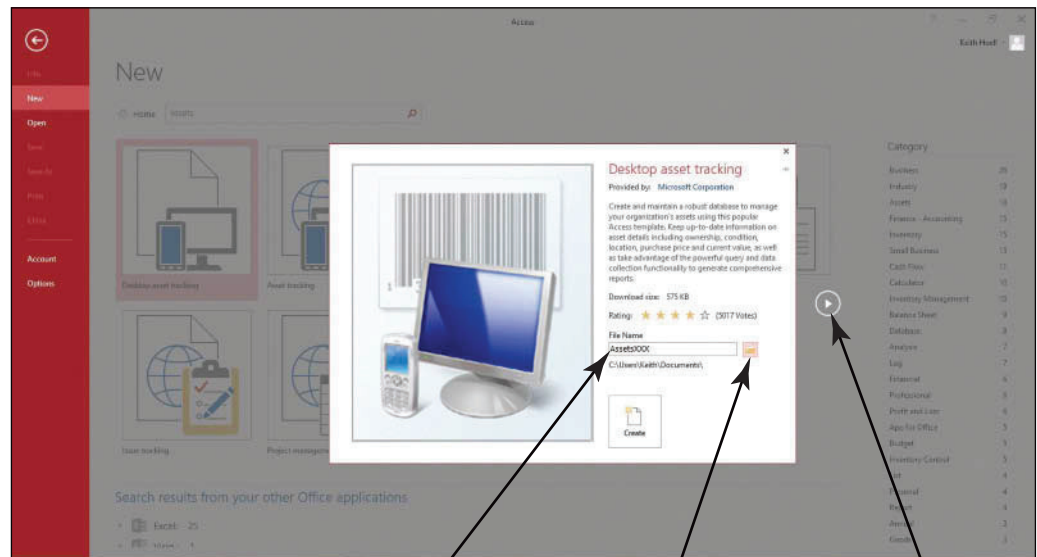


Clip art used with permission from Microsoft

7. In the Desktop asset tracking template preview screen, click in the **File Name** box and replace the default file by keying **AssetsXXX** (where XXX is your initials), as shown in Figure 2-5.

Figure 2-5

The File Name box and folder icon



Clip art used with permission from Microsoft

Key new file name

Opens File New Database dialog box to navigate to a location to save the database

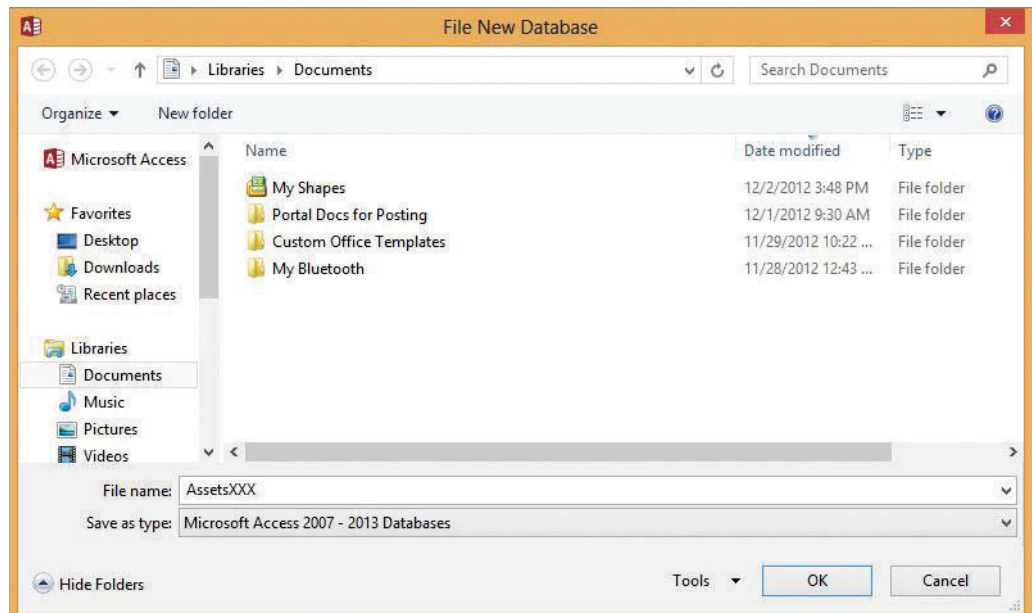
Moves to next template in search results listing

If you do not add an extension to your database file name, Access does it for you—for example, *AccessXXX.accdb*.

- Click the **folder icon** to the right of the File Name box. The File New Database dialog box appears, as shown in Figure 2-6.

Figure 2-6

The File New Database dialog box



- Navigate to the location where you want to save the file and then click **OK**.

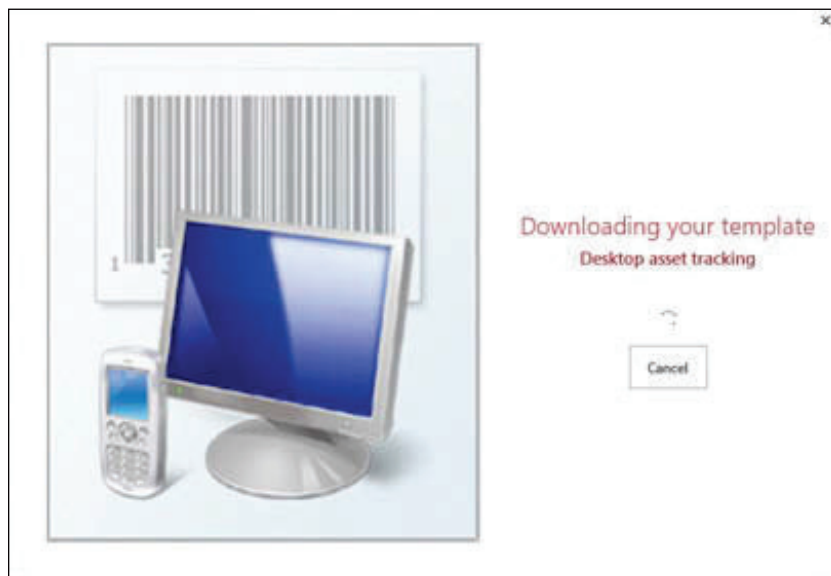
Take Note You should save your files in a separate directory from where your data files are stored. This will ensure that you don't overwrite the original data files with your updated files. Check with your instructor to see if she wants you to save your work on a flash drive or in a particular network directory.

Take Note Unless you choose a different folder, Access uses the following default location in Windows Server 2008/2012, Windows 7, and Windows 8 to store your databases: `c:\Users\user name\Documents`

10. Click the **Create** button at the the bottom of the preview pane. The preview pane indicates that the template is being downloaded, as shown in Figure 2-7. When the download is complete, the preview pane closes.

Figure 2-7

The preview pane indicating that the template is downloading



Clip art used with permission from Microsoft

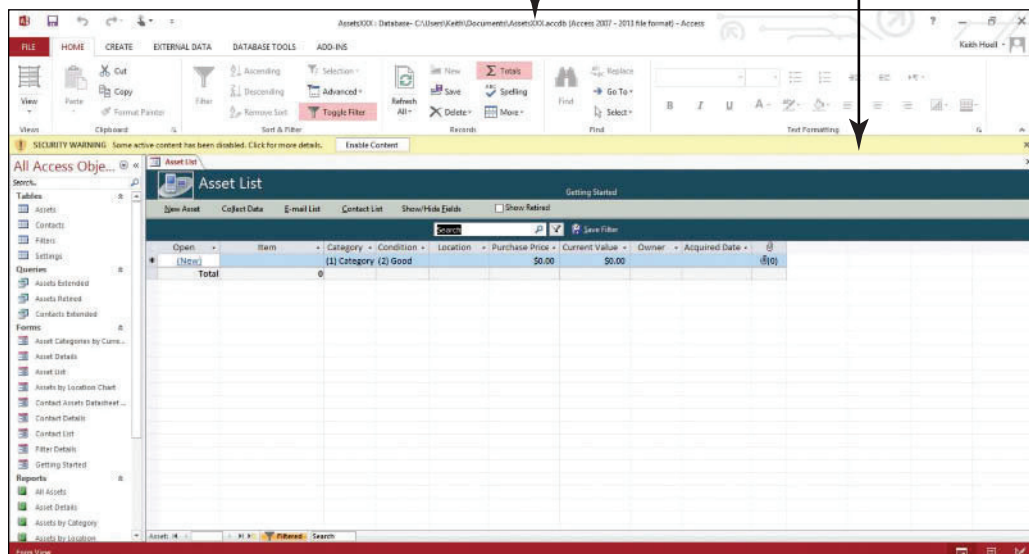
11. Access creates and then opens the AssetsXXX database, as shown in Figure 2-8. Because this database was downloaded from Office.com (a trusted source), click **Enable Content** on the Message Bar. Getting Started and Access Help windows may appear, which contain helpful videos and links about using the Asset tracking database. Close these windows, if necessary, to return to the AssetsXXX database with the Asset List form active. Click to place the insertion point in the first cell of the Item field and then key **Canon EOS Rebel T3i**.

Figure 2-8

The Assets template database

Access 2007–2013 file format indication on title bar specifies database format is of the latest specification

Message Bar



Clip art used with permission from Microsoft



Troubleshooting

Sometimes you may be asked if you want to enable content by clicking the Enable Content button on the Security Warning Message Bar. By default, Access blocks potentially harmful content that might contain viruses or present other security issues. This content should be enabled only if the database is downloaded from a trustworthy site, like Office.com.

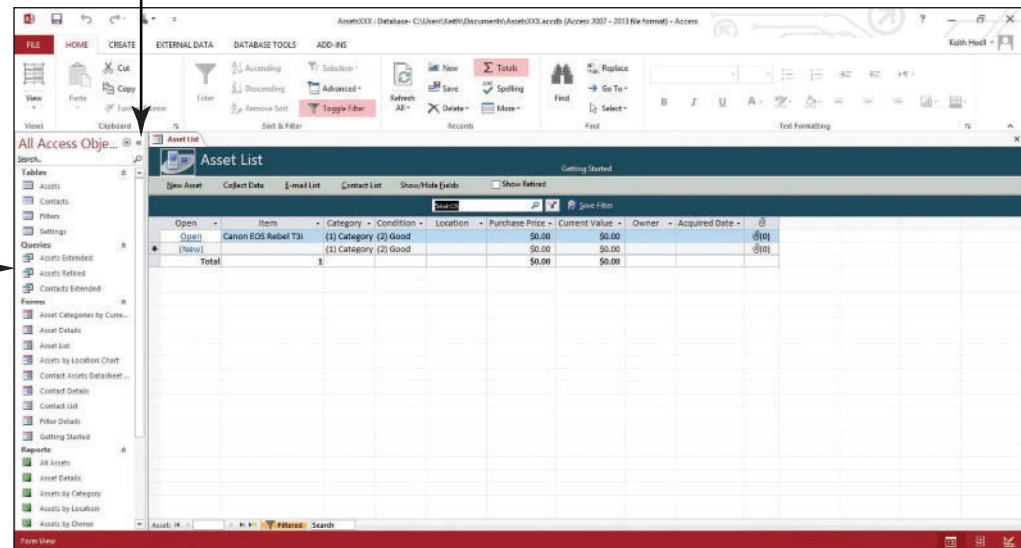
- Click the **Shutter Bar Open/Close Button**, if necessary, to display the Navigation Pane, as shown in Figure 2-9, to see all the objects in the database.

Figure 2-9

Shutter Bar Open/Close Button

The Assets database with the Navigation Pane displayed

Objects in downloaded database displayed in Navigation Pane



Clip art used with permission from Microsoft

CERTIFICATION READY? 1.1.2

How do you create databases using templates?

- CLOSE** the database.

PAUSE. LEAVE Access open to use in the next exercise.

Creating a Blank Database

If you have existing data, you may decide that it is easier to create a blank database rather than using a template, because it would require a lot of work to adapt your existing data to the template's defined data structure. When you create a new blank database, Access opens a database that contains a table where you can enter data, but it creates no other database objects. By default, Access creates a primary key field named "ID" for all new datasheets and sets the data type for the field to AutoNumber. In this exercise, you create a new blank database.

STEP BY STEP

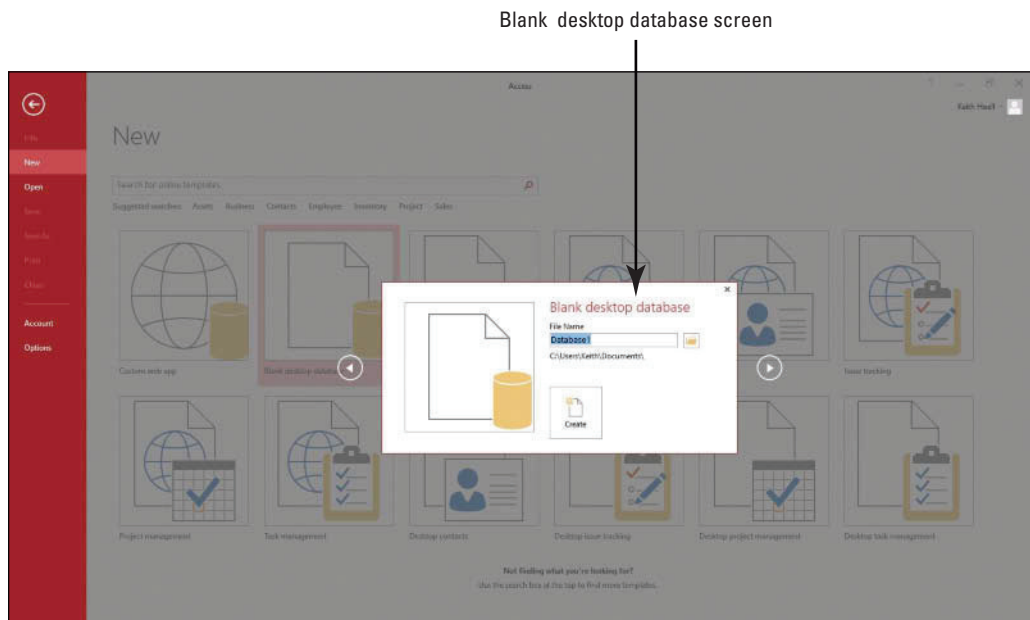
Create a Blank Database

GET READY. The Access work area window should be on the screen from the previous exercise.

- Click the **FILE** tab to open the New screen in Backstage view.
- In the templates section of the New screen, click the **Blank desktop database** icon. A Blank desktop database screen appears in the center of the screen, as shown in Figure 2-10.

Figure 2-10

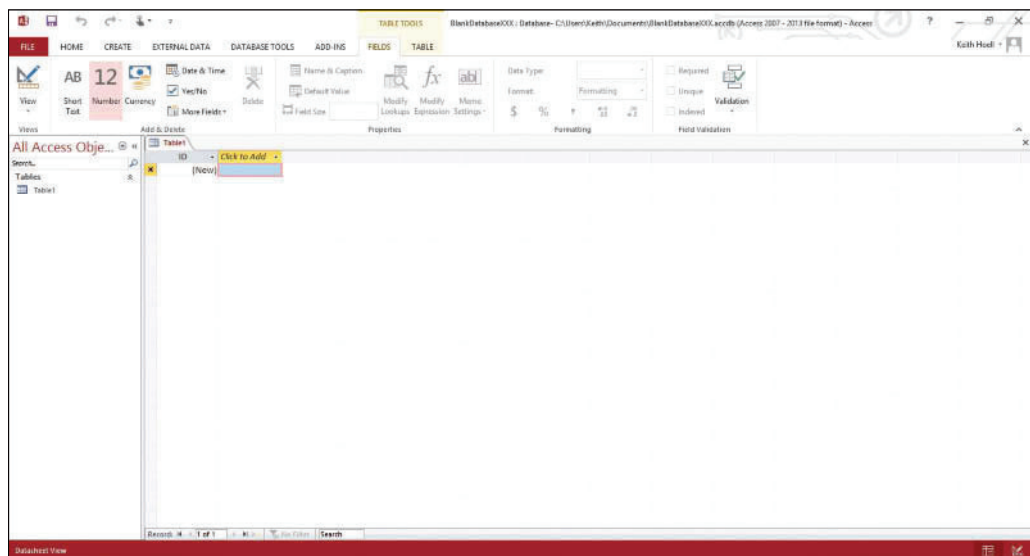
A Blank desktop database screen



3. In the File Name box, key **BlankDatabaseXXX** (where XXX is your initials).
4. If you want to save the file in a location other than the one shown beneath the File Name box, click the **folder icon** to the right of the File Name box and browse to a different location.
5. Click the **Create** button to create the blank database in your chosen location. Access creates the database and then opens an empty table named Table1 in Datasheet view, as shown in Figure 2-11.

Figure 2-11

A new blank database



**CERTIFICATION
READY?** 1.1.1

How do you create new databases?

PAUSE. LEAVE the database open to use in the next exercise.

Take Note

The New screen appears in the Backstage view after you click on the FILE tab when no database is open. When a database is open, the FILE tab takes you to the Info screen in the Backstage view.



You learn more about defining and modifying a primary key in Lesson 3.

With the insertion point placed in the first empty cell of your new, blank database, you can begin keying to add data. Entering data in Datasheet view is very similar to entering data into an Excel worksheet, except that data must be entered in related rows and columns, starting at the upper-left corner of the datasheet.

The table is structured through rows and columns, which become meaningful as you enter appropriate data. Any time you add a new column to the table, Access defines a new field for that column's data. You do not need to format your data by including blank rows or columns, as you might do in an Excel worksheet, because that just wastes space in your table. The table merely contains your data. All visual presentation of that data will be done in the forms and reports that you design later.

Take Note A database has to be saved first before any objects like tables, queries, forms or reports can be added to it. For example, you cannot create a table first and then create the database to hold it.



You learn more about creating forms and reports in Lessons 5 and 6.

SOFTWARE ORIENTATION

Templates Group and Application Parts

The Templates group on the CREATE tab contains the Application Parts gallery that you can use to insert predefined templates consisting of objects like tables, forms, and reports into a pre-existing database. Use as a reference throughout this lesson as well as the rest of this book.

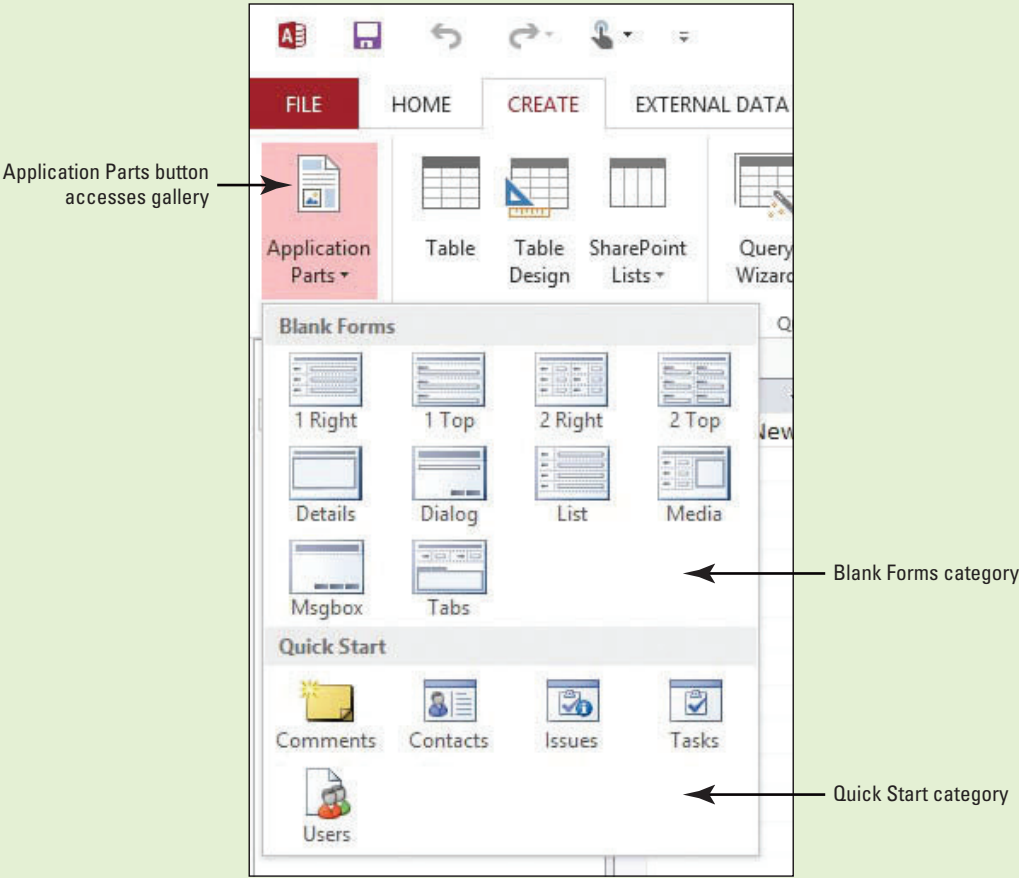


Figure 2-12
Application Parts gallery

The Bottom Line

CREATING A TABLE

It is easy to create a new table by using the Application Parts gallery and Quick Start. **Application Parts** were introduced in Access 2010 and consist of predefined templates that you can add to an existing database to help extend its functionality. Another way to create a table is to copy the structure of an existing table and then paste it into the database. You can copy a database object and paste it into the same database or into a different database that is open in another instance of Access.



Cross
Ref

You learn more about creating forms using the Application Parts gallery in Lesson 10.

Using the Application Parts Gallery and Quick Start

Application parts vary from a single table to a collection of database objects like tables, forms, and reports. The Application Parts gallery consists of two categories, Blank Forms and Quick Start. The Blank Forms category contains a collection of form parts that allows you to add predefined forms to a database. The **Quick Start** category of these templates contains a collection of predefined objects arranged by parts for tracking things such as comments, contacts, and issues. In this exercise, you will quickly create a table using the Application Parts gallery and Quick Start.

STEP BY STEP

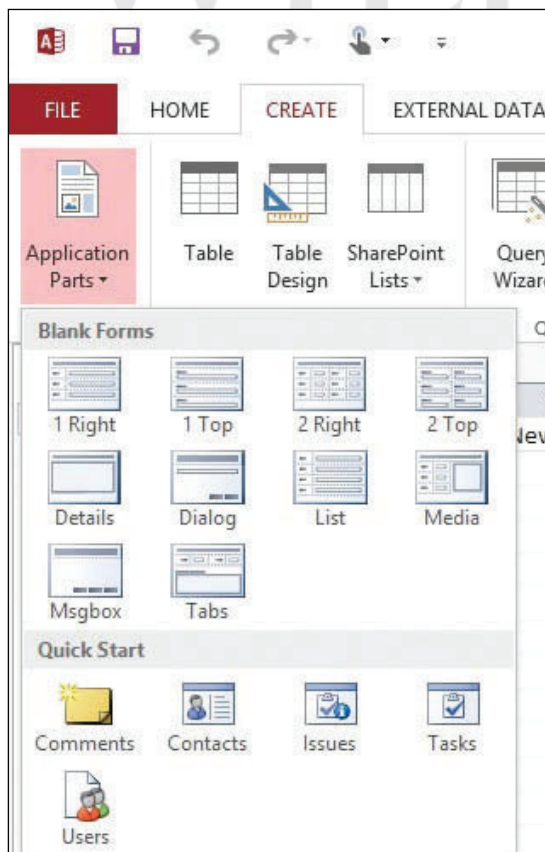
Create a Table Using the Application Parts Gallery and Quick Start

USE the database that is open from the previous exercise.

1. On the CREATE tab, in the Templates group, click the **Application Parts** button to display the gallery shown in Figure 2-13.

Figure 2-13

The Application Parts gallery

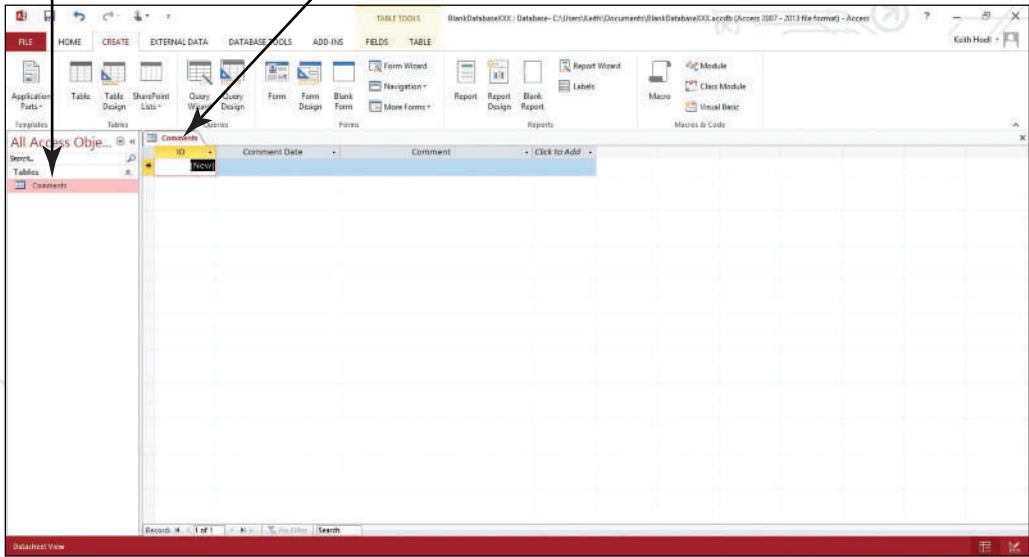


- 2. In the Quick Start section of the gallery, click **Comments**. When prompted to close all open objects before instantiating this application part, click **Yes** on the Microsoft Access dialog box that appears. Notice the Comments table appears as a new object in the Navigation Pane.
- 3. Click the **Enable Content** button on the Message Bar to trust the database.
- 4. In the Navigation Pane, double-click **Comments** to display the newly created table with fields for comments, as shown in Figure 2-14. Close the Comments table by clicking the Comments table Close button.

Figure 2-14

New Comments table for comments

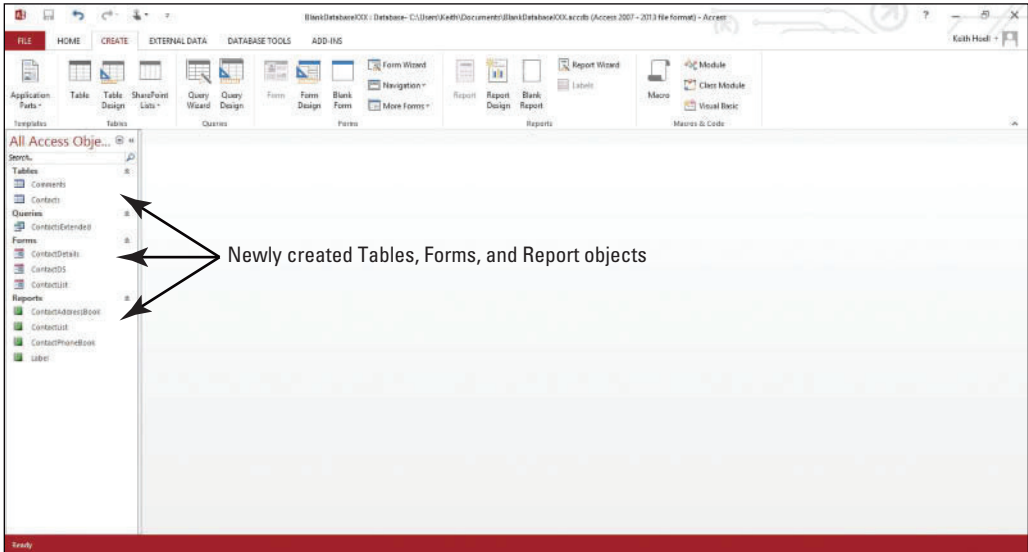
New table object named Comments in Navigation Pane Comments table tab



- 5. On the Application Parts menu, click **Contacts**. In the Create Relationship dialog box that appears, select the **There is no relationship** option button then click **Create**. A new table is created along with supporting forms and report objects, as shown in Figure 2-15.

Figure 2-15

New table, forms, and reports for contacts



Newly created Tables, Forms, and Report objects

CERTIFICATION READY? 2.1.5

How do you create tables from templates and application parts?

CERTIFICATION READY? 2.1.1

How do you create new tables?

PAUSE. LEAVE the database open to use in the next exercise.



**Cross
Ref**

You learn how to create a custom table in Lesson 9.

**CERTIFICATION
READY?** 5.1.2

How do you create reports with application parts?

Creating a Table from Another Table

Another way to create a table is to copy the structure of an existing table using the Copy and Paste commands. In this exercise, you copy the structure of an existing table to create a new table.

STEP BY STEP

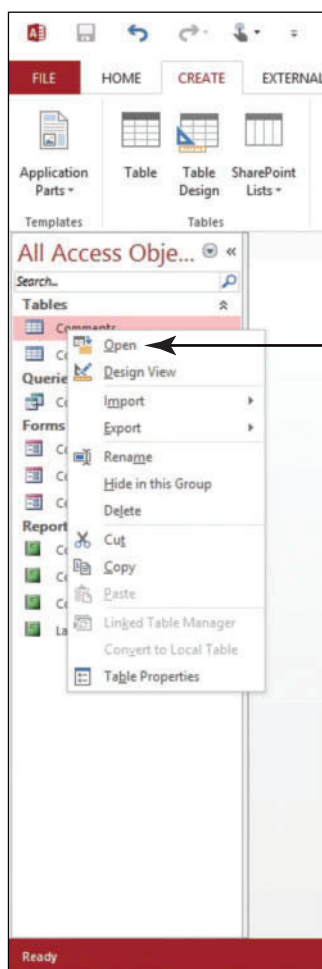
Create a Table from Another Table

USE the database that is open from the previous exercise.

1. On the Navigation Pane, right-click the **Comments** table database object to display the menu shown in Figure 2-16.

Figure 2-16

Database object menu



Right-click to display menu

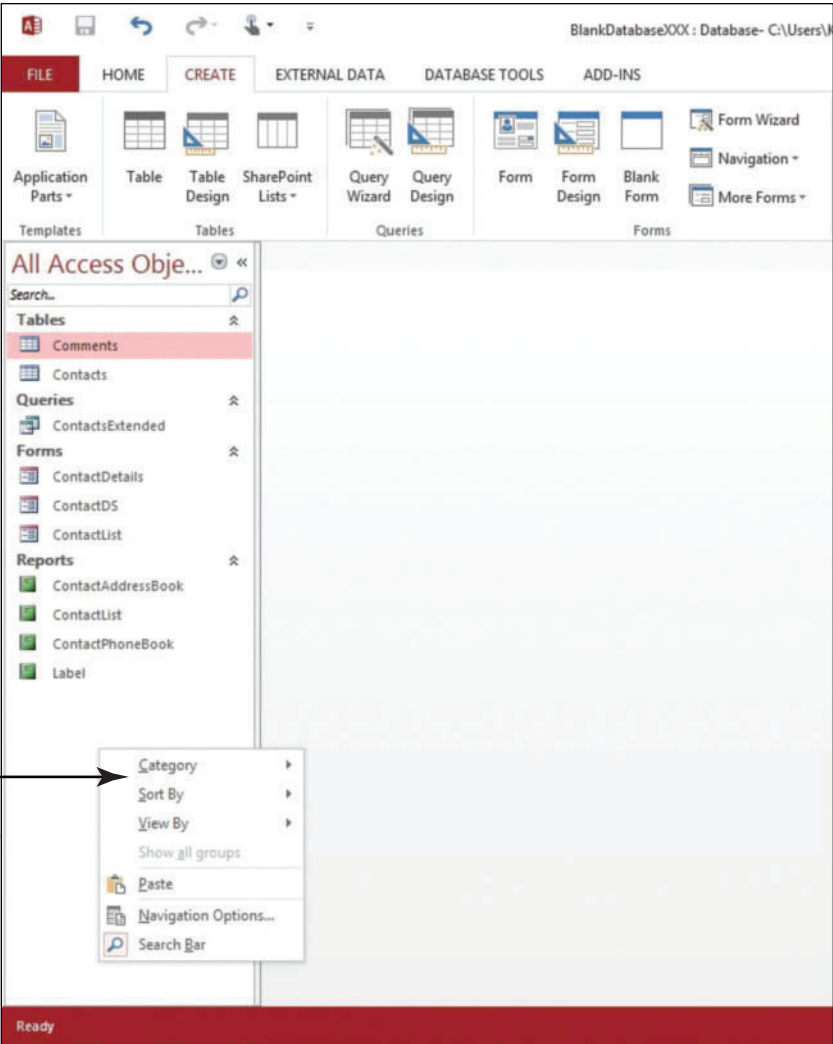


Another Way

You can also copy a database object by selecting it in the Navigation Pane and pressing Ctrl+C. Or, on the HOME tab, in the Clipboard group, you can click the Copy button.

2. Click **Copy**.
3. Right-click in a blank area of the Navigation Pane and, in the shortcut menu that appears, click **Paste** (see Figure 2-17).

Figure 2-17 Database object menu



Right-click to display menu

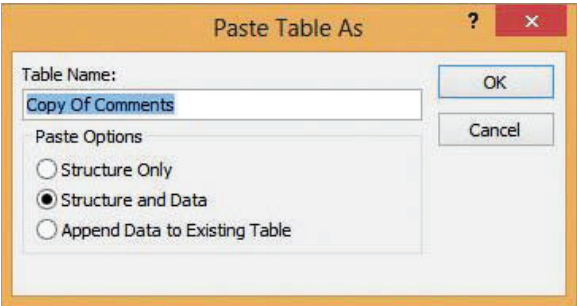


Another Way

You can also paste a database object by selecting the destination location in the Navigation Pane and pressing Ctrl+V. Or on the HOME tab, in the Clipboard group, you can click the Paste button.

4. The Paste Table As dialog box appears, as shown in Figure 2-18. Notice the default name, Copy Of Comments, in the Table Name box.

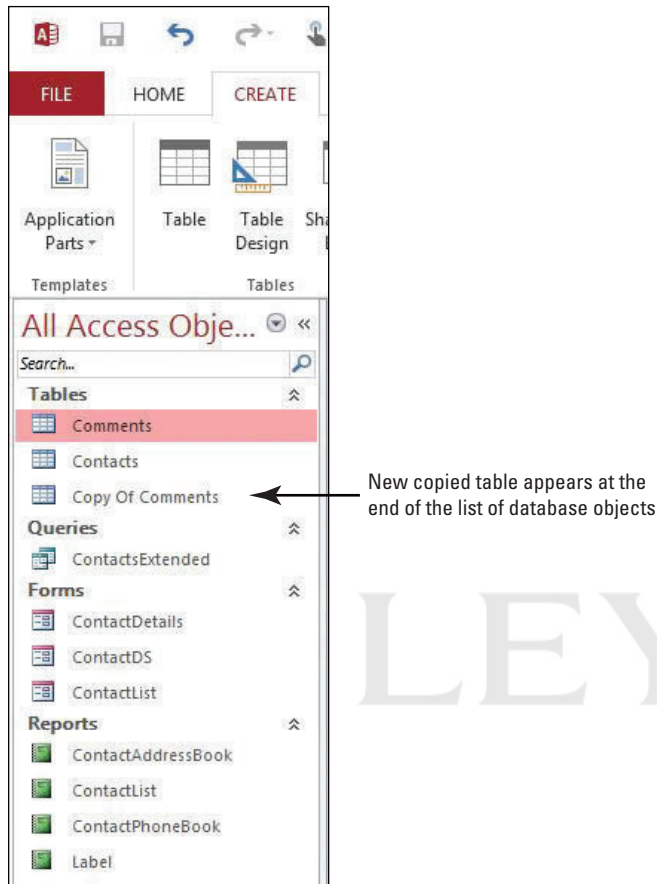
Figure 2-18 Paste Table As dialog box



5. In the Paste Options section, select the **Structure Only** option button, to paste only the table's structure, rather than pasting a copy of the table's data along with its structure (in this case, the Comments table doesn't contain any record data).
6. Click **OK**.
7. The new table appears at the end of the list of database table objects in the Navigation Pane, as shown in Figure 2-19.

Figure 2-19

New table copied from existing table



8. Double-click **Copy Of Comments** to open the new table. Notice that the structure of the new table is the same as the table from which it was copied.

PAUSE. CLOSE the database.

LEAVE Access open for the next project.

When you create a copy of a table by copying and pasting, you have the option of re-creating just the table's structure, or both its structure and data. To paste just the structure of the table, click Structure Only. To also paste the data, click Structure and Data. Access also provides you with a third option that appends data to an existing table. If this option is chosen, Access will attempt to append the table's records to another table you specify.

As you learned in Lesson 1, a relational database stores information in separate tables that are connected or linked by a defined relationship that ties the data together. When you add a new table to an existing database, that new table stands alone until you relate it to your existing tables. For example, say you need to track orders placed by a distributor. To do that, you add a table named Distributor Contacts to a sales database. To take advantage of the power that a relational database can provide—to search for the orders placed by a given contact, for example—you must create a relationship between the new table and any tables that contain the order data.



You learn more about defining table relationships in Lesson 3.

The Bottom Line

SAVING A DATABASE OBJECT

Access automatically saves data that you have entered any time you add an Application Part like a Quick Start template, move to a new record, close an object or database, or quit the application. But you will need to save the design of a table, or any other database object, after it is created. Additionally, using the Save Object As command in the Backstage view, you can create a duplicate of a database object (like a table, query, or report) by specifying an alternate name, or even save objects in other formats such as the Adobe Portable Document Format (PDF) or XML Paper Specification (XPS) which helps you share data with others who may not have Access installed. Lastly, you can even save some objects as other compatible object types. For example, you can save a table as a new report which will, by default, include all table fields.

Saving a Table

When you save a new table for the first time, give it a name that describes the information it contains. You can use up to 64 characters (letters or numbers), including spaces. For example, you might name a table Orders 2014, Clients, Tasks, Inventory Parts, or Comments. In this exercise, you save a database table and then use the Save Object As command to create a duplicate of the same table.

STEP BY STEP

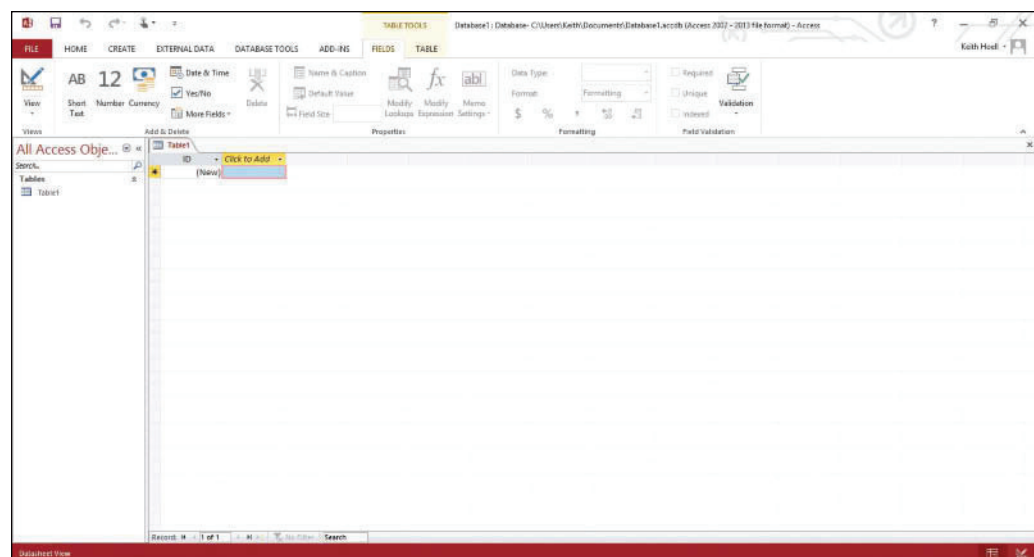
Save a Table

GET READY. The blank Access screen should be displayed from the previous exercise.

1. From the FILE tab, click the **New** command, then click the **Blank desktop database** icon; a Blank desktop database screen appears in the center of the screen.
2. In the Blank desktop database screen's File Name box, the default name should be **Database1**. If not, replace the default name by keying **Database1**.
3. If you want to save the file in a location other than the one shown beneath the File Name box, click the **folder icon** and browse to a different location.
4. Click the **Create** button. A new blank database appears with the default table labeled Table1 displayed, as shown in Figure 2-20.

Figure 2-20

New blank database with default table

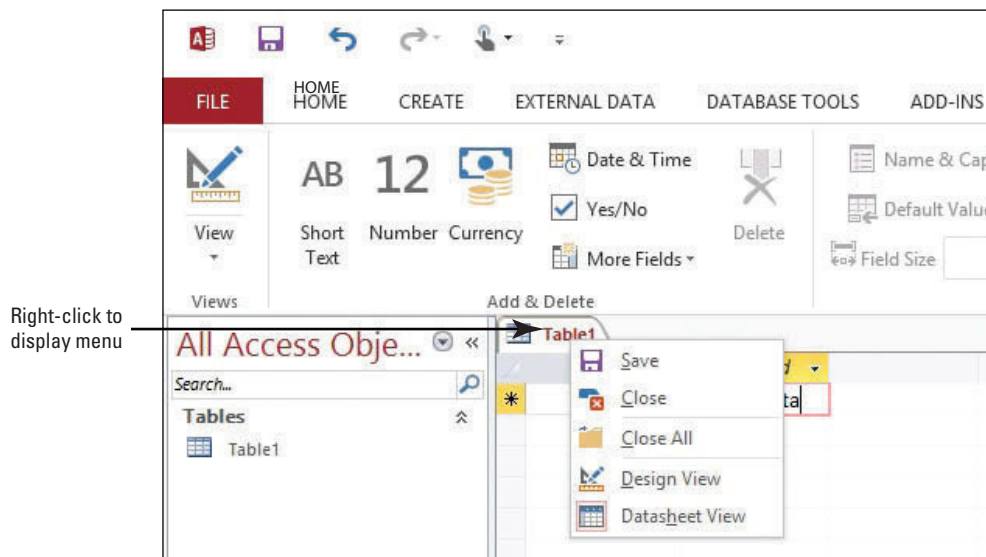


5. Click to place the insertion point in the cell under the Click to Add field and key **Sample Data**.

- Right-click on the **Table1** tab to display the shortcut menu, as shown in Figure 2-21.

Figure 2-21

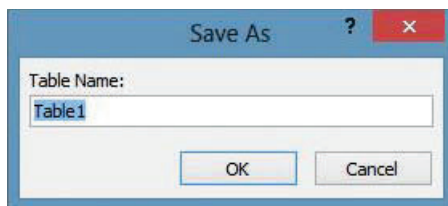
Shortcut menu



- Click **Save**. The Save As dialog box appears, as shown in Figure 2-22.

Figure 2-22

Save As dialog box

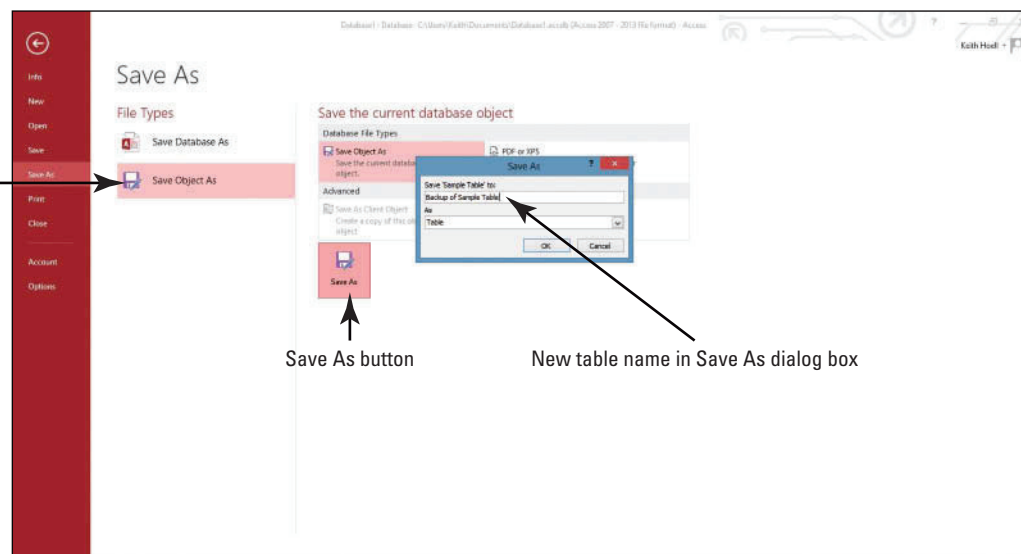


- In the Table Name box, key **Sample Table**.
- Click **OK** to close the dialog box and return to the table, which now is labeled Sample Table.
- Click the **FILE** tab to display the Backstage view.
- Click **Save As** to display the Save As screen.
- Under the File Types heading, click the **Save Object As** command.
- Click the **Save As** button.
- In the Save As dialog box that appears, key **Backup of Sample Table** in the area under "Save 'Sample Table' to:" as shown in Figure 2-23.

Figure 2-23

Save As dialog box on Save As screen

Save Object As command





Another Way

You can also save a table by pressing Ctrl+S. You do not need to save new data that you enter. Access automatically saves a record when you move to a different record or close the object or database.

Access also automatically saves changes to your data whenever you quit the program. However, if you have made changes to the design of any database objects since you last saved them, Access asks whether you want to save these changes before quitting.

15. Click **OK**.
16. Notice the new table object named Backup of Sample Table in the Navigation Pane.
17. The Backup of Sample Table should now be open. Notice the table contains the same row you created in the Sample Table table.
18. **CLOSE** Backup of Sample Table.
19. **CLOSE** the database.

CLOSE Access.

SKILL SUMMARY

In This Lesson You Learned How To:	Exam Objective	Objective Number
Create a Database	Create databases using templates	1.1.2
	Create new databases	1.1.1
Create a Table	Create tables from templates and application parts	2.1.5
	Create new tables	2.1.1
	Create reports with application parts	5.1.2
Save a Database Object		

Knowledge Assessment

Fill in the Blank

Complete the following sentences by writing the correct word or words in the blanks provided.

1. You can create a database using one of the many templates available or by creating a new _____ database.
2. By default, Access creates a(n) _____ field named "ID" for all new datasheets.
3. Entering data in Datasheet view is very similar to entering data in a(n) _____.
4. The _____ contains predefined templates included in two categories, Blank Forms and Quick Start.
5. One way to create a table is to copy the _____ of an existing table and paste it into the database.
6. When you add a new table to an existing database, that new table stands alone until you _____ it to your existing tables.
7. You can use up to _____ characters (letters or numbers), including spaces, to name a database object.
8. Several options for creating a database are provided on the _____ screen in Backstage view or the _____ screen when Access is initially launched.
9. The _____ category in the Application Parts gallery contains a collection of predefined database objects for tracking comments, contacts, and issues.
10. A table is structured through rows and _____, which become meaningful when you enter data into it.

Multiple Choice

Select the best response for the following statements.

1. In Access, a template is
 - a. a database to manage contacts.
 - b. where a database is stored.
 - c. two tables linked together.
 - d. a ready-to-use database.
2. When you create a new blank desktop database, Access opens a database that contains
 - a. one of each type of database object.
 - b. a table.
 - c. sample data.
 - d. a template.
3. To save a database file in a location other than the default, click the
 - a. folder icon.
 - b. blank database icon.
 - c. file name button.
 - d. Help button.
4. The table structure is created when you
 - a. format the data.
 - b. enter data.
 - c. query the data.
 - d. create forms.
5. The Templates group commands are located on which tab?
 - a. Home
 - b. Create
 - c. Database Tools
 - d. Datasheet
6. To copy a table, you must first select it in
 - a. the Clipboard.
 - b. Microsoft Office Online.
 - c. the Navigation Pane.
 - d. Datasheet view.
7. When you paste a table, which dialog box is displayed?
 - a. Table Structure
 - b. Copy Table
 - c. Paste Data
 - d. Paste Table As
8. After you have created a table or other database object, you should
 - a. save it with a descriptive name.
 - b. copy it to create a backup.
 - c. link it to an external data source.
 - d. insert a blank column at the end.
9. When you quit the program, Access automatically
 - a. creates a link between all tables.
 - b. leaves the Navigation Pane open.
 - c. saves the data.
 - d. renames the file.
10. Which is *not* a way to create a new database table?
 - a. Use Quick Start.
 - b. Choose Create on the Table menu.
 - c. Copy the structure of another table.
 - d. Create a new blank desktop database.

Competency Assessment

Project 2-1: Contacts Database

You want to use Access to store, organize, and manage the contact information for the wholesale coffee suppliers used by Fourth Coffee, where you work as a buyer for the 15 stores in the northeast region. Use a template to create a database for the contacts.

GET READY. LAUNCH Access if it is not already running.

1. **OPEN** Access and in the Search for online templates box, key **Desktop call tracker** to find the Desktop call tracker database template.
2. Select the **Desktop call tracker** database template.
3. Key **Call trackerXXX** (where XXX is your initials) in the File Name box.
4. If necessary, click the **folder icon** and choose a different location for the file.
5. Click **Create** to create and open the database. Click **Enable Content**, if necessary.
6. Click the **Shutter Bar Open/Close Button** to open the Navigation Pane.
7. Click the **Supporting Objects** header in the Navigation Pane to display the database objects in that group.
8. Right-click the **Customers** table under the Customers header to display the menu and click **Copy**.
9. Right-click in the white area of the Navigation Pane and click Paste on the menu.
10. In the Paste Table As dialog box, key **Customers structure**.
11. Click the **Structure Only** option button (the table contains no record data so choosing Structure Only will have the same effect as choosing Structure and Data).
12. Click **OK**.
13. **CLOSE** the **Call trackerXXX** database.

LEAVE Access open for the next project.

Project 2-2: Database for Restaurants

As a regional manager for a franchise restaurant chain, you want to keep track of restaurant locations and customer comments. You decide to create a database to store the necessary information.

GET READY. LAUNCH Access if it is not already running.

1. In the Backstage view's New tab (or on the Startup screen, if Access is initially launched), click the **Blank desktop database** icon.
2. In the Blank desktop database screen that appears in the center of the screen, key **RestaurantsXXX** (where XXX is your initials) in the File Name box.
3. If necessary, click the **folder icon** and choose a different location for the file.
4. Click the **Create** button.
5. Right-click the **Table1** tab and click **Save**.
6. In the Save As dialog box, key **Locations**.
7. Click **OK**.

LEAVE the database and Access open for the next project.

Proficiency Assessment

Project 2-3: Adding Tables

You need to add some tables to the database that you just created for information about the restaurants.

USE the database that is open from the previous project.

1. Use the Application Parts gallery to create a table for comments.
2. In the Create Relationship dialog box that appears, click the **Cancel** button.
3. Rename the Comments table ***Uptown Comments***.
4. Copy the structure of the Uptown Comments table to create a new table.
5. Name the new table ***Downtown Comments***.
6. **CLOSE** the database.

LEAVE Access open for the next project.

Project 2-4: Nutrition Tracker

You have become health conscious and want to track your activity, exercise, and food logs using Access.

GET READY. LAUNCH Access if it is not already running.

1. If necessary, log on to the Internet.
2. In the *Search for online templates* box, search for, download, and save the Desktop Nutrition tracking database template with the file name ***NutritionXXX*** (where XXX is your initials).
3. Click **Enable Content** on the Message Bar.
4. Double-click the **My Profile** form to open it and key your information to see your body mass index and recommended calorie consumption.
5. Click the **OK** button on the form.
6. Open the **Tips** table to view the tips stored in the database.
7. Explore the other useful forms and information available.
8. **CLOSE** the database.

LEAVE Access open for the next project.

Mastery Assessment

Project 2-5: Northwind Traders

You have just joined the sales force at Northwind Traders. To familiarize yourself with the information available in the company database, open the file and browse through the objects.

GET READY. LAUNCH Access if it is not already running.

1. Using the *Search for online templates* search box, find and download the Desktop Northwind 2007 sample database using the name ***Northwind2013XXX*** (where XXX is your initials).
2. Enable the content.
3. Log in as a sales representative, Jan Kotas, by selecting that name from the Select Employee drop-down menu and clicking the **Login** button.

4. Open the Navigation Pane and open each group to view all the objects that are part of the database.
5. **CLOSE** the database.

LEAVE Access open for the next project.

Project 2-6: Customer Service Database

Southridge Video has a large membership of customers that rent new release and film library movies, as well as video games. As the store manager, customer complaints are directed to you. Create an Access database for the purpose of tracking customer service issues.

GET READY. LAUNCH Access if it is not already running.

1. Choose an Application Parts template to create a database called *SouthridgeXXX* (where XXX is your initials) that will store information about customer service issues.
2. **CLOSE** the database.

LEAVE Access open for the next project.

WILEY