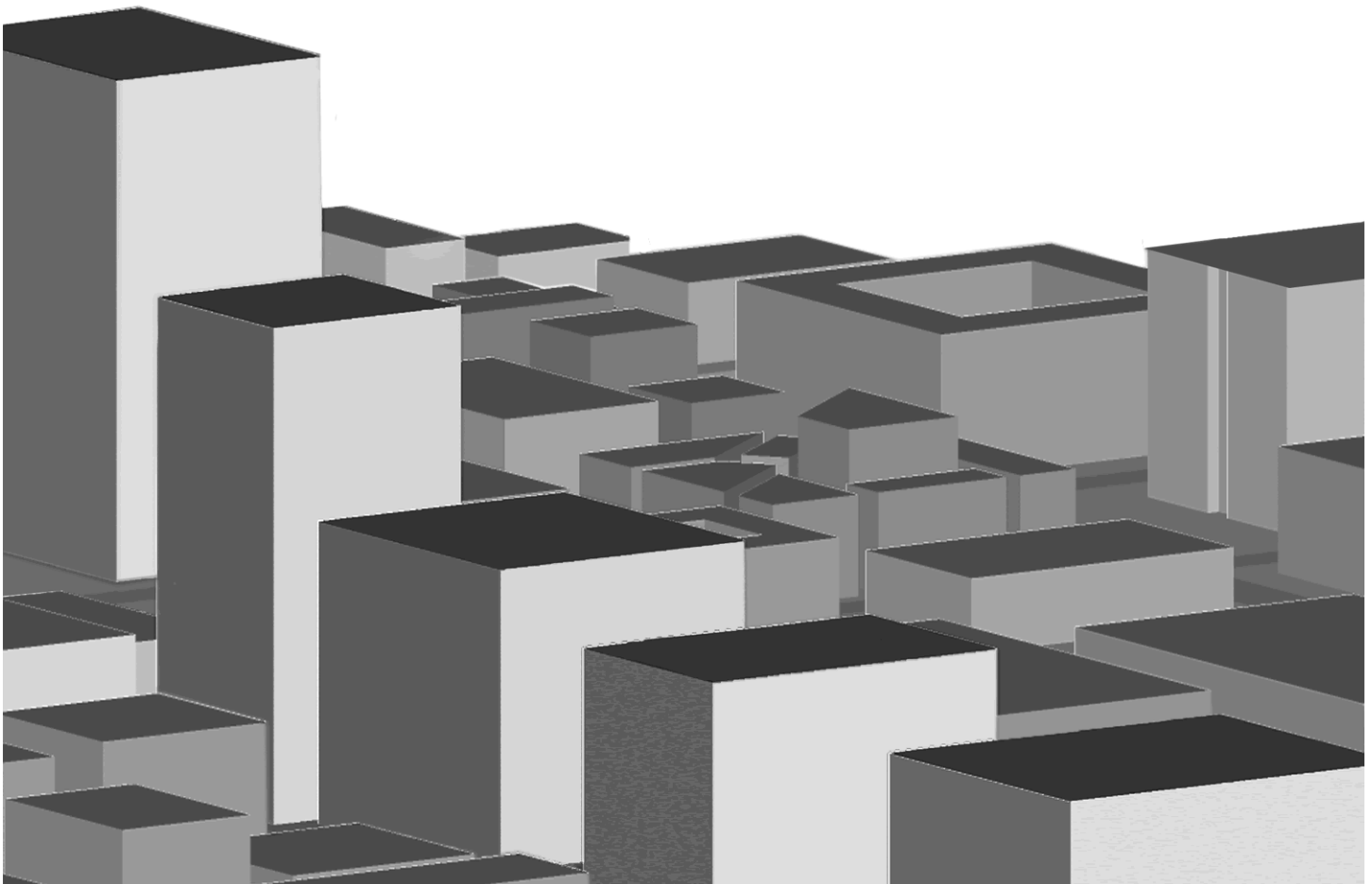




Microsoft Office 2007: What's New in Access



About IT Training & Education

The University Information Technology Services (UITS) IT Training & Education program at Indiana University offers instructor-led computing workshops and self-study training resources to the Indiana University community and beyond. We deliver training to more than 30,000 participants annually across all Indiana University campuses. Our staff is comprised of enthusiastic professionals who enjoy developing and teaching computing workshops. We appreciate your feedback and use it to improve our workshops and expand our offerings. We have received several international awards for our materials and they are being used at universities across the country. Please keep your questions, comments and suggestions coming!

In Bloomington, contact us at ittraining@indiana.edu or call us at (812) 855-7383.

In Indianapolis, contact us at ittraining@iupui.edu or call us at (317) 274-7383.

For the most up-to-date information about workshops and schedules, visit us at:

<http://ittraining.iu.edu/>

Copyright 2008 - The Trustees of Indiana University

These materials are for personal use only and may not be copied or distributed. If you would like to use our materials for self-study or to teach others, please contact us at: IT Training & Education, 2711 East 10th Street, Bloomington, IN 47408-2671, phone: (812) 855-7383. All rights reserved.

The names of software products referred to in these materials are claimed as trademarks of their respective companies or trademark holders.

Contents

Welcome and Introduction	1	Creating a Table	17
What You Should Already Know	1	Examining Table Templates	17
What You Will Learn	1	Creating a Table in an Existing Database	18
What You Will Need to Use These Materials	1	Entering a New Record in Datasheet View	20
Getting Started	2	Creating a Form	21
Opening a Database	3	Creating a Split Form.	22
Understanding Compatibility Issues	5	Working in Layout View	24
Important Note Regarding Older Databases	5	Switching to Design View	25
Exploring the Access 2007 Interface.	6	Understanding Multivalued Fields	25
Using the Microsoft Office Button.	9	Viewing Relationships	26
Using the Ribbon.	10	Viewing a Multivalued Field in a Table	27
Exploring Tabs and Commands	10	Creating a Query to Display a Multivalued Field	28
Customizing the Quick Access Toolbar	11	Displaying Individual Values in a MultiValued Field	30
Finding Help in Access.	12	Applying a Quick Filter	31
Filtering Data in Datasheet View	14	Creating and Modifying a Report in Layout View.	32
Alternating Colors in Datasheet View	16	Wrapping Up.	34
Adding Objects to a Database	16	Contributions to These Materials	35

Welcome and Introduction

Welcome to *Microsoft Office 2007: What's New in Access*. This workshop introduces the primary changes in the 2007 Microsoft Access user interface as well as new features in the Access application.

What You Should Already Know

You should have already attended the workshop *Access: Database Relationships* or have equivalent skills. Specifically, you should be able to:

- understand basic database terminology
- create a new database
- create a simple query
- understand one-to-many relationships

What You Will Learn

This workshop provides information about the new Microsoft Access 2007 interface and some new file formats and compatibility issues. Participants will explore:

- the new Microsoft Access 2007 interface
- new features in Microsoft Access 2007

What You Will Need to Use These Materials

To complete this workshop successfully, you will be provided with:

- the use of Microsoft Access 2007
- the exercise file **Customers.accdb**

Getting Started

These materials presume you will begin work from the desktop, and have any required exercise files located in an eclass folder there. For instructions on obtaining the exercise files, see below.

If you need assistance logging on or starting an application, please consult your instructor.

Finding Help

If you have computer-related questions not answered in these materials, you can look for the answers in the UITS Knowledge Base, located at:

<http://kb.iu.edu/>

Self-Study Training

Want to learn more on your own?

IT Training Online makes self-study computer-based courses available on a wide range of IT topics. You may also purchase STEPS workshop materials to use in learning on your own. To find out more, go to:

<http://ittraining.iu.edu/online/>

Getting the Exercise Files

Most of our workshops use exercise files, listed at the bottom of page 1 of the materials. In our computer-equipped classrooms, these files are located in the eclass folder, which should already be on the computer desktop. If you are using our materials in a different location, you may obtain the exercise files from our Web site at:

<http://ittraining.iu.edu/workshops/files/>

Once you are logged on and have the needed files in an eclass folder on your desktop, you are ready to proceed with the rest of the workshop.

Opening a Database

Microsoft Office Access 2007 shares the major user interface changes with Word 2007, Excel 2007, and PowerPoint 2007. In addition, there is a new *Getting Started with Microsoft Office Access* page, which includes a library of professionally designed database templates.

We will launch Microsoft Access and look at the new interface as well as some of the new features.

1. Launch Microsoft Access.

The **Getting Started with Microsoft Office Access** page appears:



This page is always displayed when Access is started from the Windows Start button or from a desktop shortcut. We can create a new database, create a database from a template, or open a recent database. There is also a More link we can use to browse and find additional files. In addition, we can go directly to Microsoft Office Online to learn more about Access 2007 or download additional templates or any downloads such as new updates.

In addition to opening a database from the Getting Started page, we can open a database by using the Microsoft Office Access button.

2. To begin to open an Access database,



The Open dialog box opens.

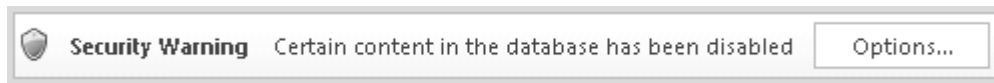
3. To navigate to the epclass folder, if necessary,



4. To open the **Customers.accdb** database,



The database opens, with a **Security Warning** Message Bar:



By default, Microsoft Office system programs (Word, Excel, PowerPoint, and Access) will provide alerts on the Message Bar if content could prove to be unsafe. Several Access components can pose security risks, including macros, action queries, expressions, and VBA code. To help secure data when we open a database application, Access 2007 uses the **Trust Center** to determine which commands may be unsafe and then checks its list of unsafe commands. When Access encounters an unsafe command, it can block the command from execution. By default, Access 2007 blocks unsafe commands.

Based on the results of the security checks, Access will disable content in the database and display a Security Warning or open the database with full functionality. Even though a security warning may appear when an Access database is opened, the data is still accessible. For information on viewing or modifying security settings in the Access 2007 Trust Center, review the Microsoft Online Access Help documentation.

NOTE: If a file is moved to a designated trusted location, it can be opened without being checked by the Trust Center security feature. To establish a trusted location, under the Microsoft Office Button menu, **Click** the **Access Options** button. Select the Trust Center in the left pane; then **Click** **Trust Center Settings...**. The Trusted Locations section will allow you to add, remove, or modify folders on your computer that will always contain trusted files. You can also choose to allow trusted locations on a network.

We will enable the content in this database.

5. To enable this content, in the Message Bar,



The content is enabled.

NOTE: If you don't want to be alerted of potentially unsafe content (not recommended), you can disable the Message Bar. To do this, **Click** the Microsoft Office Button, **Click** **Access Options**, **Click** Trust Center in the left pane, **Click** **Trust Center Settings...**, and then **Click** Message Bar in the left pane. In this window, you have the option of showing the Message Bar in all applications when content has been blocked or to never show information about blocked content. Select the desired option and **Click** **OK**.

Understanding Compatibility Issues

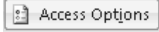
Access 2007 recognizes all previous versions of Access database files. The default extension for a new Access 2007 database is “.accdb.” Some considerations when working with Access databases follow:

- Access database files created in Access 95 or Access 97 must be converted to Access 2000, 2002-2003, or 2007 before they can be used in Access 2007.
- To save the file in the original format, choose *Save*. The Access file will retain its original format.
- You can choose the *Save As* option and save any database as a 2007 database, as a 2002-2003 database, or as a 2000 database. The new 2007 features will not be available if the database is saved in an earlier version of Access.
- To save the file with the newer 2007 format, you can also *convert* the file and then choose *Save*. However, in Access 2007 you will have to give the database a new filename or save it in a different folder. A warning will then appear stating that the new database cannot be shared with users of Access 2003 or earlier versions.

Important Note Regarding Older Databases

It is important to note that if you are using a version of Access 2003, you cannot open a file created in Access 2007 with the “.accdb” format. In addition, this new format no longer supports replication or user-level security. Access 2007 provides user-level security only for databases with user-level security settings previously created in Access 2003 or earlier versions. If these security settings already exist in a 2003 Access database and you convert the

database to the Access 2007 format, then Access will strip out all security settings automatically; the new rules for securing the converted database will then apply.

NOTE: You may prefer to create all of your databases in Access 2000 or Access 2002-2003 (with the extension “.mdb”) so that they can be shared with other users. In this case, you can change the default file format when creating databases by going to  under the Microsoft Office Button and setting the default file format within the *Popular* category.

Exploring the Access 2007 Interface

This simple database will be designed to keep track of individual sales reps and their assigned customers, as well as customer order information.

The Access interface consists of several elements, many of which are consistent with the Microsoft Office interface. The *Navigation Pane* allows users to manage objects in a database and gives them quick access to tables, queries, reports, etc. It can group database objects by date created, date modified, and object type, or by custom groups so that users can find the objects easily.

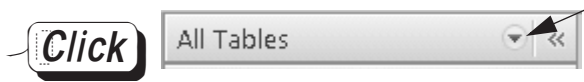
The Navigation Pane replaces the old database window:



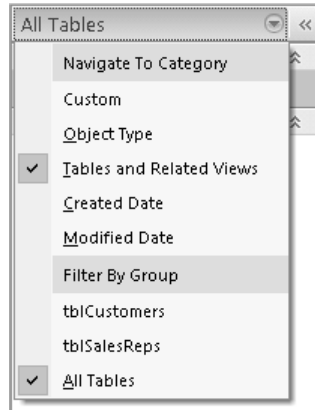
By default, the Navigation pane appears when we open a database in Access 2007. Objects can be grouped in this pane in several different ways. The default category for new databases is Tables and Related Views, which groups the objects by the tables to which they are related.

We will change the default so that all of our objects are grouped according to the object type.

1. To group the objects, at the top of the Navigation Pane,



We see:



The upper section of the menu contains categories, but the lower section contains groups. The groups will change as we choose different categories. We can also create custom groups if the predefined groups don't work for us.

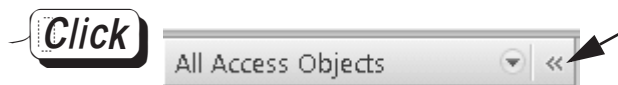
2. To group objects by object type,



Now all objects will be placed in the appropriate category (tables, forms, queries, etc.).

Next we will hide the Navigation Pane.

3. To hide the Navigation Pane,



NOTE: A keyboard shortcut for hiding or showing the pane is **F11**.

4. To unhide the Navigation pane,



This database consists of three tables with customers, sales reps, and states. The RepID field is the joining field that matches each customer with a sales rep.

We will open a table and then explore some other interface features.

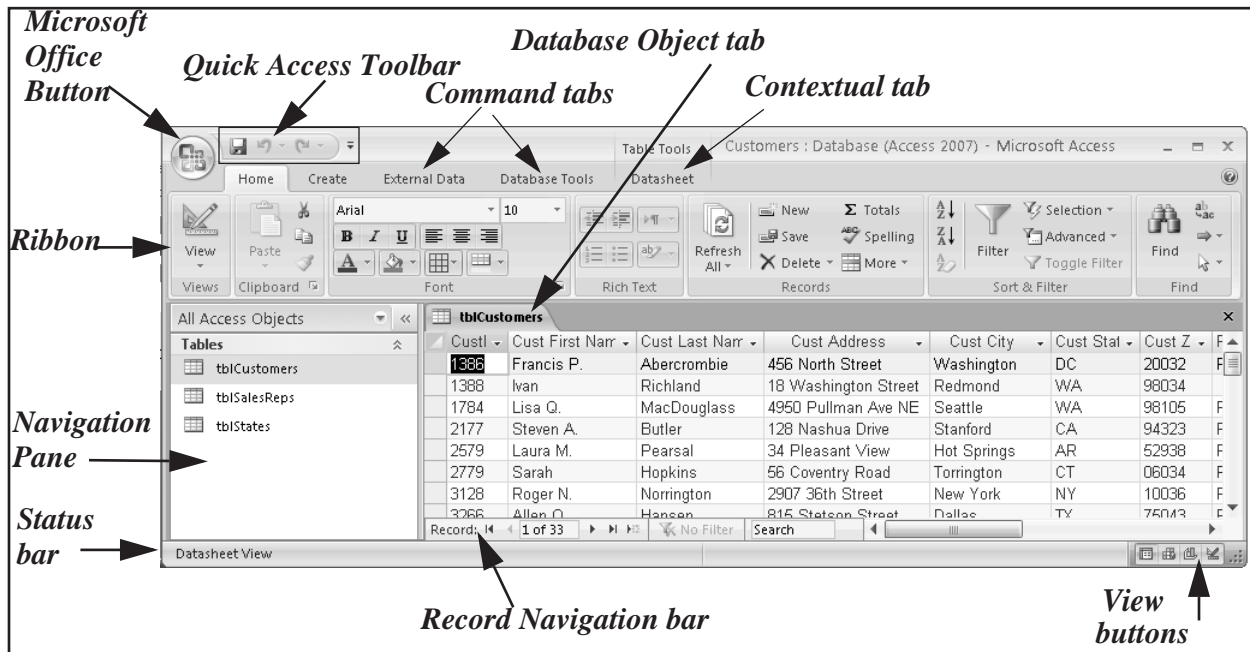
5. To open the tblCustomers table, in the Navigation Pane,



NOTE: You can also drag the table or object onto the Access work area.

The Customers table opens in datasheet view.

Some of the elements of the Access interface are illustrated below:



The new tabbed user interface in Access prevents objects from overlapping and obscuring other objects.

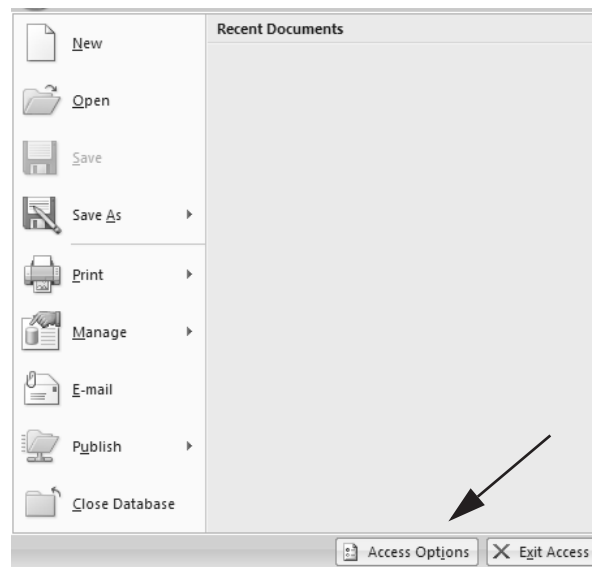
Using the Microsoft Office Button

The *Microsoft Office Button* in the upper left corner has replaced the File menu that we used to see in older versions of Microsoft Office. We will see the same basic commands available in earlier releases such as Open, Save, and Print; however, more commands are now available, including Prepare and Publish.

1. To view the Office button options,



You should see:



Note the location of the Access Options command.

This menu consists of two panels. On the left, we see major file tasks; on the right, the appropriate task appears when you point to one of the commands on the left. The *Access Options* command is always located in the bottom right of this dialog box and enables us to set specific preferences for the application in which we are working (which is similar to the *Tools > Options* dialog box in older versions of Office applications).

NOTE: If we open a document that is in an older file format, we would see an additional *Convert* command listed in the left pane, which would enable us to quickly convert the document to the newer default (2007) format.

2. To close the Office button, press:



Using the Ribbon


The primary replacement for menus and toolbars in Office 2007 is the **Ribbon**. The Ribbon consists of command tabs, groups, and various commands that extend across the top of the window and is designed to help users quickly find the commands that are needed to complete a task. Commands are organized in logical groups, which are related and collected together under the command tabs. To reduce clutter, some tabs are shown only when needed.

Exploring Tabs and Commands

The menu system in Microsoft Office 2003 has been replaced with a series of **Command tabs** that relate directly to the tasks we need to accomplish. These tabs correspond directly to the stages of the process we're likely to follow as we create a particular project in an Access application. **Contextual tabs** provide additional groups and commands only when needed for working with a selected item. These tabs will appear next to the standard set of tabs in an accent color.

A **command** is a button, a box to enter information, or a menu. Commands in each Office application are organized under each command tab according to how they are used. Depending upon the application, the commands will vary. The command tabs correspond to the various tasks a user might perform in a logical sequence and, therefore, are arranged for the user's convenience.

Each command tab may contain several **groups** that show related items together. For example, on the Home command tab, we see the commands that are grouped together related to changing text font.

NOTE: If your screen is set to a low resolution or if a program window is too small, a few groups on the Ribbon may display the group name only, not the commands of the group. If this is true, you will need to  on the arrow on the group button to display the commands.

Let's explore the various commands on the command tabs.

1. To explore the various command tabs,

 *each command tab*

Here is a summary of the various tabs and their commands:

Command Tab	Commands
Home	Can change views, format records, add and delete records, sort and filter records, and search records.
Create	Provides tools to design and add tables, forms, reports, queries, and macros.
External Data	Provides tools for importing from and exporting to Access 2007, Excel 2007, text files, and XML files. Can save in XPS format, gather information via email, and synchronize with Office Share-Point 2007 lists.
Database Tools	Contains more advanced tools for working with macros, displaying relationships and dependencies, analyzing tables and performance, encrypting with passwords, and working with the switchboard manager.

NOTE: If you move the mouse over the Ribbon, you can use the scroll button on the mouse to progress through the command tabs.

2. To return to the Home command tab,

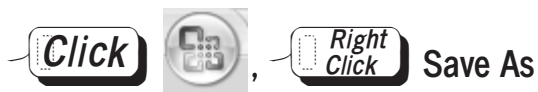
 *the Home command tab*

Customizing the Quick Access Toolbar

The Quick Access Toolbar is customizable and remains visible at all times. It provides a quick way for users to perform a commonly used command by accessing it from this toolbar, such as opening a database file or printing an object. We can add and delete command buttons on this toolbar by using the Customize command in the Access Options dialog box or by right-clicking a command directly from the Ribbon or from the Office Button drop-down menu.

We will add a Save As command to the Quick Access Toolbar.

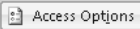

1. To open the Office button, in the upper-left corner,





A drop-down menu is displayed.

2. To add the Save As command to the Quick Access Toolbar,



The command has been added to the Quick Access Toolbar. You can also add other commands by clicking the Microsoft Office Button and choosing  Access Options . Then  Customize in the left pane. Any command can be added to the Quick Access Toolbar from this window.

NOTE: To remove a particular command from the Quick Access Toolbar, just  the command on the Quick Access Toolbar and then  Remove from Quick Access Toolbar.

Finding Help in Access

Changes in the Office 2007 system are designed to give us better answers to our questions as quickly as possible. Each program in Microsoft Office has a separate Help window, which means that we can view separate Help windows when working in different applications. In addition, Microsoft Office maintains unique settings for each of these Help windows.

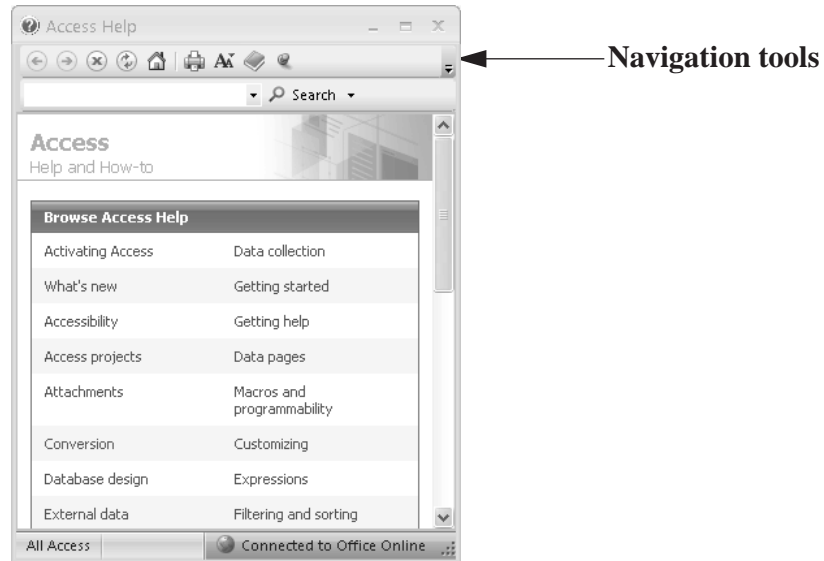
Let's view a Help window in Microsoft Access.

1. To open the Access Help window, in the upper-right corner,



NOTE: The **F1** key also opens the Help window.




You see the **Access Help** window:



The Back, Forward, and Home buttons have been used in older versions of Microsoft Office. This Help window can be resized or moved just like any other window. To search for a help topic, just type the text in the text box and press **Enter**.

The tools on the Navigation bar are described below:

Tool	Name	Purpose
	Back	Goes back to the previous Help topic.
	Forward	Goes forward to a previous Help topic.
	Stop	Will stop Help from searching.
	Refresh	Updates content in the Help window.
	Home	Returns to the Home default contents within the current application.
	Print	Prints the current window.

Tool	Name	Purpose
	Change Font Size	Changes the size of text in the Help window.
	Show Table of Contents	Provides a lists of Help topics in the left pane related to the application you are working in.
	Keep on Top	This new “push pin” tool will allow you to keep the Help window on top of the Office programs; it has no effect on applications that are not Office applications.

2. To search for a help topic, in the Search box, type:

filtering 

We see the results.

3. To choose a Help topic,

 *any link*

4. To navigate the Access Help window,

experiment with the navigation tools

5. Close the Access Help window.

Filtering Data in Datasheet View

The new enhancements of filtering data in datasheet view make working with tables much easier and faster. Automatic filters are available for numeric, date, and text data. We can get additional filter options by right-clicking on any field value.

Let’s explore some of these filtering options by filtering the Cust State field and find all customers who are from California (CA).

1. To view the filter drop-down list, in the Cust State heading,



The drop-down list displays all of the states in the column. We will deselect all states, and then we can select only the state of CA.

2. To deselect all states,




All of the states are deselected.

3. To select the state of CA,



We only see those customers who live in California. Notice that an icon next to the column heading indicates that a filter has been applied. When you hover the mouse over this filter button, a screen tip describes the filter that has been applied to the column.

NOTE: If you save the filter design, the next time you open the table, you can  the Unfiltered button on the Status bar, and the filter will “remember” which filter was applied last and reapply the same filter.

We will turn off the filter using the Status bar.

4. To clear the filter, on the Status bar,



NOTE: Depending upon the data type in a column, other filter options may be available. For example, in a date column, options may include: Yesterday, Today, Tomorrow, Next Week, Next Month, Next Quarter, and more. In addition, with numeric data, you have the option to add a Total row to the bottom of the datasheet, which will apply totals to numeric data, and will include only the filtered data.

Alternating Colors in Datasheet View

Another new feature in Access 2007 is the alternate fill/back color feature, which makes viewing data in tables and forms that much easier. You can set or change the color shading for alternate rows in a table or a form that is in datasheet view. You can also use this feature with conditional formatting to have this fill or background color change when certain conditions are met.

1. Verify that the Home command tab is active.
2. To view the color palette, on the Ribbon in the Font group,



A color palette is displayed.

3. To select a color,



The colors are alternated within the datasheet.

4. To close the table,



5. To save changes,



NOTE: To close the table, you can also **Click** the Close button in the upper right corner of the table.

Adding Objects to a Database

The process of adding objects to a database is very easy in Access 2007. The Create command tab displays several options for adding tables, forms, queries, and reports.

Creating a Table

A database will most likely contain several tables. A new table is automatically opened in Datasheet view when creating a brand new database. We can also create a new table in an existing database or import a table from another source. When creating a table from scratch, there are some *Table Templates* that can help get us started, which we will explore first.

Examining Table Templates

Let's take a moment to look at some of the table templates before we create our table.

1. To view the contents of Create command tab, on the Ribbon,

 the Create command tab

2. To see a list of templates we can use,



Access gives us different templates to choose from. For example, the Contacts table might be used to store names, addresses, and telephone numbers.

3. To see the Contacts sample template,

 Contacts

A new table is inserted with a list of fields based on the Contacts template. We also see a new Table1 tab in the database object navigation section of the window.

Since this table contains various pre-defined fields, we could simply start entering data into the cells as we would in Microsoft Excel. Since we plan to create our own table from scratch, we will close this table.

4. To close the table without saving it, in the upper-right corner of the table,



Creating a Table in an Existing Database

Since we plan to track customer orders in this database, we will need to create a table listing each item in our inventory, price, and the date the item was added to our inventory.

We can add a new table in Datasheet view by using the Table button, or we can add a table in Design view. Using Design view makes conforming to the rules of database design easier and allows more control in setting data types and field properties.

We will create our new table in Design view.

1. Switch to the Create command tab, if necessary.
2. To create the table in Design view, in the Tables group,



NOTE: You can create a table in Datasheet view by selecting the  tool.

A Design contextual tab appears under Table Tools, which allows us to perform certain tasks. In Design view, we can set the field size or data type, define a primary key, add or delete fields, rename fields, etc.

3. To add the first field, type:

ItemID

<i>Tab</i>

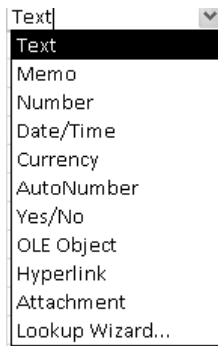
Changing the Data Type

The *Data Type* declares the type of data a field will store. Let's take a look at the different options that are available.

1. To see a list of data types, in the Data Type field,



You should see:



The *Attachment data type* is new to Access 2007. This allows the user to attach images, spreadsheet files, documents, charts, and other types of supported files to the records in the database. Depending upon how the user sets up the Attachment field, individuals can also view and edit attached files. An attached file is actually incorporated into the Access database. Therefore, it is important to note that the database can increase in size quite rapidly since a single attachment in a table may contain multiple files.

We will choose the AutoNumber field.

2. To choose the AutoNumber field,



3. To establish this field as the primary key, in the Tools group on the Ribbon,



The ItemID field is set as the primary key.

4. To add the remaining fields and data types, use the table below:

Field Name	Data Type
Description	Text
Price	Currency
DateAdded	Date/Time

5. To begin to save the table, on the Quick Access Toolbar,



The Save As dialog box opens.

6. To save the table, type:

tblItems **Enter**

This table shows up in the Navigation pane along with the remaining tables.

Entering a New Record in Datasheet View

Next we will enter a new record in Datasheet view. We will switch views so we will be in Datasheet view.

1. To switch to Datasheet view, in the Views group on the Ribbon,



The first field is already set to AutoNumber so we will begin adding data in the Description field.

2. To add an item in the Description field,

Click in the Description field, type: IU mug **Tab**

3. To add a price in the Price field,

 in the Price field, type: 9.99 

A Date Picker icon appears next to the DateAdded field. This is a handy calendar tool, which will help us to choose a date.

4. To display the calendar, next to the DateAdded field,

A calendar appears from which we can choose a date. The current date is the default date.

NOTE: This Date Picker will be inherited on other objects, such as forms, which will make choosing dates quicker and easier.

5. To select a date, in the Price field,

 any date 

6. Save and close the table.

The new table is displayed in the Navigation pane.

Creating a Form

Access 2007 provides new tools and new features to improve the usability of our database. We will view these tools on the Ribbon.

1. To switch to the Create command tab on the Ribbon,

 the Create command tab

We can create a form using several different tools on the Ribbon:

- **Form** - This simple Form tool creates a form with all of the fields from the underlying data source and displays one record at a time.
- **Split Form** - This is a new feature in Access 2007 that gives two views of the data at the same time: a Form view and a Datasheet view.
- **Multiple Items** - The form created with this tool displays multiple records, such as the ability to add graphical elements and other controls, but it is more customizable than a datasheet.
- **Blank Form** - This tool can be a quick way to build a form from scratch in the new Layout view, especially if only a few fields are used. This tool opens the Field List pane and allows the user to view all tables and fields in the database and to choose any fields that are appropriate.
- **Form Wizard** - This option was available in previous versions of Access and allows the user to be more selective about what fields from which tables to include on the form. It is located under the *More Forms* tool.
- **Form Design** - This allows the user to create a form from scratch in Design view.

Next we will create a split form, which is a new feature in Access 2007.

Creating a Split Form

We will create a form using the new Split Form tool. When we use this tool on the Ribbon to create a form, all of the fields from the underlying data source are placed on the form.

1. To select the Customers table, in the Navigation Pane, if necessary,



2. To create the form, in the Forms group on the Ribbon,



The split form is displayed in Layout view.

A split form gives us two views of our data at the same time, which remain synchronized at all times. For example, if we select a field in one part of the form, it will also be selected in the other part of the form. A split form allows the user to quickly locate a record using the datasheet portion of the form and then edit the record in Form view.

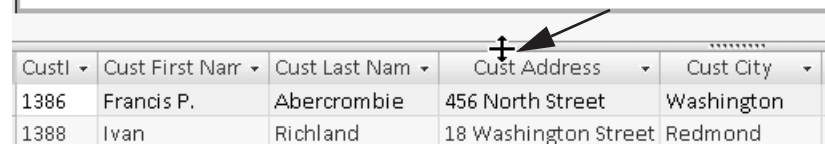
NOTE: An existing form can be converted to a split form by opening the property sheet and then changing the Default View property to Split Form. You can also define other split form properties in the property sheet, such as whether the datasheet appears above, below, to the left, or to the right of the form.

A form separator appears between the two forms, which can be adjusted by the user.

3. To select the form separator,

place the cursor on the splitter bar

You will see:



CustID	Cust First Name	Cust Last Name	Cust Address	Cust City
1386	Francis P.	Abercrombie	456 North Street	Washington
1388	Ivan	Richland	18 Washington Street	Redmond

4. To move the splitter bar,

 the splitter bar up approximately 1 inch

We can view more records in the datasheet view.

Let's save the form.

5. To begin to save the form, on the Quick Access Toolbar,

The Save As dialog box opens.

6. To name and save the form, type:

frmCustomers 

The form is saved and appears in the Forms category in the Navigation Pane.

Working in Layout View

The new Layout view allows us to make design changes while displaying the data. We can rearrange and format fields, remove a field from the form, or add an existing field. The form is actually running, so we can see the data as it will appear in Form view, which facilitates the resizing of controls. Many of the formatting tools are familiar to the new Microsoft Office 2007 interface.

In Layout view, the Form Layout Tools include the two contextual tabs, *Format* and *Arrange*, which appear on the Ribbon.

Let's change the title on the form to Customers.

1. To select the title,

 in the title,  the tblCustomers title

The cursor is positioned in the title.

2. To modify the text, type:

Customers 

The form title is changed to Customers.

Enhancing a Form by Applying a Predefined Format

Access 2007 provides several predefined formats for forms and reports that make the design more appealing. We will apply a format to the form.

1. To select a format, on the Format contextual tab under the Form Layout Tools, in the AutoFormat group,



We see a gallery with various formats from which to choose.

NOTE: The Live Preview feature that exists in Word 2007, Excel 2007, and PowerPoint 2007 does not exist in Access 2007.

2. To select a format,



The form now has a different color scheme applied.

Switching to Design View

There are certain tasks that can be performed more easily in Design view, such as resizing form sections and adding certain controls, such as images, lines, and labels. In Design view, we also have access to the Design contextual tab which gives us additional controls that were available in the Toolbox in earlier versions of Access.

Let's switch to Design view using the Status bar.

1. To switch to Design view, on the Status bar,



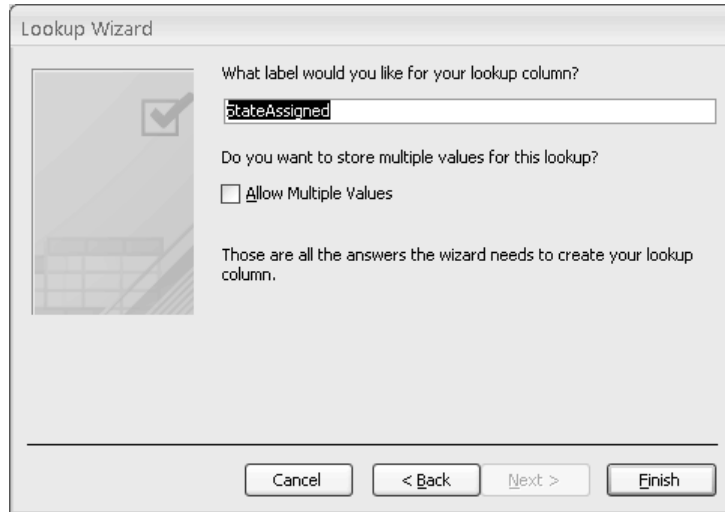
The form now appears in Design view. Notice that the *Design* and *Arrange* contextual tabs appear on the Ribbon under the Form Design Tools.

2. Save and close the form.

Understanding Multivalued Fields

You can create a *multivalued field* that contains multiple values, and then the user may select values from a drop-down list. Multivalued lookup fields are new to Access 2007. This feature can be enabled by using the Lookup Wizard, which will walk you through the steps necessary to create a lookup column and will automatically set the appropriate field properties to match your choices.

The **Lookup Wizard** will display the following dialog box to allow multiple values:



To allow multiple values, the “Allow Multiple Values” checkbox must be enabled. After you create the multivalued field, it will appear as a drop-down list when you view the table in Datasheet view.

NOTE: It may seem that Access can now create a many-to-many relationship, which was not permitted in earlier versions of Access. However, even though Access 2007 allows users to store multiple values in one single field (the foreign key field), the Access 2007 database engine actually stores the values independently and manages the data in hidden tables.

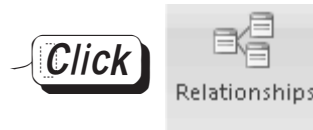
Viewing Relationships

We will view some of our table relationships and see what they look like before working with the multivalued field.

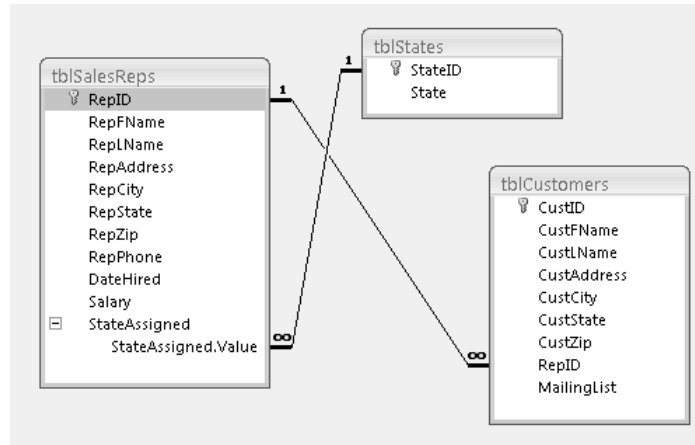
1. To switch to the Database Tools command tab,

 the Database Tools command tab

2. To view the table relationships, in the Show/Hide group,



You should see:



Notice that the StateAssigned.Value field in the SalesReps table is the “many” side of the relationship for the States table. This level was added when the multivalued lookup field was created. Several sales reps may be assigned to multiple states at once.

3. To close the Relationships window,



Viewing a Multivalued Field in a Table

The StateAssigned lookup field in the SalesReps table contains the states, stored in the States table, which are assigned to each sales rep. Let’s view the data in the SalesReps table.

1. To open the SalesReps table, in the Navigation Pane,



NOTE: You can press **Enter** to open a selected table in Datasheet view or **Ctrl** **Enter** to open a selected table in Design view.

The table opens. Notice that multiple states are assigned for some of the sales reps.

2. To expand the States Assigned column, in the column heading border,

 the column border to the right until all states are visible

We will assign an additional state to the last sales rep, Mike Sammis.

3. To view the combo box for Mike Sammis,

 in the “States Assigned” field for Mike Sammis

A drop-down arrow appears.

4. To view and edit the states assigned to Mike Sammis,



Notice that the checkboxes provided in the drop-down box make selections for data entry easier, as each state is listed separately.

5. To add another state to this sales rep,



The states of Kentucky and Illinois are assigned to Mike Sammis.

6. Save the SalesReps table.

7. Close the SalesReps table.

Next we will see how to create queries using the multivalued field.

Creating a Query to Display a Multivalued Field

When displaying multivalued fields in a query, we can display all of the values in the multivalued field (separated by commas), or we can display a separate row for each field.

First we will create a query to display the multivalued field with all of the values separated by commas.

1. Switch to the Create command tab on the Ribbon.

2. To begin to create the query, in the Other group,



The Show Table dialog box opens.

3. To add the SalesReps table,



4. To close the Show Table dialog box,



5. To see all of the fields in the field list,

expand the field list

We will add the first three fields and the multivalued field StateAssigned to the query grid.

6. To add the fields,



NOTE: Be sure to  the StateAssigned field rather than the StateAssigned.Value field.

7. To run the query, on the Design command tab in the Results group,



The query displays the multiple values in the StateAssigned field.

NOTE: You can expand the column by double-clicking the right border to the right of the column heading.

8. To begin to save the query, on the QuickAccess Toolbar,



The Save As dialog box opens.

9. To name the query, type:

qryReps&States_multi **Enter**

The query is saved and appears in a new Queries group in the Navigation Pane.

Displaying Individual Values in a MultiValued Field

Next we will revise the previous query in Design view so that each state value appears on a separate row.

1. To switch to Design view, on the Ribbon, in the Views group,



NOTE: You can also switch to Design view on the Status bar.

2. To switch to the Value field, in the lower pane, in the StateAssigned field,



3. To expand the column, with the cursor positioned at the right edge of the column heading,



You see the StateAssigned.Value field on the query grid:

StateAssigned.Value
tblSalesReps
<input checked="" type="checkbox"/>

4. View the query.

Some of the sales reps are listed multiple times since all of the states are displayed on separate rows.

We will save the query with a different name.

5. To begin to save the query with a new name, on the Quick Access Toolbar,



NOTE: Be sure to use the Save As button instead of the Save button.

6. To name and save the query, type:

qryReps&States_single 

Applying a Quick Filter

Filters are easy to apply in Access 2007, because common filters are built into every view including Layout view. The available filters depend on the type of data that is in the selected column. When filters are applied, icons in the column header and the record navigator bar indicate that the filter is enabled on a particular column. When applying a second filter on the same column, the first filter is automatically removed.

We have already seen how to apply a filter to a table in Datasheet view. This is very similar to applying filters in queries. We will apply a filter to see which sales reps are assigned to the State of Indiana.

1. To apply a filter, in the last column,


 any Indiana value,  Equals "Indiana"

We see five records showing the sales reps who are assigned to Indiana.

2. To turn off the filter, on the Status bar,



3. Close the query without saving the changes.

NOTE: If you save the filter design, the next time you open the query, you can  the Unfiltered button on the Status bar, and the filter will “remember” which filter was applied last and reapply the same filter.

Creating and Modifying a Report in Layout View

Access 2007 provides a wide range of tools for creating and editing reports. As in Forms, there is a Layout view, which allows users to fine-tune a report by adjusting column widths, rearranging columns, placing new fields on the report design, and setting various properties. The main advantage of Layout view is that you can see the relative positions of the controls on the report, as well as the margins, page headers and footers, and other report details. Design view allows you to make fine adjustments to the report’s design, but in Layout view, you can make changes to the report while looking at the data.

We will create a report using the Report tool based on the SalesReps data.


1. To select the table for the source data, in the Navigation Pane,



2. Switch to the Create command tab on the Ribbon.
3. To create a report, in the Reports group,



The report is created and displayed in Layout view with page breaks showing how the report will print. Three new contextual tabs appear under the Report Layout Tools. Notice that all of the states for the StateAssigned lookup field are displayed. Also, by default the total of the Salary field is calculated and displayed.

NOTE: There’s no more need to create calculated controls! Simple group totals and sums can be added in Layout view by clicking a number in a column and, on the Format tab, in the Grouping & Totals group,  the Totals button. You will have an option on the type of aggregate that you want to add for the field. Access automatically adds the appropriate text box to the Report Footer section and sets the Control

Source property to the appropriate expression. If there are grouping levels in your report, Access also adds the appropriate text box to each Group Footer section that performs the same calculation.

Let's see how easy it is to make some modifications to the report in Layout view. First we will change the orientation to Landscape.

4. To change the orientation to Landscape, in the Report Layout Tools,



The vertical page break moved to the right.

We can easily delete any column(s) that we do not want to show up in the report. Notice that the Salary column has been automatically totaled. To select the entire column, including the heading and total, we must select the column heading.

5. To delete the Salary column,



Next we will adjust column widths.

6. To adjust the column width for the Rep First Name column,

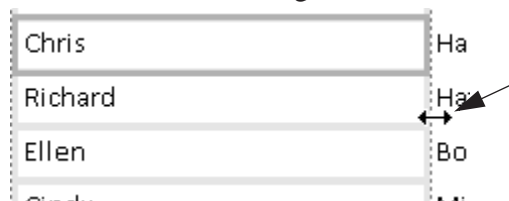


The rows in the column are selected as a single group.

7. To begin to resize the column,



We see the cursor change to a double-sided arrow:



8. To resize the column,

 the row border to the left

The width of the column is resized.

9. To resize any remaining columns,

repeat steps 6 through 8

NOTE: You can also filter and group records in Report Layout view by right-clicking the column and choosing the appropriate option from the drop-down menu.

10. To save the report, on the Quick Access Toolbar,

 , type: rptSalesReps 

11. Close the report.

12. Close Access.

Wrapping Up

We've reached the end of today's workshop. Please follow your workshop instructor's guidance and take a few moments to fill out the workshop evaluation form.

Also, before leaving, please log off your computer.

Thank you for participating in
Microsoft Office 2007: What's New in Access

Contributions to These Materials

Project Leader	<i>Susan Hanns</i>
Project Developer	<i>Susan Hanns</i>
Development Team	<i>Andy Hunsucker</i> <i>Thomas Mason</i> <i>Veronica Mount</i>
Editor	<i>Sandy Doell</i>

Where to Go From Here

You can use the resources listed below to further build your computing skills.

Taking Other IT Training & Education Workshops

UITs IT Training & Education offers hands-on instructor-led computing workshops aimed at a variety of skill levels, covering a broad range of topics. We teach hundreds of workshops on more than 80 topics every year! For more information, to see a detailed workshop schedule, or to register for a workshop, contact IT Training & Education:

Web: <http://ittraining.iu.edu/>

Email: (IUB) ittraining@indiana.edu; (IUPUI) ittraining@iupui.edu

Phone: (IUB) 812/855-7383; (IUPUI) 317/274-7383

Getting Help from Online Resources

University Information Technology Services – IU technology resources, services and support:

<http://uits.iu.edu/>

IT Training Online – Self-paced IT courses you can take on your computer:

<http://ittraining.iu.edu/online/>

UITs Knowledge Base – Searchable database of computing questions:

<http://kb.iu.edu/>

Getting Help from Support Staff

Walk-in Support

(All IU Campuses) Walk-in Support Center. Locations and schedules at:

<http://kb.iu.edu/data/abxl.html>

(IUB & IUPUI) Consultants in the UITs Student Technology Centers

24 Hour Phone Support

(IUB) 812/855-6789

(IUPUI) 317/274-4357

E-mail Support

(All IU campuses) ithelp@iu.edu
