

Tutorial 1

Introduction to Microsoft Access 2000

Lecture Notes

TUTORIAL OUTLINE

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Diskettes and Databases: There can be problems associated with running a database from a diskette. Files can become corrupt for no apparent reason or because the diskette was removed during the use of the database. If at all possible, it is best that students store the data on a hard drive or their personal network drive space. Not only does this help reduce the chance of corrupted files but the database will run much faster as well.

Known "glitches" in Access 2000. The following are some "glitches" that are known to arise randomly -- these are definitely Access bugs. They do not seem to affect the students' work in Access but this information is provided to the instructor for the purpose of identification and remedy purposes.

--Microsoft Access dialog box, message is: 'Could not find field 'Description'. This error happens sometimes when you close a database. Click the OK button to continue. The database should close without any errors.

--Microsoft Access dialog box, message is: 'Not enough space on disk'. This dialog box opened while testing the tutorial when there was enough space on the disk. Click the OK button to continue. Testers received this message when trying to preview a report. The files in the Brief book do fit on the floppies, so there definitely is enough disk space. Clicking the OK button should work to get rid of this dialog.

--Sometimes when you start Access, or when you try to use the Office Assistant or Help, you will get a message saying that the Help files are not installed, even though they are. If this happens insert the Office 2000 CD, click the Install button, and then after about 30 seconds the Help system opens.

Key Terms

Access 2000 : computer program used to enter, maintain, and retrieve related data in a format known as a database

Field: a single characteristic or attribute of a person, place, object, event, or idea

Table: a collection of fields that describe a person, place, object, event, or idea

Field value: the specific value, or content, of a field

Record: a set of field values pertaining to ONE person, place, object, event, or idea

Database: a collection of related tables

Relational database: a collection of related tables

Common field: a field that appears in more than one table in a database

Primary key: a field, or a collection of fields, whose values uniquely identify each record in a table

Foreign key: a field in a table which is a primary key in a related table

Database management system (DBMS): a software program that lets you create databases and then manipulate data in the databases

Relational database management system: a system in which data is organized as a collection of tables

Access window: the program window that appears when you start the program

Database window: the window that appears when you open a database and that is the main control center for working with an open Access database

Objects Bar: contains a set of controls each of which controls one of the six major object groups in an Access database: tables, queries, forms, reports, macros and modules

Groups Bar : provides a way to organize database objects into groups and provides shortcuts to those objects to make them easily accessible

Datasheet view: shows a table's contents as a datasheet in rows and columns

Field selector (column selector) : located at the top of each column in a datasheet; clicking it selects the entire column

Record selector (row selector): located to the left of a row in a datasheet; clicking it selects the entire row

Current record symbol: a symbol that identifies the currently selected record

Navigation buttons: located at the bottom of Datasheet view; provide a way to move vertically through the records

Specific Record box: located between the two sets of navigation buttons in Datasheet view; displays the current record number

Query: a question you ask about the data stored in a database

Query Wizard: an Access tool that guides you through the steps to create a query

Form : a database object you use to maintain, view, and print records in a database

Form Wizard : an Access tool that asks you a series of questions, and then creates a form based on your answers

AutoForm Wizard: an Access tool that places all the fields from a selected table (or query) on a form automatically, without asking you any questions, and then displays the form on the screen

Report: a formatted printout (or screen display) of the contents of one or more tables in a database

Compacting: rearranges the data and objects in a database to make its size smaller.

INSTRUCTOR'S NOTES

Introduction to Database Concepts

Consider using an example that students are very familiar with to reinforce their understanding of these concepts. For example, you could use the example of a student's record. After showing the example of the customer table in the text, apply the concepts to a student table. Have students tell you what fields they might expect in a student table, what would constitute a single student's record, what field would uniquely identify a student record, etc. Once they can see that storing

records is not a new concept, you can point out that the database is simply a tool that allows them to store and retrieve data more efficiently than manual storage.

Before Starting Access: Reviewing the Windows 95/98 User Interface

You might want to review the Windows 95/98 user interface if some students have not used Windows 95/98 on a regular basis or if they have not had formal instruction on Windows 95/98. Some of the topics you might cover include:

- Using the Windows 95/98 Start button to run software programs
- Opening, saving, and printing files
- Using sizing buttons to enlarge, shrink, or close a window
- Switching between programs using the taskbar
- Using Windows Explorer to list files on a disk, copy files, rename files, and delete files
 - Include information about location of data files for this text
 - Illustrate the structure of your installation's file storage
- Exiting a software program

New Database Objects Bar

Notice that in Access 2000 the objects "tabs" have been replaced with the database objects "bar" on the left of the database window. Also the New, Design, and Open buttons have been replaced with icons located at the top of the window. If you click on the new icon, in most cases you will see the same "new" screens that appeared in previous versions of Access.

Querying the Database

You can simplify the concepts of querying by telling students you are simply asking questions of the database. All the data is stored in the database and now you want to view various parts of it according to your information needs. You might further enforce how a DBMS is a powerful "tool" that makes data retrieval faster and more efficient. Compare the querying of the database to that of pulling information out of a file cabinet filled with records contained within individual folders. Have them imagine, for example, the time it would take to make a list of file cabinet folders of students who have a grade point average greater than 3.5 or who are in a particular major.

Depending on your installation of Access, students may find that the Office Assistant is a different figure than the one shown in the text. Consider setting the Office Assistant figure to the paper clip so that it matches. To do this, right click the Office Assistant, click on options, click on the gallery tab and then select the Office Assistant character you are looking for.

Wizards

Students will use several Access wizards in this tutorial. Explain that a wizard is an Access tool that asks questions and creates an object according to the answers provided. Point out that students can create tables, queries, forms, or reports using wizards, and that the wizards operate in essentially the same way (i.e., they guide you through the creation of the object). Also tell students that they can still modify the object they created using a wizard to customize as necessary.

Explain to students that wizards provide a quick way to create relatively simple objects. Later they will learn how to create more complex objects in design view without the assistance of a wizard.

Compacting and Backing Up a Database

Students learn more about compacting if you have them observe the size of the database before and after compacting. There are several ways to do this but the most simple is to right click the database file in the Windows Explorer then click on Properties. Have the students make a note of the file's size then go through the process of compacting. Once the database is compacted, repeat the process of viewing the file size in the Windows Explorer. Explain to students that the file size reduction would be much more dramatic with a very large database. Since the examples and cases are relatively small they really don't understand the importance of size reduction.

If students are using either the hard drive or network drive space to save their files, they might want to make their backup on a diskette so that it is portable to their home computer. However, if at all possible, they should copy the database to a hard drive or network drive prior to working with it for reasons explained under "diskettes" in this manual.

Use the AutoReport: Columnar Wizard to create a report based on the Business Articles table.