



Microsoft Access 97/98 Session 1

document revision date: June 17, 1997



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Introduction

Access Session 1 is a course created for CAL PACT participants to learn more about the features of Access. This document serves as a supplement and future reference to the class. It covers simple introductory material to give you the knowledge to create a database by providing the fundamentals of the application.

Skills needed to take this class

- How to use the mouse
- How to use the Windows computing environment
- Familiarity with other applications in the Microsoft Office Suite

Topics covered in this course

- What is Access
- What is a database
- Creating new databases
- Data entry and manipulation
- Creating Forms
- Locating Records
- Creating Queries
- Using basic calculations in Queries
- Creating Reports

What is a Database?

A database is a collection of information on a particular subject. A Database Management System (DBMS), like Access, provides an easy way to store, retrieve, and organize information. Using Access allows you to store, access, and manipulate information in many different ways.

The foundation of Access is based upon the following categories:

Tables - allows you to store information

Queries - lists which allow you to ask questions about specific information

Forms - allow for individual records of data to be viewed one at time

Reports - give better control of the visual look/setup of information for printing purposes

A database can be created manually or by using the Database Wizard. The Database Wizard provides template databases on common subjects like address books, order form entries, and employee lists.

Creating New Databases

Tables

Tables form the basis from which all information is stored. They contain all the information about the desired topic such as names, addresses, phone numbers, and budgets. Queries, Forms, and Reports refer to these tables allowing the user to manipulate and customize data to fit their desired questions. Access tables use "fields" to store data into different categories.

Tables can be created manually using the Table Wizard or by entering the data into a datasheet. Datasheets allow you to organize information by assigning fields to hold specific types of information. Each column within the datasheet is assigned to contain a specific type of data, assigned by the field. The rows in a datasheet are used, like a listing, to store information on the subjects of your topic.

To create a new table, first make sure the Tables tab is selected. Then click on the New button which will bring up the New Table window. Select either Datasheet View or Table Wizard and select Ok.



Datasheet View

Datasheet View allows the user to manipulate and edit stored data. Field header names and the order in which they appear may also be changed. Likewise, records may also be edited and updated in Datasheet View. The main purpose of this layout is to enter data once field categories have been designated.

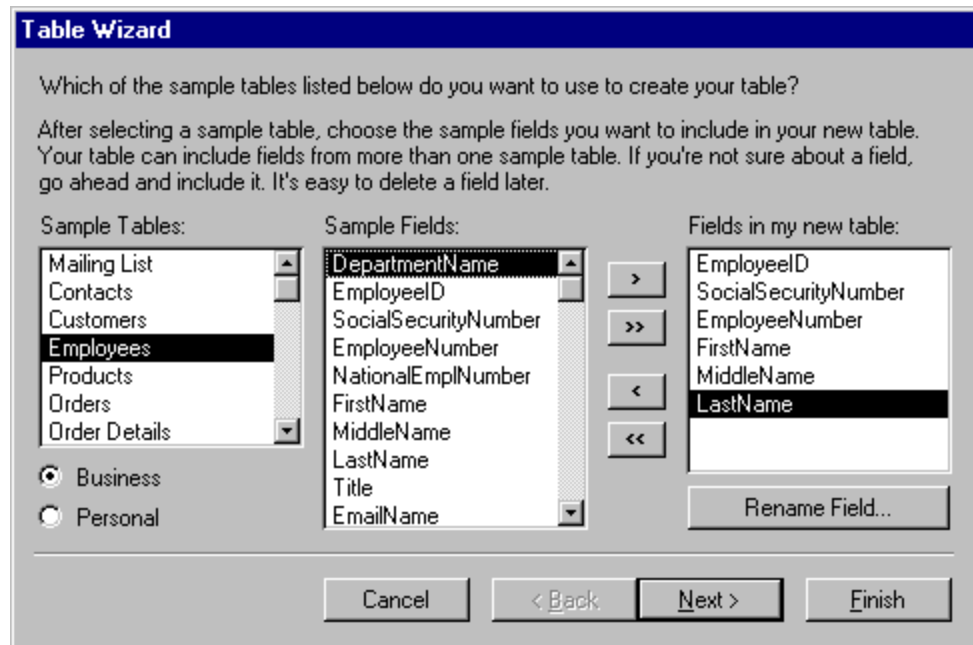
Once you have organized how data will be stored in your database, categories can be assigned to the field headers. Rename field headers by double-clicking on the field header. Once the cursor shows up, field names may be designated any name you like and can include spaces.

Table1 : Table	
Employee ID	Last Name

If you create a new table using Datasheet View, field headers will appear as Field1, Field2, Field3, etc. Only the field headers you modify will be contained in your table once you have finished with your initial setup by saving the table.

Table Wizard

If you use the Table Wizard to create a table, predefined categories become available to include as categories within your table. Sample categories from business and personal table templates can be chosen to be included in your table, though not all categories from each sample template have to be chosen. Access' Table Wizard gives you the flexibility to pick and choose only those categories that apply to your topic.



Modifying a Table's Design

Design View

The other way to view how your categories will appear and the type of information they will be stored is to utilize the table's Design View. Design View can be accessed by clicking on the Design View button, designated by the triangle and pencil, for an open table. To view a table in Design View that has not yet been opened, select the appropriate table within the Table tab and click on the Design button.

Records cannot be entered when in Design View. Instead, this mode allows you to customize the type of data to be stored within your fields. In this mode three columns become available, Field Name, Data Type, and Description.

Field Name

Field names are used to distinguish between the different categories you have chosen to include in your table. It is recommended that you do not include spaces; this is to allow compatibility with other database applications. If you want to change the field name, click within the appropriate cell and edit the name once the cursor bar has appeared. Remember, avoid using spaces for field names - instead you may want to use uppercase letters to separate words. (Ex. Quarterly Financial Reports should be en-

tered as QuarterlyFinancialReports)


Field names will also appear as the field header within the Datasheet View unless otherwise modified. This can be accomplished by entering the field header name under Caption in the General menu located at the bottom of the window. The name entered within the Caption area will now appear as the field header instead of the field name. Note that names entered within the captions field can include spaces.

General	Lookup
Field Size	50
Format	
Input Mask	
Caption	Employee Id
Default Value	
Validation Rule	
Validation Text	
Required	No
Allow Zero Length	No
Indexed	Yes (Duplicates OK)

Data Type

Modifying the Data Type allows the user to define the way records will be displayed within that category. By clicking within the Data Type cell of the appropriate field and then the pull down menu, the way in which data is displayed can be modified. Records can be preset to include useful symbols for structured data entry as well as save time. Examples of Data Types are Auto Numbering, Yes/No check boxes, and adding in " / / " for dates.

Employee Info : Table	
Field Name	Data Type
EmployeeID	Number
LastName	Text
FirstName	Memo
Department	Number
PhoneNumber	Date/Time
DateHired	Currency
SSN	AutoNumber
PrimarySkill	Yes/No
SecondarySkill	OLE Object
	Hyperlink
	Lookup Wizard...

Fields can also be added by using the Build button () located on the menu bar. The Field Builder allows for new field entries using built-in templates based on common topics. Just browse through the sample fields and highlight the one that applies to your topic and click Ok. The field button uses preset input masks to format the entered data. (Ex. Automatically inputting "() - " in a phone number field)

Moving/Deleting Records and Fields

Datasheet View

Field headers can be rearranged by clicking on the appropriate field header, highlighting the entire column. Then click and drag the header over to its new location.

Employee Id	LastName	FirstName
▶	0	

Fields can be removed by clicking within any of the records in the desired field and then choosing **Edit | Delete Column**. Likewise, records can be deleted by clicking any cell inside the record or the gray button in the corresponding row and selecting **Edit | Delete Record**.

Design View

Since Design View only allows you to set up your table, records cannot be deleted. To move fields, click on the gray button to the left of the corresponding Field Name. The entire row should be highlighted and a black arrow will appear. Click and drag the arrow and drop the field to

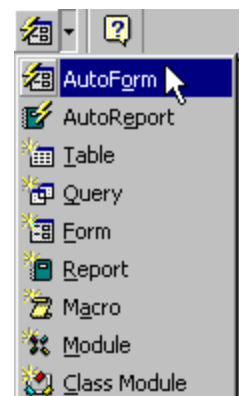
Employee Info : Table	
Field Name	Data Type
▶ EmployeeID	Number
LastName	Text
FirstName	Text
Department	Text
PhoneNumber	Text
DateHired	Text
SSN	Text
PrimarySkill	Text
SecondarySkill	Text

its new location. Fields can be removed by highlighting the entire row or by selecting a cell within the field and selecting **Edit | Delete Row**.

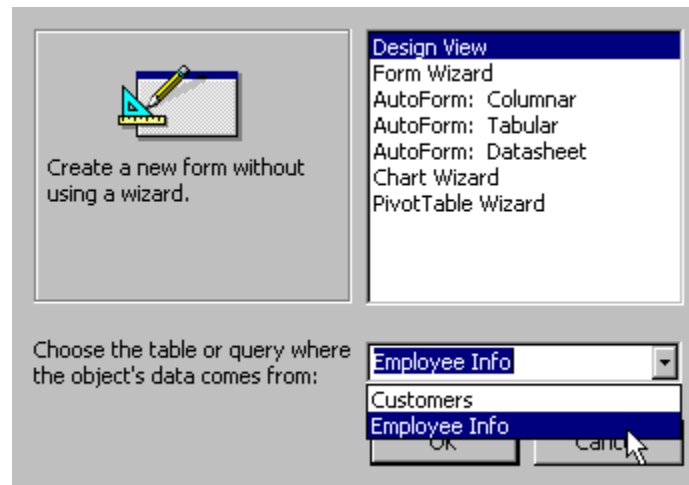
Creating Forms

Forms allow the user to enter and view data for individual records. Forms can be created based on either existing tables or queries. Information entered in forms can be saved for later use. Whatever information is entered will be saved into the table it was created from.

Autoform provides the fastest and easiest way to create a form. This function can be accessed by selecting the desired table from the table menu and selecting the Autoform function from the New Object button pull



down menu. Likewise, you can get the same effect by selecting the Forms tabs and clicking on New. Select AutoForm: Columnar and select the desired table from the pull down menu. Either method tells Access to create a form based upon the field names you designated when creating the table.



Once the form is created, previously entered records can be viewed by clicking on the arrows at the bottom of the form. The arrows by themselves will advance or go back one record, while the arrows with the bar will advance or go back to the last or first record. The arrow with the asterisk will provide you with a blank record for new records. Just as with tables, records can be deleted by having the desired record showing and then selecting **Edit | Delete Record**.

Field Name	Value
LastName	Shioshita
Employee Id	12258382
FirstName	John
Department	CAL PACT
PhoneNumber	510-643-2458
DateHired	4-28-98
SSN	546-87-9548
PrimarySkill	Network Support
SecondarySkill	n/a

Design View



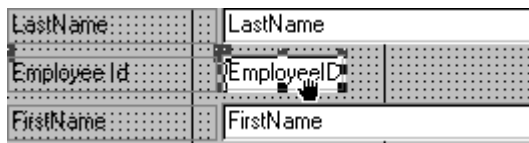
Forms in Design View allow you to manipulate the way a form will appear. Field headers and cells, as well as, text and background colors can be assigned with this option.

Form Layout/Size

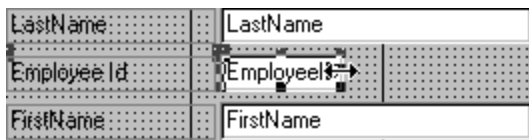
The size and layout of field names and entry blanks can be rearranged to suit your needs. The overall form size can be changed by moving the mouse cursor over the borders of the form until you see a double headed arrow. Then, click on the mouse and drag the form to its new size.



Field names and entry blanks can be moved by clicking on the selected box and then putting the mouse cursor over the border that appears. The mouse cursor will change to a small black hand. Next, click and drag the box to its new location.





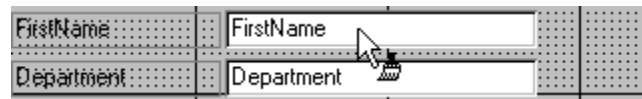
The size of the boxes can also be changed by moving the cursor over the selected box and clicking and dragging the border to its new size, like the form border.



Text/Display Formatting

Field names can be changed by selecting the cell and renaming it once the cursor appears in the field. *Note: You can only change field names (fields in gray). The other input boxes use their designated names to refer to the table from which you made the form. Text and the background of both the

field and input boxes can be changed by using the Background, Fore-ground, and Border buttons on the toolbar. Click on the  desired box and select your color options from the button's pull down menu. If you would like to apply the same color formatting to another box, you can do so using the Format Painter button on the toolbar, designated by the paintbrush. Select the box who's format you wish to copy, then click on the Format Painter button (). A new cursor will appear which looks like a pointer and paintbrush. Next, click on the box to receive the new format.



Locating and Editing Records

Using Spell Check



The Spell Check option can be used on Tables, Queries, Forms, or Reports. This option can be accessed by clicking on the Spell Check button once a file is opened/selected from any of the above categories. Access Spell Check works in the same manner as other applications in the Microsoft Office Suite.

Finding Records

You can search for records by selecting **Edit | Find**. This function will work only if an existing file is currently open. The Find command can be applied to either specific fields or all fields. Field selection can be accomplished by either selecting the field name or any record within that field.

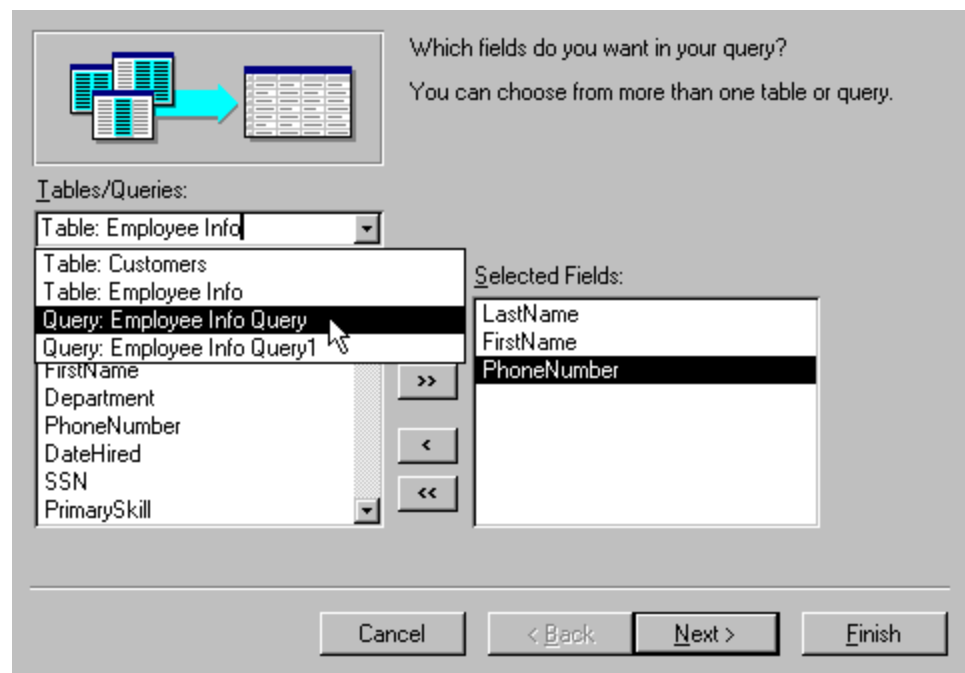
Replacing Records

Replacing records is a useful tool to make uniform changes to multiple records. (Ex. Changing the area code for phone numbers) This option can be accessed by selecting **Edit | Replace**. Similar to finding records, this function will only work if the selected file is currently open. Normally Access will replace entire field data, though the Replace command can be customized to only replace specific instances within records by deselecting the Match Whole Field checkbox. This can be useful in such instances as changing the area code on phone lists.

Creating Queries

Queries allow the user to view specified fields from multiple tables and queries. New queries can contain only the information you would like to use for a specific purpose. (Ex. Using a query to create an employee phone list from an existing table instead of printing out the table, which may contain data than is necessary.)

The easiest way to create a query is to use the Simple Query Wizard by clicking on the New button in the Query window. Select Simple Query Wizard and select the fields you would like to add from the available Tables/Queries. Once the query is created, you may edit, move, and delete records and fields in the same manner as tables.

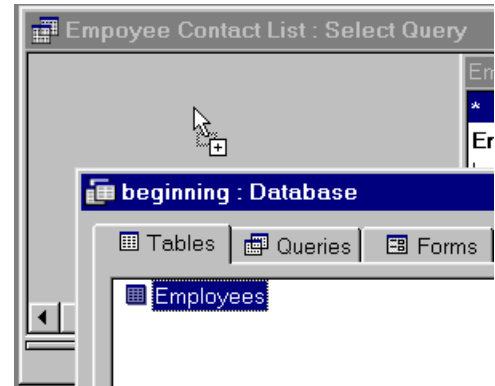


Using Design View With Queries

New Queries

Queries can also be created manually by selecting the Design View option in the New Query window. Once this option has been selected, choose the desired tables and queries you would like to include within the new query and click on the Add button. Once you have selected all the tables/queries to be included, click on the close button to open up the new query in Design View.

Within Design View, field can be added to the query in the following ways: 1) Double-click the field to be added from within the appropriate table/query. 2) Click and drag the desired field into an empty Field cell. 3) Use the drop down menu within the Field cell to select the desired field to be added

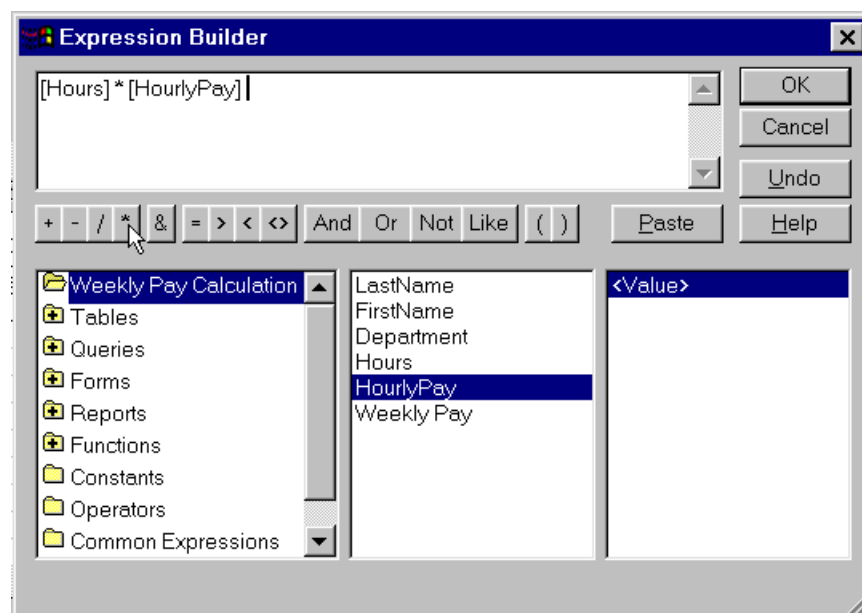


*Note that only the tables/queries you designated for your query will be available to enter into the open query.

To include fields from other queries, click on the Database Window button and drag and drop the table or query to be added into the open query window. Then drag and drop the desired fields from the newly included table or query into a blank field cell.

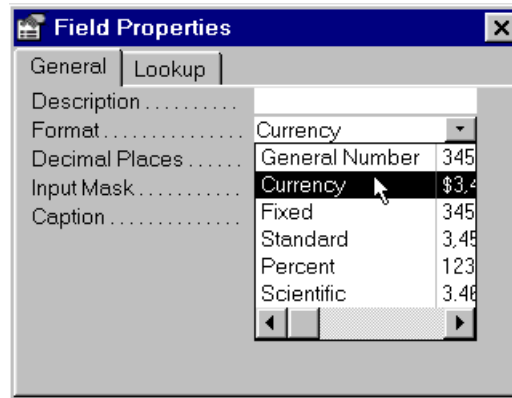
Using Calculations in Queries

Queries can also allow you to make calculations, such as tabulating an employees weekly pay by using the Expression Builder. While in Design View, select the desired field you wish to perform a calculation on and click within the field cell. Then click on the Expression Builder button and select the fields and expressions for the calculation.



Renaming/Modifying Expression Labels

Fields created from calculations can be renamed by editing the text within the field cell, though only the text before the : can be altered without modifying the calculated expression. Field labels can also be change to express your calculations by modifying the displayed data to include various formats, like % or \$. This can be done by clicking within the desired field cell and selecting **View | Properties**. Then select the appropriate option from the Format pull-down menu.



Copying Queries

To save time from making new queries, Access allows queries to be copied and modified to suit new needs without remaking or replacing existing queries. Select the desired query from within the Database window and select **Edit | Copy** and then **Edit | Paste**. The new copy will then need to be named to distinguish it from the original copy.

Sort

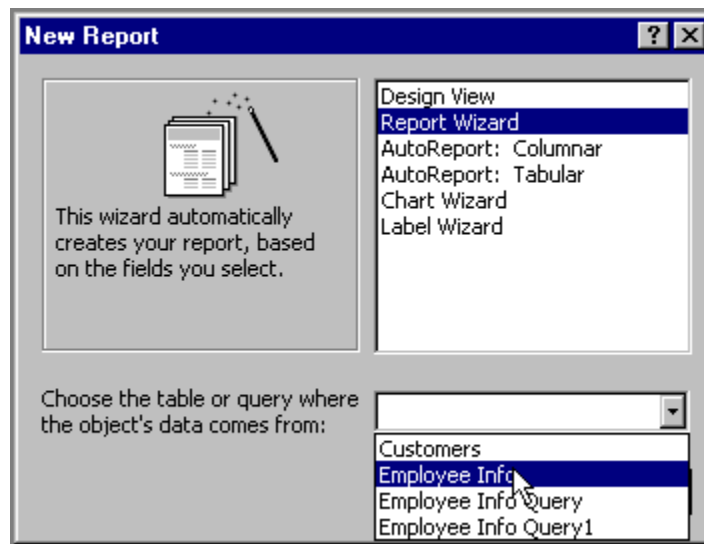
The Sort option allows you to sort your data according to the field(s) you specify, in ascending or descending order. This command is accessed by clicking within the the Sort cell of the desired field and selecting the appropriate sort command from the pull down menu.

Show

The Show check box allows you to include fields within the query, but gives you the option of not viewing the field when in Datasheet View. Each field within the query can be individually chosen to appear or not appear by clicking on the check box for their respective fields.

Creating Reports

Reports are a useful way to present your information when a hardcopy of your data is needed. New reports can be created by selecting the Report option for the New Object pull down button or by selecting New from inside the Reports tab. Then select Report Wizard and the table or query from which the report's data will come from.



Then, choose the desired fields from the available tables/queries to add to your report. Finally, the Report Wizard will take you through various steps on how you would like your report to be displayed including text layouts and formatting designs.