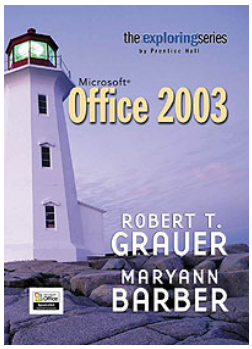
Exploring Microsoft Access 2003

Revised Edition



Chapter 1- Introduction to Access: What is a Database?

Robert Grauer and Maryann Barber

Committed to Shaping the Next Generation of IT Experts.

Objectives

- Define field, record, table, and database
- Describe the objects in Access database
- Add, edit, and delete records in a table
- Use existing forms and reports

Objectives (continued)

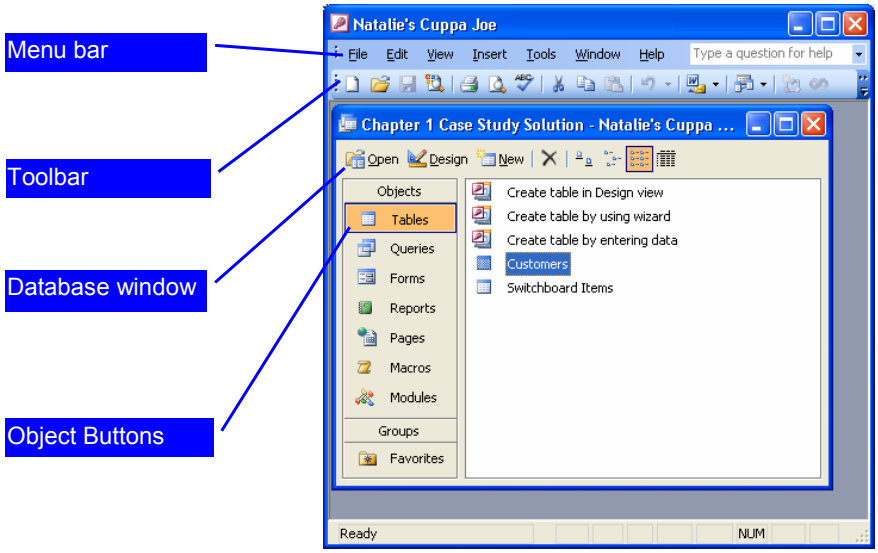
- Explain importance of data validation
- Apply filter by form or selection
- Sort a table on one or more fields
- Identify one-to-many relationships

Case Study: The South Vancouver Preschool

The case requires students to:

- Use a form to enter data about themselves
- Print the completed form
- Print all reports from the database

Database Window



Exploring Access 2003 Revised - Grauer and Barber 5

Introduction to a Database

- Field – a basic data element (name, phone number, title)
- Record – a set of fields (All fields for one person)
- Table – a set of records
- Database – one or more tables

Exploring Access 2003 Revised - Grauer and Barber 6

Fields and Records

Field – A basic fact listed above each column

Field = columns
Record = rows

Record is an entire row of information

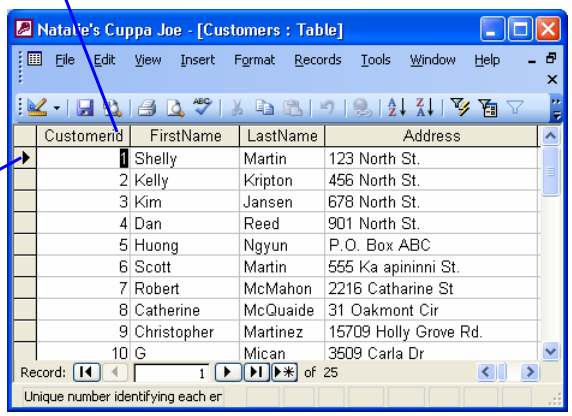
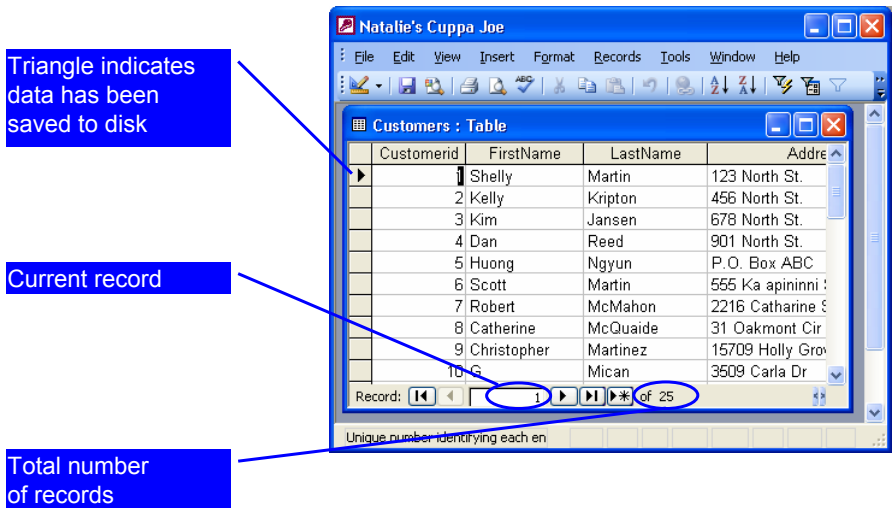


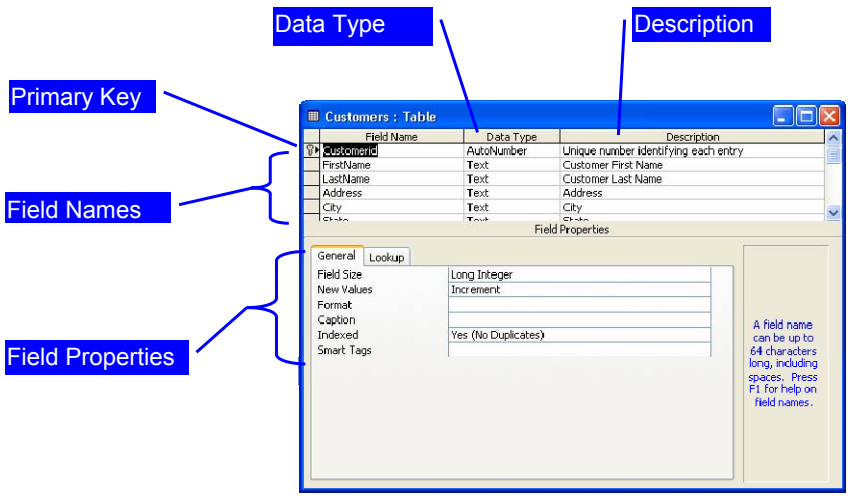
Table Views

- Datasheet view is used to add, edit, or delete records
- Design view is used to create and modify fields
- PivotTable view summarizes groups of data
- PivotChart view charts the data from PivotTable view

Datasheet View



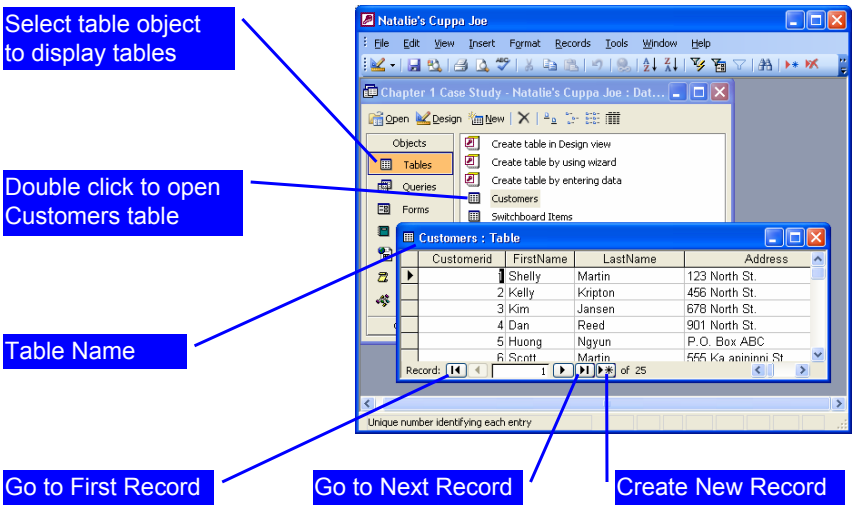
Design View



Tables

- Record selector symbol next to current record shows status
  - Triangle indicates saved to disk
  - Pencil indicates you are typing
- Asterisk appears next to last blank record in table

Open a Table



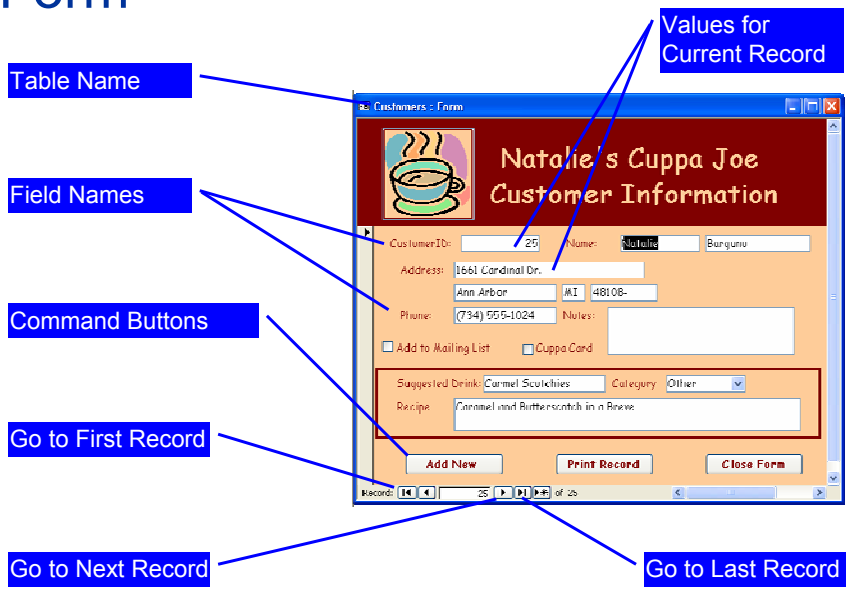
Tables

- Insertion point — where text is entered
- Primary key — unique identifier for each record
- Access automatically saves changes when you move to next record

Forms, Queries, and Reports

- A **form** is a friendly interface for entering or modifying a table
- A **query** provides a subset of a table based on a criteria
- A **report** presents data in an attractive format

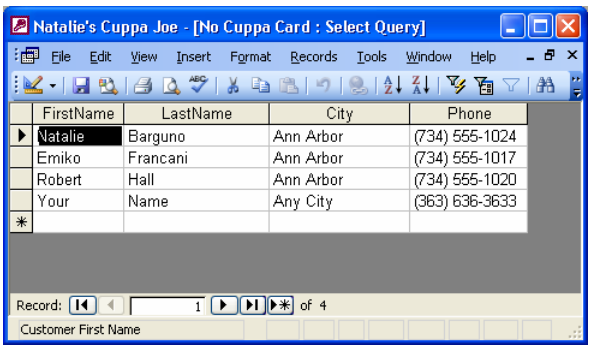
Form



Exploring Access 2003 Revised - Grauer and Barber 15

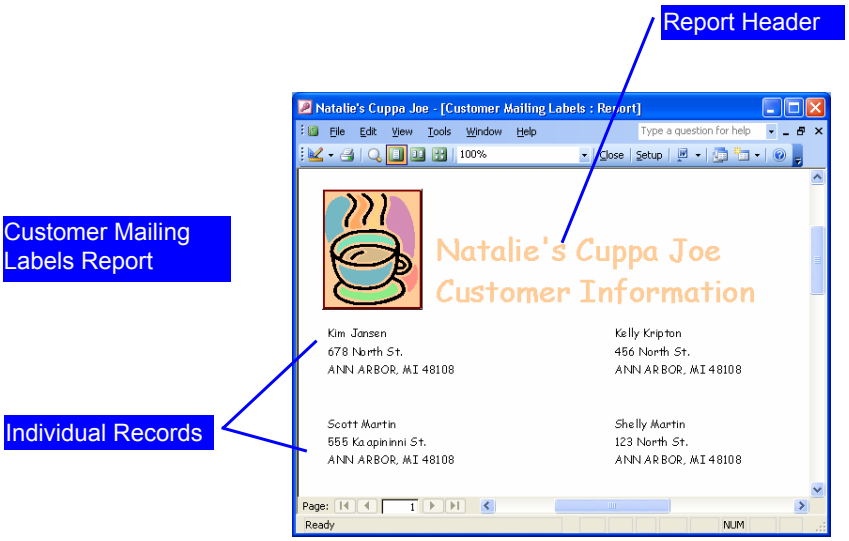
Query

Display only customer records who don't have a Cuppa Card



Exploring Access 2003 Revised - Grauer and Barber 16

Report



Hands-on Exercise 1

- Title of Exercise: Introduction to Access
- Objective: To add, edit and delete records and open forms, queries and reports
  - Input file: Bookstore database
  - Output file: Bookstore database (modified)

Hands-on Exercise 1: Step 1 - Obtain the Practice Files

1. Start Internet Explorer, and go to **http://www.prenhall.com/grauer**. Click the book for Office 2003, which take you to the Office 2003 homepage
2. Click the student downloads tab (near the top of the window) to go to the student download page as shown in next slide
3. Click the link to download the file for the Exploring Access 2003 Revised Edition

Hands-on Exercise 1: Step 1 - Obtain the Practice Files

4. You will see the file download box asking what you want to do. Click the Save button. The Save As dialog box appears
5. Click the down arrow in the Save In list box and select the drive and folder where you want to save the file. Click Save
6. Start Windows Explorer, select the drive and folder where you saved the file, then double click the file to follow the onscreen instruction

Hands-on Exercise 1: Step 2 - Start Microsoft Access

1. Click the Start button, click the All Programs button, click Microsoft Office, then click Microsoft Office Access 2003 to start the program
2. Pull down the file menu, and click the Open command to display the Open dialog box. Do this even the task pane is open
3. Click the down arrow on the Views button, then click Details to change to Details view.

Hands-on Exercise 1: Step 2 - Start Microsoft Access

4. Click and drag the vertical border between column to increase (or decrease) the size of a column
5. Click the drop-down arrow on the Look In list box. Click the appropriate drive (Drive C) depending on the location of your data. Double click the Exploring Access folder
6. Click the down scroll arrow (if needed) to click the Bookstore database. Click the open command button to open the database

Hands-on Exercise 1: Step 2 - Start Microsoft Access

7. Click the Open button within the Security Warning dialog box if you see a warning message saying that the database may contain code to harm your computer. (The message caused by the programming statements that are behind the command button in the various forms within database).

Hands-on Exercise 1: Step 3 – Open the Books Table

1. If necessary, click the Maximize button in the application window so that Access take the entire desktop
2. You should see the database window for the Bookstore database. Click the Tables button. Double click the icon next to Books to open the table as shown in next slide
3. Click the Maximize button so that the Books table fills the access window and reduce the clutter on the screen

Hands-on Exercise 1: Step 3 – Open the Books Table

4. Practice with the navigation buttons above the status bar to move from one record to the next. Click ►or ◄to move forward to the next record or return to previous record
5. Click |◄ to move the first record in the table or ►| to move the last record in the table
6. Click in any field of the first record. The status indicator at the bottom of the Books table indicates record 1 of 22. The triangle symbol in the record selector column indicates that the record has not changed since it was last saved.

Hands-on Exercise 1: Step 4 – Add a New Record

1. Pull down the insert menu and click New Record (or click the New Record button on the Table Datasheet toolbar). The record selector moves to the last record (record 23). The insertion point is positioned in the first field (ISBN Number)
2. Enter data for the new book as shown in next slide. The record selector change to a pencil as soon as you enter the first character in the new record
3. Press Enter when you have entered the last field for the record. The record has been saved to the database, and the record selector changes to a triangle.

Hands-on Exercise 1: Step 4 – Add a New Record

4. Add another record. Enter 0-13-143442-X as the ISBN. The title is Exploring Microsoft Office 2003 Volume II by Grauer/Barber. The Price is $79.00. The book was published by Prentice Hall in 2003. Be sure to press Enter when you have completed the data entry.
5. There are now 24 records in the table.

Hands-on Exercise 1: Step 5 – Edit a Record

1. Click in the Title Field for the first record, pull down the Edit menu, and click Find (or click the Find button on the toolbar) to display the dialog box as shown in next slide
2. Enter COBOL in the Find What text box. Check that the other parameters for the Find command match the dialog box. Be sure that the Title field is selected in the Look In list box and Any Part of Field is selected in the Match text box

Hands-on Exercise 1: Step 5 – Edit a Record

3. Click the Find Next command button. Access moves to record 14, the record containing the designated character string, and selects the matching word in the Title field for that record. Click Cancel to close the Find dialog box
4. Press the Tab key three times to move from the Title field to the Price field (or click directly in the price field). The current price ($52.95) is already selected
5. Type $58.95, then press the down arrow to move to the next record and save the data (auto).

Hands-on Exercise 1: Step 6 – Delete a Record

1. Use the Find command to search for the book A Guide to SQL. (You can click in the Title field, enter “SQL” in the Find What dialog box, then use the same search parameters as in the previous step)
2. The Find command should return the appropriate record, which is not visible in next slide. This is because we’ve deleted the record to display the dialog box in the figure.
3. Pull down the Edit menu, and click the Select Record command to highlight the entire record. You can also click the records selector column to select the record without having to use a pull-down menu.

Hands-on Exercise 1: Step 6 – Delete a Record

4. Press the del key (or click the Delete Record button on the toolbar) to delete the record. You will see the dialog box in Figure indicating that you are about to delete a record and asking you to confirm the deletion. Click Yes to delete the record
5. Pull down the Edit menu. The Undo command is dim, indicating that you cannot undeleted a record. Press Esc to continue working.

Hands-on Exercise 1: Step 7 – Print the Table

1. Pull down the File menu and click the Print Preview command to see the table prior to printing. The status bar indicates that you are viewing page 1 (and further, the active scroll button indicate that there are additional page)
2. Click the Setup button on the Print Preview toolbar to display the Page Setup dialog box as shown in next slide
3. Click the Page tab. Click the Landscape option button. Click OK to accept the setting and close the dialog box

Hands-on Exercise 1: Step 7 – Print the Table

4. The table should now fit on one page. (If it still does not fit on one page, click the Setup button on the Print Preview toolbar to display the Page Setup dialog box, click the Margins tab, and make the margin smaller
5. Click the Print button to print the table. Alternatively, you can pull down the File menu, click Print to display the Print dialog box, click the All options button, then click OK)
6. Click Close to close the Print Preview window. Close the table.

Hands-on Exercise 1: Step 8 - Open the Book Form

1. Click the Forms button in the Database window. Double click the Books form to open the form, and if necessary, maximize the form so that it takes the entire window
2. Click the Add Record command button, or use the keyboard shortcut, Alt+A (Each command button has a different underlined letter to indicate the keyboard shortcut)
3. Click in the text box for ISBN Number, the use the Tab key to move from field to field as you enter data for the book as shown in next slide.

Hands-on Exercise 1: Step 8 - Open the Book Form

3. You can use a query to display information, as was just done, and/or you can modify data in the underlying table. Click in the Publisher field for the blank record in the last row (an asterisk). Type McGraw Hill to begin entering the data for a new record as shown in next slide.
4. You can enter data for any publisher within the query, but you must satisfy the requirements for data validation.
5. Click the Close the query form, and return to the Database window.

Hands-on Exercise 1: Step 9 – Run a Query

1. Click the Queries button in the Database window. Double click the Publisher query to run the query. You will see a dialog box asking you to enter the name of a publisher
2. Type McGraw Hill and press Enter to see the results of the query, which should contain three books by this publisher. (If you don't see any books, it is because you spelled the publisher incorrectly. Close the query to return to Database window, then return the query)

Hands-on Exercise 1: Step 9 – Run a Query

4. The table should now fit on one page. (If it still does not fit on one page, click the Setup button on the Print Preview toolbar to display the Page Setup dialog box, click the Margins tab, and make the margin smaller
5. Click the Print button to print the table. Alternatively, you can pull down the File menu, click Print to display the Print dialog box, click the All options button, then click OK)
6. Click Close to close the Print Preview window. Close the table.

Hands-on Exercise 1: Step 10 - Open a Report

1. Click the Reports button in the Database window to open display the available reports. Double click the icon for the Publisher report. Type McGraw Hill in the Parameter dialog box. Press Enter
2. Click the maximize button so that the report takes the entire screen as shown in next slide
3. Click in the Zoom button to toggle to 100% so that you can read the report, which should contain four records.

Hands-on Exercise 1: Step 10 - Open a Report

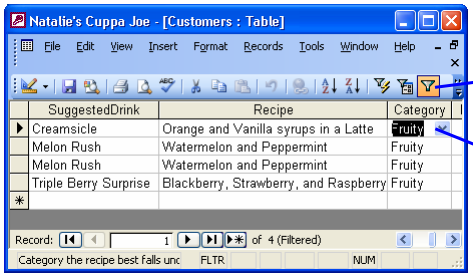
3. Two books were in the original database. One book was entered through a form in step 8. The other book was entered through a query in step 9. All of the books in the report are published by McGraw Hill, which is consistent with the parameter you entered at the beginning of this step.
4. Click the Print button on the Report toolbar, Click the Close button to close to the Database window.

Filters and Sorting

- Filter by Selection is easiest
- Filter by Form
  - Allows for comparative criterion (e.g. >, <)
  - Allows for "*or*" filters (e.g. either cosmetics or shoes)
- Remove Filter button - redisplays complete table

Filter By Selection

These Records Were Filtered by Selection (Category = Fruity)

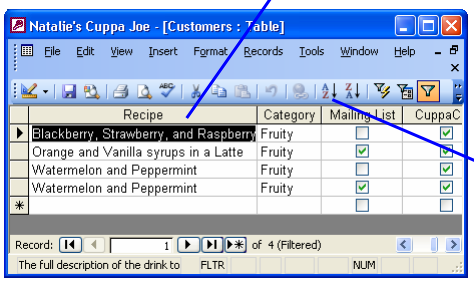


Apply Filter button

Select field to filter

Sorting

The Previous Filtered Records Sorted by Recipe



Sort Ascending button

The Same Records, Only Displayed in a Different Order

Hands-on Exercise 2

- Title of Exercise: Filters and Sorting
- Objective: To apply a Filter by Selection and Filter by Form criteria, and to sort records in a table
  - Input file: Employee database
  - Output file: Employee database (modified)

Hands-on Exercise 2: Step 1 – Open the Employees Table

1. Start Access as you did in the previous exercise, but this time you will open a different database. Pull down the File menu and click the Open command to display the Open dialog box
2. Click the down arrow in the Look In box to select the drive (drive C) and folder (Exploring Access) that contain Employee database
3. Click the Open button in the Open dialog box to open database, then click Open button within the Security Warning dialog box (if any)

Hands-on Exercise 2: Step 1 – Open the Employees Table

4. Click the Forms button in the database window, then double click the Employees form to open the form as shown in next slide. Click the Maximize button so that The Employees forms fills the Access window
5. Click the Add Record button, then enter data for your self, using 12345 as the EmployeeID, and your first and last name. You have been hired as Account Rep. Your salary is $40,000, you will work in Miami, and your performance is Good
6. Click the Print Record button to print the record containing your data. Click the Close Form button to return to Database window.

Hands-on Exercise 1: Step 2 – Filter by Selection

1. Click the Tables button in the Database window. Double click the Employees table to open the table, which should contain 15 records, including the record you added for your self
2. Click in the Title field of any record that contain the title Account Rep, then click the Filter by Selection button
3. You should see 9 employees, all of whom are Account Reps, as shown in next slide. The status bar indicates that there are 9 records (as opposed to 15) and that there is a filter condition in effect

Hands-on Exercise 1: Step 4 – Add a New Record

4. Click in the performance field of any employee with a Good performance (we clicked in the Performance field of the first record), then click the Filter by Selection button a second time
5. This time you see 4 employees, each of whom is an Account Rep with a performance evaluation of Good. The status bar indicates that 4 records satisfy this filter condition
6. Click the Print button to print the filtered table.

Hands-on Exercise 1: Step 3 – Filter by Form

1. Click the Filter by Form button to display the form in next slide Figure, where you can enter or remove criteria in any sequence. Each time you click in a field, a drop-down list appears that displays all the value for the field that occur within the table
2. Click in the columns for Title and Performance to remove the criteria that were entered in the previous step. Select the existing entries individually and press the Del key as each entry is selected

Hands-on Exercise 1: Step 3 – Filter by Form

3. Click in the cell underneath the Salary field and type >30000 (as opposed to selecting a specific value). Click in the cell underneath the Location Field, click the down arrow, and select Chicago
4. Click the Apply Filter button to display the records that satisfy these criteria (You should see 4 records)
5. Click the Print button to print the table.

Hands-on Exercise 1: Step 4 – Sort the Table

1. Click the Remove Filter button to display the complete table, which contains 15 employee records.
2. Click in the LastName field of any record then click the Sort Descending button. The records are displayed in alphabetical (ascending) order by last name as shown in Figure
3. Click in the Salary field of any record, then click the Sort Descending button. The records are in descending order of salary; that is, the employee with the highest salary is listed first

Hands-on Exercise 1: Step 4 – Sort the Table

4. Click in the Location field of any record then click the Sort Aescending button to display the records by location, although the employees within a location are not in any specific order
5. You can sort on two fields at the same time, provided the fields are next to each other, as described in the next step.

Hands-on Exercise 1: Step 5 – Sort on Two Fields

1. Click the header for the Location field to select the entire column. Click and drag the Location header so that the Location field is moved to the left of the Lastname field.
2. Click anywhere to deselect the column, then click on the Location header and click and drag to select both the Location header and the Lastname header as shown in Figure.
3. Click the Sort Ascending button. The records are sorted by location and alphabetically within location. (You could extend the sort to three fields such as Location, LastName, and FirstName by selecting all three fields prior to clicking the Sort button
4. Print the table. Close the table, saving the changes when prompted to do so

Hands-on Exercise 1: Step 5 – Sort on Two Fields

Hands-on Exercise 1: Step 6 – Print a Report

1. Click the Report button in Database window. Double click the icon for Employees by Location Report
2. Click in the Maximize button in the Report Window so that the report takes the entire screen as shown in figure
3. Click in the Zoom button to toggle to 100% so that you can read the report. The displays the employees in the same order as the sorted table from step 5. (The sequence for the report is contained in its design specification and does not depend on the sequence of the underlying table)

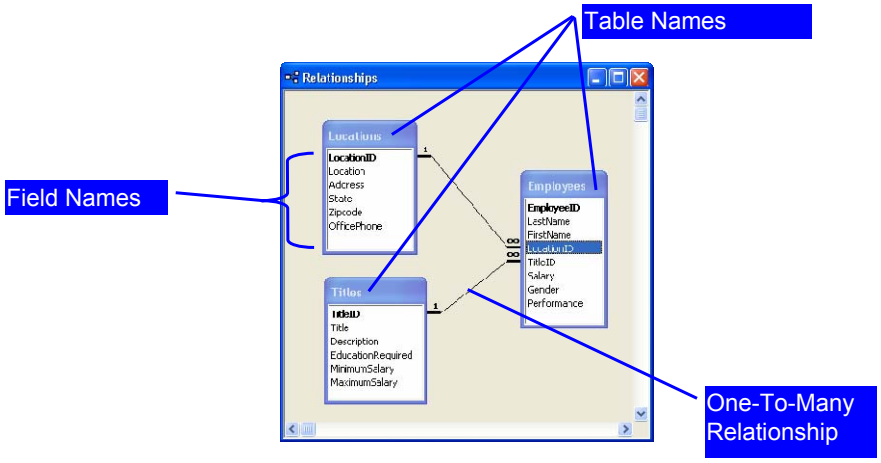
Hands-on Exercise 1: Step 4 – Sort the Table

4. Click in the Print button on the Report toolbar to print the report. Submit all the printed information:
   - The employee form from step 1
   - The filtered table from steps 2 and 3
   - The sorted table from step 5
   - The Employees by Location report from this step
5. Close the report. Exit Access if you do not want to continue with the next exercise at this time.

Relational Database

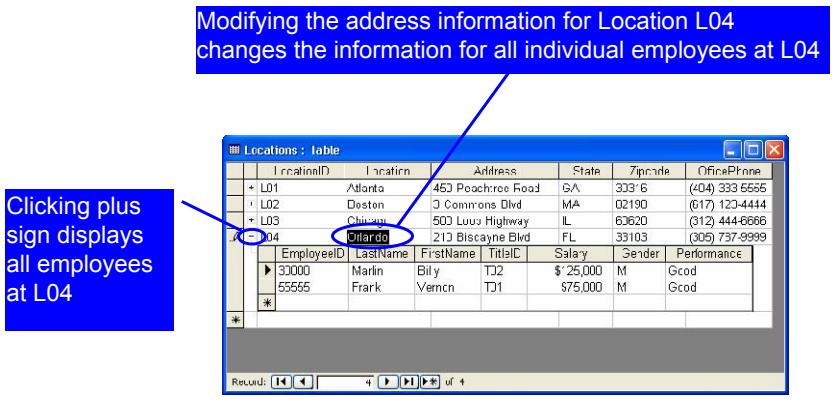
- Uses multiple tables
- Examples of one-to-many relationships:
  - One publisher has many books
  - One customer has many purchases
  - One student has many courses
  - One instructor has many students

Relationships Window



Exploring Access 2003 Revised - Grauer and Barber 57

Modifying Related Information



Exploring Access 2003 Revised - Grauer and Barber 58

Displaying Related Information

Related information is easily grouped together when creating reports

Employees are grouped by their location

Hands-on Exercise 3 (next week)

- Title of Exercise: A Look Ahead
- Objective: To identify one-to-many relationships within a database
  - Input file: Look Ahead database
  - Output file: Look Ahead database (modified)

Hands-on Exercise 3: Step 1 – Open the Relationship Window

1. Start Access as you did in the previous exercise. Pull down the File menu and click the Open command to display the Open dialog box. Open the Look Ahead database in the Exploring Access folder.
2. Pull down the Tools menu and click the Relationships command to open the Relationships window as shown in Figure. Pull down the relationships menu and click the Show Table dialog box.

Hands-on Exercise 3: Step 1 – Open the Relationship Window

3. Click (select) the Location table (within the Show Table dialog box), then click the Add button to add this table to the relationships window.
4. Double click the Titles and Employee tables to add these tables to the Relationships window. Close the Show Table dialog box.

Step 2-7 is to be cont. next week

Chapter 1 Summary

- **Six object types**:
  - Tables, Forms, Queries, Reports, Macros, & Modules
- A table is composed of records
- Records are composed of fields
- Tables views:
  - Design, Datasheet, PivotTable, or PivotChart

Chapter 1 Summary (Continued)

- Data validation is critical
- A filters applies a criteria to display a subset of records
- Relational databases contain multiple related tables
  - Allows for referential integrity and data validation

End-of-chapter Exercises

- Multiple Choice
- Practice With Access
  - Exercise 1 – The Oscars
  - Exercise 2 – Definitely Needlepoint
  - Exercise 3 – The United States
  - Exercise 4 – Large Databases
  - Exercise 5 – The Look Ahead Database
  - Exercise 6 – Peppy's Restaurants
  - Exercise 7 – Peppy's Relational Database
  - Exercise 8 – Metro Zoo

End-of-chapter Exercises (Continued)

- Practice with Access (continued)
  - Exercise 9 – Finding a Physician
- Mini Cases
  - Online Study Guide
  - Garbage In, Garbage Out
  - Chapter Recap – Natalie's Cuppa Joe

Questions?

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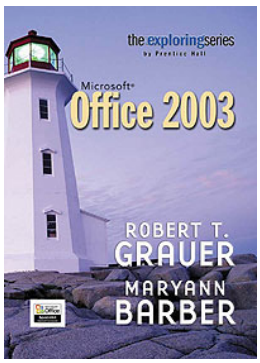


Chapter 2- Tables and Forms: Design, Properties, Views, and Wizards

Robert Grauer and Maryann Barber

Committed to Shaping the Next Generation of IT Experts.

Objectives

- Describe table design
- Describe data types and properties; set a primary key
- Use Table Wizard; Modify a table design
- Discuss data validation importance

Objectives (continued)

- Use Form Wizard; modify a form design
- Distinguish between bound, unbound, and calculated controls
- Add combo box and command buttons
- Use a form to add, edit, and delete records

Case Study: Debbie's Fine Fashions

The case requires students to:

- Create a database; set field properties
- Create a form to enter the data
- Modify the form to include command buttons and clip art
- Use the form to enter data

Table Design Basics

- Include necessary data
- Store data in its smallest parts
- Avoid calculated fields

Creating a Table

- Two ways to create a table:
  - Table Wizard is easiest
  - Design a table yourself
- Every field has a field name
- Every field has a data type
- Primary key – Makes each record unique
- Views: Datasheet or Design
- Properties – characteristics of an object

Data Types

- Number field
- Text field
- Memo field
- Date/Time field
- Currency field
- Yes/No field
- OLE field
- AutoNumber
- Hyperlink field

New Table Screen

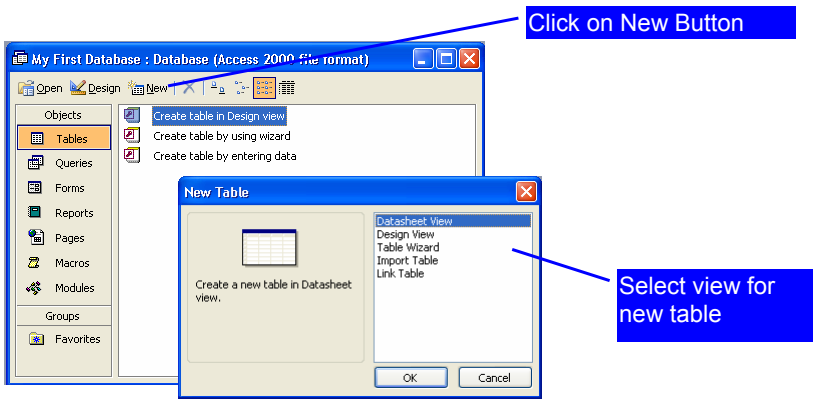
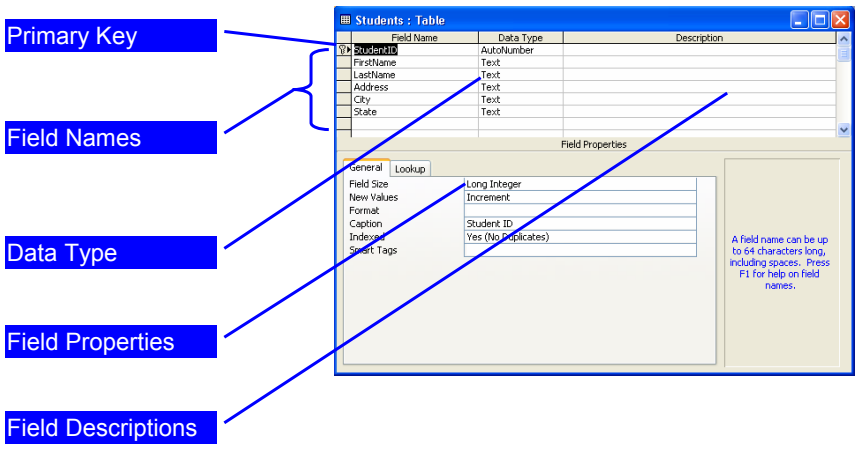


Table Design View



Properties

- Field size
- Format
- Input Mask
- Caption
- Default Value
- Validation Rule
- Validation Text

Properties (continued)

- Required
- Allow Zero Length
- Indexed
- Unicode Compression
- IME Mode
- IME Sentence Mode

Table Wizard Screen

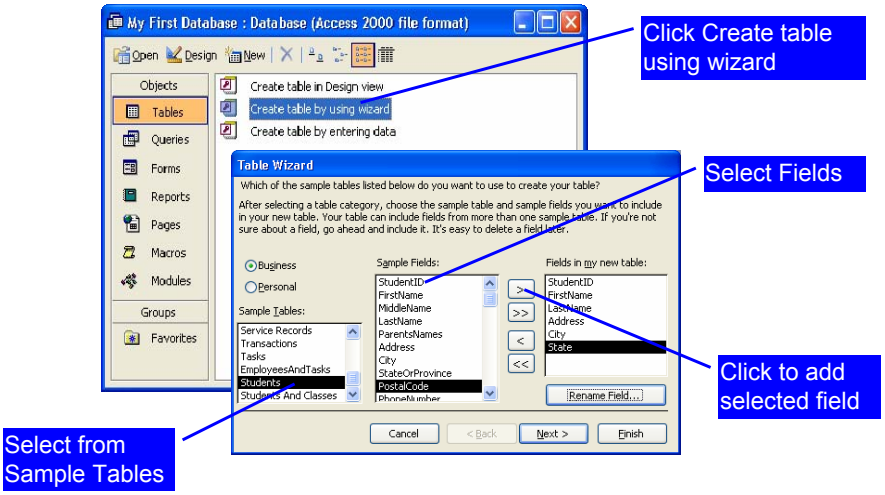
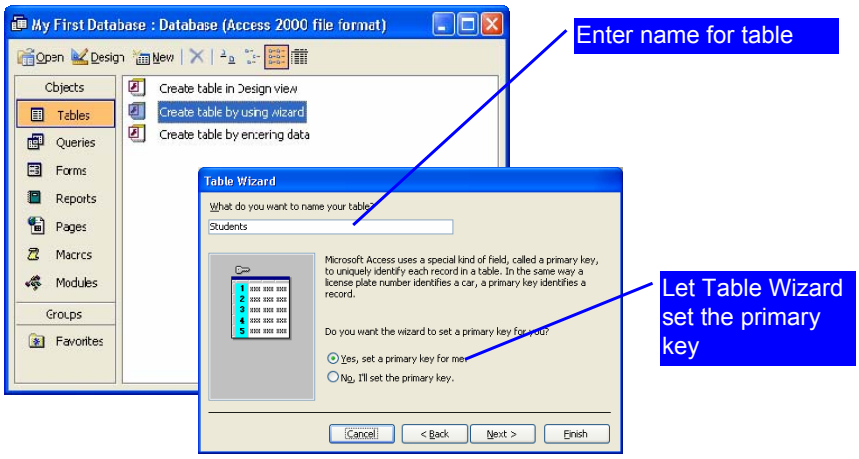
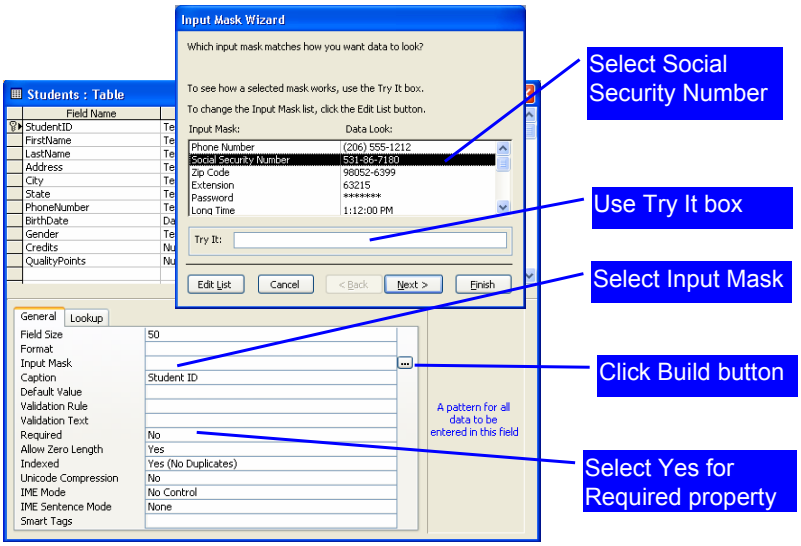


Table Wizard Screen (continued)



Create an Input Mask



Hands-on Exercise 1

- Title of Exercise: Creating a Table
- Objective: to create a new database; use Table Wizard to create a table; to add and delete fields of an existing table
  - Input file: None
  - Output file: My First Database

Hands-on Exercise 2

- Title of Exercise: Creating a Form
- Objective: to use the Form Wizard; to move and size controls; to use the completed form to enter data in the associated table
  - Input file: My First Database (modified after exercise 1)
  - Output file: My First Database (modified)

Hands-on Exercise 1: Step 1 – Creating a Table

1. Click the Start button, click the All Programs button, click Microsoft Office, then click Microsoft Office Access 2003 to start the program
2. Click Create a new file at the bottom of the Getting Started task pane, then click Blank database in the New File task pane. (If the task pane is not open, click the New button on the toolbar)

Hands-on Exercise 1: Step 1 – Creating a Table

3. You should see the File New Database dialog box as shown in Figure
4. Click the drop-down arrow on the Save In list box and select the appropriate drive. Double click the Exploring Access folder.
5. Click the File Name text box and drag to select db1. Type My First Database as the name of the database you will create. Click the Create button

Hands-on Exercise 1: Step 2 – The Table Wizard

1. The Database windows for My First Database should appear on your monitor. The Table button is selected by default
2. Double click the icon to Create table by using wizard to start the Table Wizard as shown in Figure. Click the Business option button.
3. Click the down arrow on the Sample Tables list box to scroll through the available table until you can select button so t (click) the Student table (The student table is found near the bottom of the list)

Hands-on Exercise 1: Step 2 – The Table Wizard

3. The StudentID field is already selected in the Sample Fields list box. Click the > button to enter this field into the list of fields for the new table.
4. Enter the additional fields for the new table by selecting the field and clicking the > button (or double clicking the field). The fields to enter are FirstName, LastName, Address, City and StateOrProvince.
5. Click the Rename Field button after adding the StateOrProvince field to display the Rename Field dialog box. Enter State to shorten the name of this field. Click OK to accept the new name and close the dialog box.

Hands-on Exercise 1: Step 3 – The Table Wizard Continued

1. Add PostalCode and PhoneNumber (you may need to click the down arrow to scroll). Click Next
2. The next screen in the Table Wizard asks you to name the table and determine the primary key.
   - Accept the Wizard's suggestion of Students as the name of the table
   - Make sure that the option button Yes, set a primary key for me is selected as shown in Figure
   - Click Next to accept both of these options

Hands-on Exercise 1: Step 3 – The Table Wizard Continued

3. The Final screen in the Table Wizard asks you what you want to do next.
   - Click the option button to Modify the table design
   - Click the Finish command button
4. The Students table should be appear in Design view. Pull down the File menu and click Save (or click the Save button on the Table Design toolbar) to save the table within database
5. The Table Wizard provided an easy way to create the table initially. You can now modify the table in Design as described in the next several steps.

Hands-on Exercise 1: Step 4 – Add the Additional Fields

1. Click the Maximize button to give yourself more room to work. Click the cell immediately below the last field in the table (PhoneNumber). Type BirthDate as shown in Figure.
2. Press Tab key to move to the Data Type column. Click the down arrow on the drop-down list box. Click Date/Time. (You can also type the first letter of the field type such as D for Date/Time, T for Text, or N for number).

Hands-on Exercise 1: Step 4 – Add the Additional Fields

3. Add the remaining fields to the Student table
   - Add Gender as a Text field
   - Add Credits as a Number field
   - Add QualityPoints as a Number field. (There is no space in the field name)
4. The additional fields are unique to our application and were not available in the wizard
5. Click the Save button to save the table.

Hands-on Exercise 1: Step 5 – Change the Primary Key

1. Point to first field in the table and click the right mouse button to display the shortcut menu in Figure. Click Insert Rows
2. Click the Field Name column in the newly inserted row. Type SSN (for Social Security Number) as the name of the new field. Press Enter. The data type will be set to Text by default
3. Click the Required box in the Properties area. Click the drop-down arrow and click Yes

Hands-on Exercise 1: Step 5 – Change the Primary Key

4. Click in the Field Name column for SSN, then click the Primary Key button on the Table Design toolbar to change the primary key for Social Security Number. The primary key symbol has moved to SSN
5. Point to the StudentID field in the second row. Click the right mouse button to display the shortcut menu. Click Delete Rows to remove this field from the table definition
6. Save the table.

Hands-on Exercise 1: Step 6 – Create an Input Mask

1. Click the field selector column for SSN. Click the Input Mask box in the Properties area. (The box ix currently empty)
2. Click the Build button to display the input Mask Wizard. Click Yes if asked to save the table. Click Social Security Number in the Input Mask Wizard dialog box as shown in Figure.
3. Click the Try It text box and enter a Social Security Number to see how the mask works. If necessary press the left arrow key until you are at the beginning of the text box, then enter a Social Security Number (digits only)

Hands-on Exercise 1: Step 6 – Create an Input Mask

4. Click the Finish command button to accept the input mask. Click in the text box for the Field Size property and change the field size to 9
5. Click the field selector column for BirthDate, then follow the steps detailed above to add an input mask. (Choose the Short Date format). Click Yes if asked whether to save the table
6. Set an appropriate input mask for the telephone number as well. Change the field size to **10**
7. Save the Table

Hands-on Exercise 1: Step 7 – Change the Field Properties

1. Click the field selector column for the FirstName field. Click in the text box for the Field Size Property and change the field size to 15. Change the Required property to Yes.
2. Select the LastName field. Set the Field Size property to 20 and the Required property to Yes.
3. Select the State field. Set the Field Size property to 2 Click the Format box in the Properties Area. Type a > sign to display the data in uppercase as shown in Figure. Click in the InputMask property and type LL to require letters as opposed to digits

Hands-on Exercise 1: Step 7 – Change the Field Properties

4. Select the Credits field. Click the Field Size box in the Properties area, click the down arrow to display the available field sizes, then click Integer. Click in the Default property box, and delete the default value of zero.
5. Set the Field Size and Default properties for the QualityPoints field to match those of the Credit field
6. Save the table.

Hands-on Exercise 1: Step 8 – Add a Validation Rule

1. Data Validation is implemented in several ways. You can set the Required property to Yes to ensure that a value is entered and/or you can create an input mask to accept only certain characters. You can also set the Validation Rule property.
2. Select the Gender field as shown in Figure. Click the Field Size box and change the field size to 1
3. Click the Format box in the Properties area. Type a > sign to display the data in uppercase letters

Hands-on Exercise 1: Step 8 – Add a Validation Rule

4. Click the Validation Rule box. Type =“M” or “F” to accept only these values on data entry. Click the Validation text box, and type. You must specify M or F (This message explains the error to the user)
5. Check that the required property is set to “No” so that gender is not required. If the user enters a value, however, it must be “M” or “F”
6. Click the Save button to save the table.

Hands-on Exercise 1: Step 9 – Print the Student Table

1. Pull down the View menu and click Datasheet View to change to the Datasheet View as shown in Figure. Enter Data for yourself, but use a hypothetical Social Security Number such as 123-45-6789. (Note the input mask that appears)
2. Pull down the File menu and click the Page Setup command to display the Page Setup dialog box. Click the Page tab and change to Landscape printing.
3. Click the Margin tab. Change the left and right margins to .5 inch. Click OK

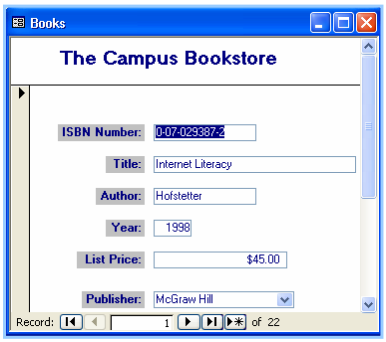
Hands-on Exercise 1: Step 9 – Print the Student Table

4. Click the Print Preview button to review the table to check that it fits on one page. (If not, return to the Datasheet view and reduce the column widths as necessary)
5. Pull down the File menu, click the Print command, and click OK to print the table. Close the Print Preview window. Close the Students table. Click Yes if prompted to save the changes to the table
6. Pull down the File menu, and click the Exit command if you don't want to continue

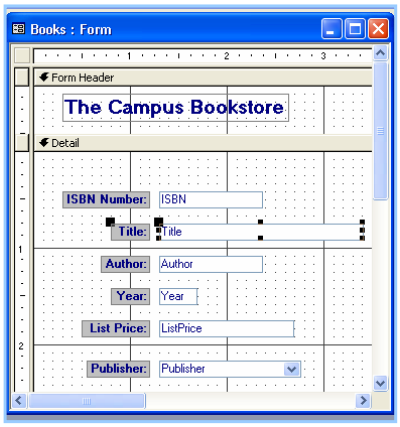
Forms

- Form view
  - Displays completed form
  - Used to enter or modify data in underlying table
- Design view
  - Used to create or modify the form

What They Look Like



Form View



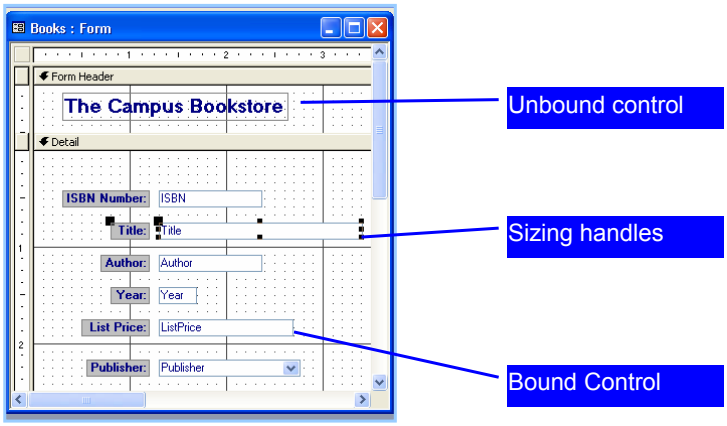
Design View

Creating a Form

Controls

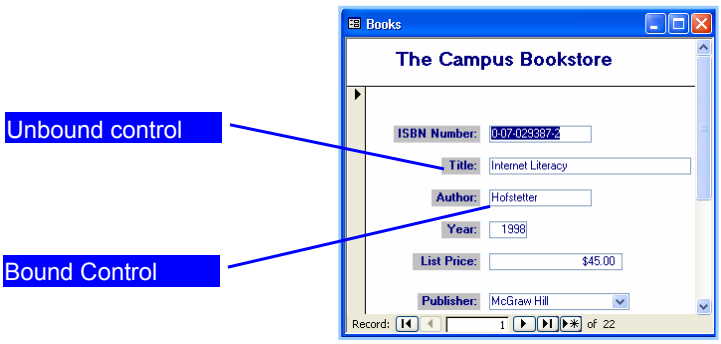
- Bound control — has data source
- Unbound control — no data source
- Calculated control — expression as data source

Form Design View



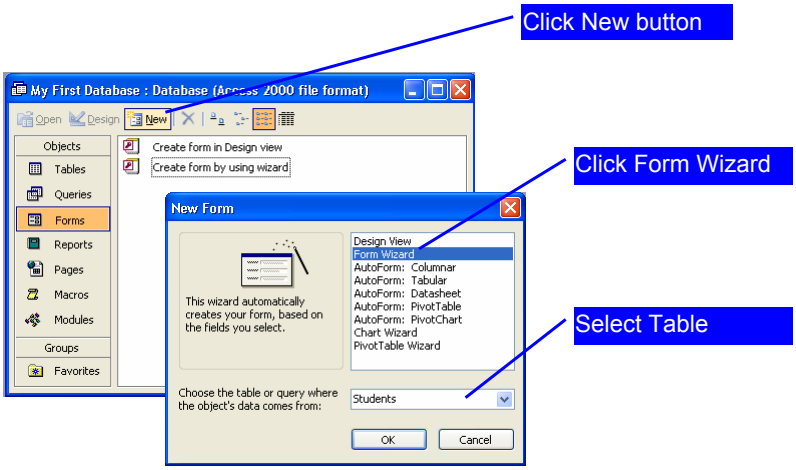
Exploring Access 2003 Revised - Grauer and Barber 105

Form View

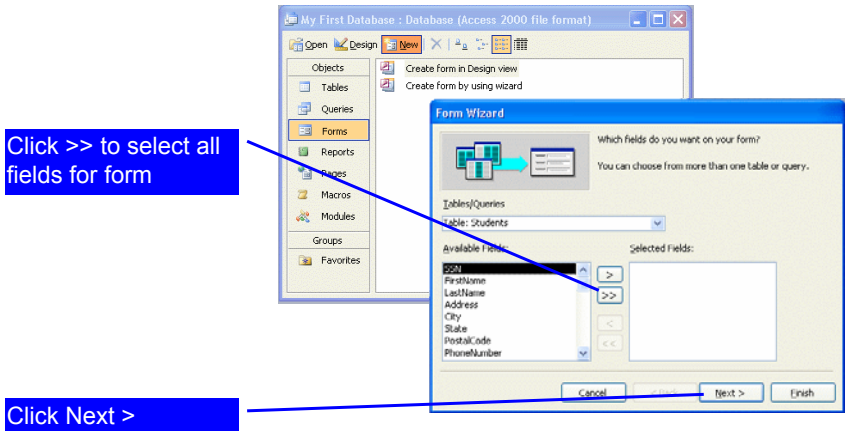


Exploring Access 2003 Revised - Grauer and Barber 106

Form Wizard



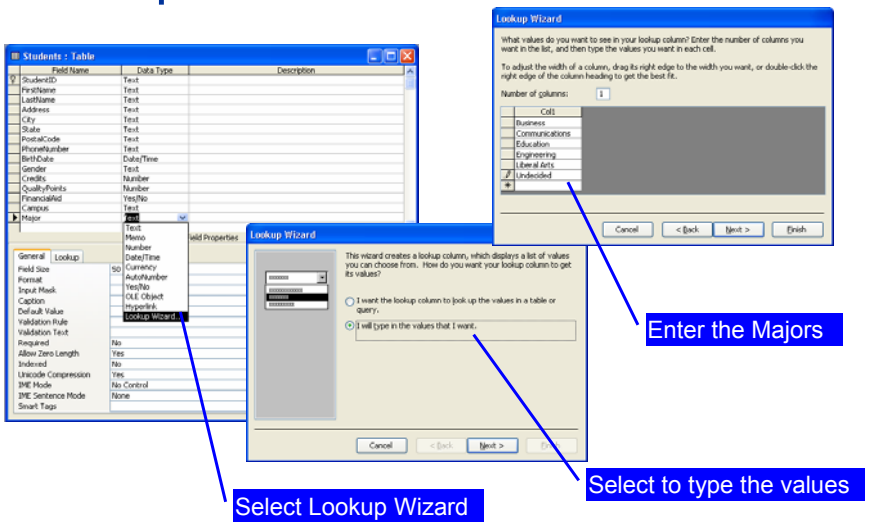
Form Wizard (continued)



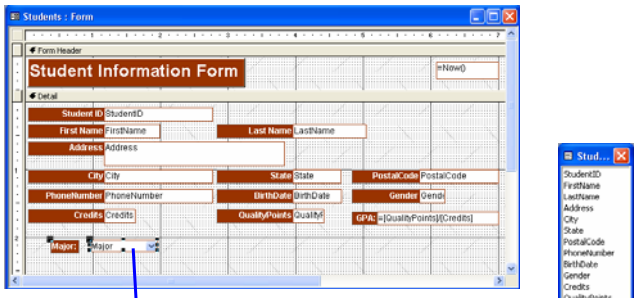
Sophisticated Forms

- Additional controls to use on forms
  - Drop-down list box (using Lookup Wizard)
  - Check box
  - Option group
- Command buttons

Lookup Wizard



Add New Controls

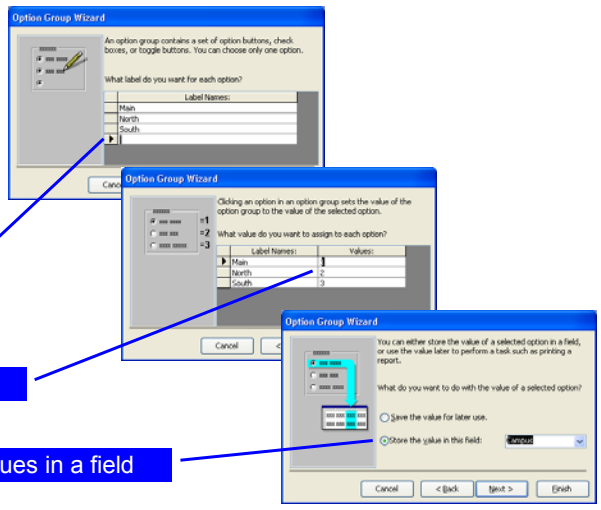


Click and drag field from field list to form design grid

Major is then added as a combo box

Option Group Wizard

Drag the Option Group button onto the form to enable the Option Group Wizard

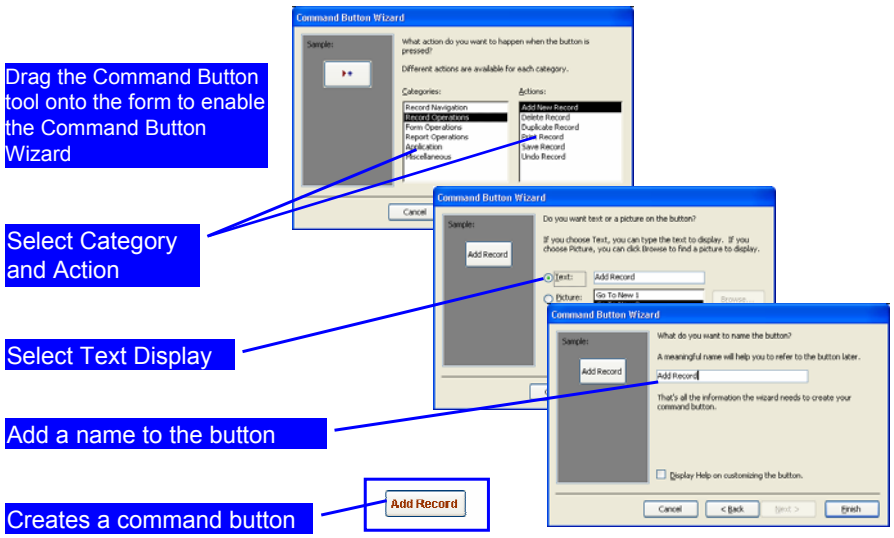


Type the label names

Accept the default values

Store the values in a field

Command Button Wizard



Hands-on Exercise 3

- Title of Exercise: A More Sophisticated Form
- Objective: to use the Form Wizard; to move and size controls; to use the completed form to enter data in the associated table
  - Input file: My First Database (modified after exercise 2)
  - Output file: My First Database (modified)

Chapter 2 Summary

- Information depends on underlying data
- Divide data into smallest units
- Database design is critical
- Table Wizard: creates tables easily

Chapter 2 Summary (continued)

- A form provides easy way to enter and display data
- A form consists of objects called controls
- A property is a characteristic or attribute of an object

End-of-chapter Exercises

- Multiple Choice
- Practice With Access
  - Exercise 1 – A Modified Student Form
  - Exercise 2 – The United States Database
  - Exercise 3 – The Super Bowl
  - Exercise 4 – The Fishing Pole
  - Exercise 5 – A Form for the Fishing Pole
  - Exercise 6 – The Shopping Mall
  - Exercise 7 – A Form for the Shopping Mall

End-of-chapter Exercises (continued)

- Practice With Access (continued)
  - Exercise 8 – Best Realty
  - Exercise 9 – A Form for Best Realty
  - Exercise 10 – Events Extraordinaire
  - Exercise 11 – A Form for Events Extraordinaire (with Tab Controls)
  - Exercise 12 – Paw Prints
  - Exercise 13 – About Our Students

End-of-chapter Exercises (continued)

- Mini Cases
  - Employee Compensation
  - The Stockbroker
  - Chapter Recap – Kahakai Villas

Questions?