

MS Access Lab 1

Topic: Introductory tour of MS Access

Summary

- What is Microsoft Access?
- Ways to get help
- MS Access: Overview
- Table, Query, Form, Report
- Terminology

1. MS Access

In this lab, we will be implementing the theories on database design that we learned in class with a program called Microsoft Access (MS Access). MS Access is a commercial Relational Database Management System (RDBMS) from Microsoft. It sells for about \$300(stand alone) and is included in MS Office Professional. If you do not have a copy of MS Access on your home PC, you can launch it on any of our lab machines with Start → Programs → Microsoft Access **OR** clicking on the  icon on the office toolbar. To use the lab machines, you will need to have a Windows NT account within the IEOR Department. To obtain more information on how to set up your account, please visit:

<http://www.ieor.berkeley.edu/labs/general.html#accounts>

Most of the information given out in this lab can be accessed in greater detail under Microsoft Access's extensive help files. We will start by giving an introduction to MS Access and then we will be discussing ways to access help files in Microsoft Access.

Database Window

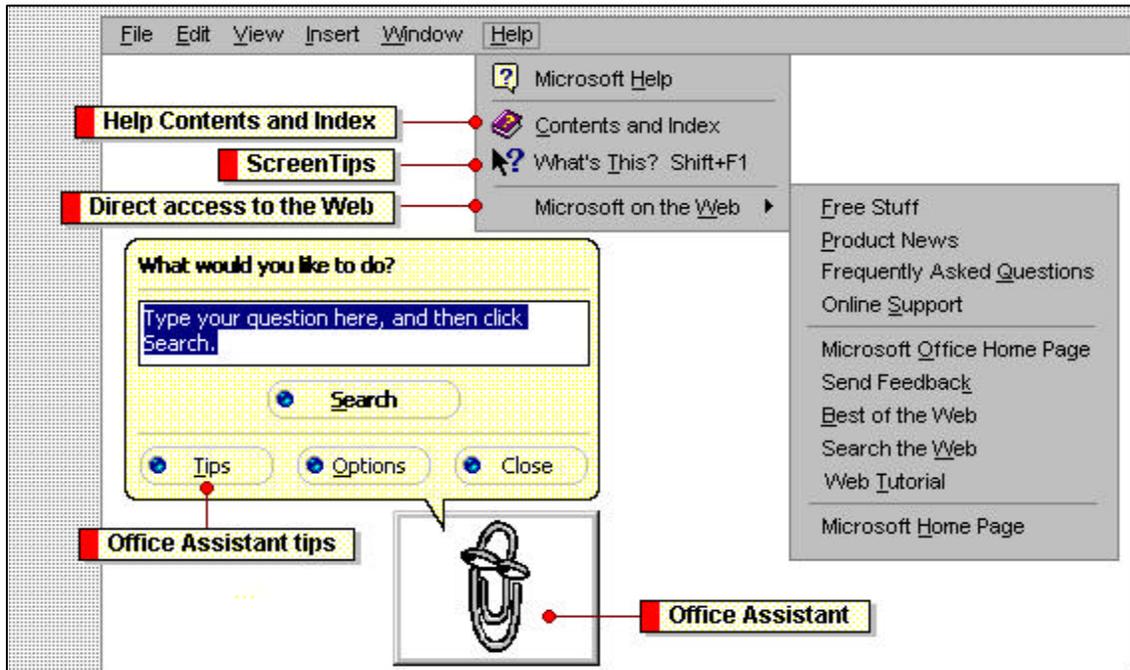
- When you open a new or existing database, you will be greeted by the database window
- Use it to conveniently access all components of MS Access

To work with all the objects in a Microsoft Access database, use the Database window. Click a tab (for example, Tables) to view a list of the available objects of that type. Using the buttons to the right of the list, you can open or modify existing objects and create new ones.

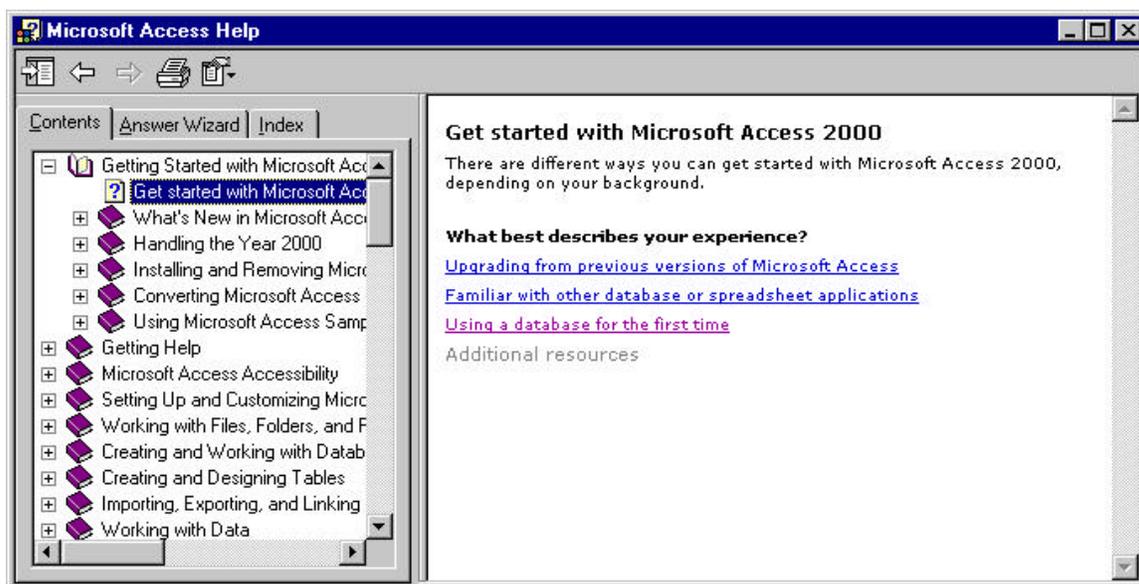


2. Ways to get help

- In MS Office programs, you can get help by pressing F1 key, or
- Click **Microsoft Help** on the **Help** menu (If the Assistant is turned on, it appears. If the Assistant is turned off, the Help window appears)
- To type a question in the Help window, click the **Answer Wizard** tab. To scroll through a table of contents for Help, click the **Contents** tab. When you want to search for specific words or phrases, click the **Index** tab.



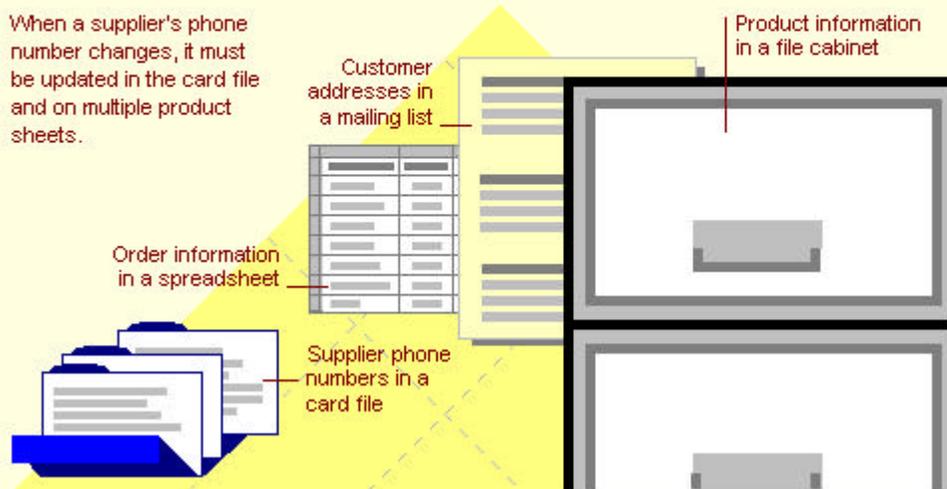
To get help on the topics discussed in this particular lab, we will go to the Help Microsoft Help Help Window Contents Getting Started ... "Using a database for the first time" , as shown:



What is a database?

A database is a collection of information related to a particular subject or purpose, such as tracking customer orders or maintaining a music collection. If your database isn't stored on a computer, or only parts of it are, you may be tracking information from a variety of sources that you're having to coordinate and organize yourself.

When a supplier's phone number changes, it must be updated in the card file and on multiple product sheets.



3. MS Access Overview

- Microsoft Access's Components: Tables, Queries, Forms, Reports
- Each has its own special function to allow the user to manage information

Using Microsoft Access, you can manage all your information from a single database file. Within the file, divide your data into separate storage containers called tables; view, add, and update table data using online forms; find and retrieve just the data you want using queries; and analyze or print data in a specific layout using reports.

Store data once in one table, but view it from multiple locations. When you update the data, it's automatically updated everywhere it appears.

Customers : Table		
Customer ID	Company Name	City
BSBEV	B's Beverages	London
EASTC	Eastern Connection	London

London Orders for April : Select Query		
Company Name	City	Order Date
B's Beverages	London	11-Apr-96
Eastern Connection	London	12-Apr-96

Sales by Customer : Report	
Customer: B's Beverages	
Order ID:	Sale Amount:
10943	\$711.00
10947	\$220.00
11023	\$1500.00
Total:	\$2431.00

Customers : Form

Customers

Customer ID: BSBEV

Contact Name: Victoria Ashworth

Company Name: B's Beverages

Table

- A table allows the user to store a collection of data about a specific topic like Customers or Orders

To store your data, create one table for each type of information you track. To bring the data from multiple tables together in a query, form, or report, you define relationships between the tables.

Customers : Table

Customer ID	Company Name	City
BSBEV	B's Beverages	London
EASTC	Eastern Connection	London
HANAR	Hanari Carnes	Rio de Janeiro

A unique ID distinguishes one record from another. By adding one table's unique ID field to another table and defining a relationship,...

Orders : Table

Order ID	Customer ID	Required Date	Employee
11022	HANAR	09-May-96	Dodsworth, Anne
11023	BSBEV	25-May-96	Davolio, Nancy
11024	EASTC	10-May-96	Peacock, Margare

...Microsoft Access can match related records from both tables so you can bring them together in a form, report, or query (as seen on the next screen).

Query

- A query allows the user to view, change, and analyze data in different ways like combining data from two different tables (Customers and Orders) to create a user's own custom view (London Orders for April)
- Can also be used as the source of records for forms, reports, and data access pages.

To find and retrieve just the data that meets conditions you specify, including data from multiple tables, create a query. A query can also update or delete multiple records at the same time, and perform built-in or custom calculations on your data.

Customers : Table

Customer ID	Company Name	City
BSBEV	B's Beverages	London
EASTC	Eastern Connection	London
HANAR	Hanari Carnes	Rio de Janeiro

Orders : Table

Order ID	Customer ID	Required Date	Employee
10931	HANAR	21-Apr-96	Dodsworth, Anne
10943	BSBEV	05-Apr-96	Davolio, Nancy
10987	EASTC	25-Apr-96	Peacock, Margare

London Orders for April : Select Query

Company Name	City	Order ID	Required Date
B's Beverages	London	10943	05-Apr-96
Eastern Connection	London	10987	25-Apr-96

This query retrieves the company name, city, order ID, and required date information for customers in London whose orders were required in April.

Form

- A form allows a user to enter/change/update data to table(s)

To easily view, enter, and change data directly in a table, create a form. When you open a form, Microsoft Access retrieves the data from one or more tables and displays it on screen using the layout you chose in the Form Wizard or using a layout that you created from scratch.

Order ID	Customer ID	Required Date	Employee
11022	HANAR	09-May-96	Dodsworth, Anne
11023	BSBEV	25-May-96	Davolio, Nancy
11024	EASTC	10-May-96	Peacock, Margaret

Tables display many records at the same time, but you may have to scroll to see a whole record, and you can't update data from more than one table at the same time.

Forms focus on one record at a time, and they can display fields from multiple tables, pictures, and more.

Automate tasks
INVOICE

Bill To: B's Beverages
Fauntleroy Circus
London EC2 5NT
UK

Salesperson: Davolio, Nancy

Order ID: 11023 **Required Date:** 25-May-96

Product	Unit Price	Quantity	Extended Price
Ipoh Coffee	\$46.00	30	\$1380.00
Uncle Bob's Dried Pears	\$30.00	4	\$120.00

Print Invoice

Report

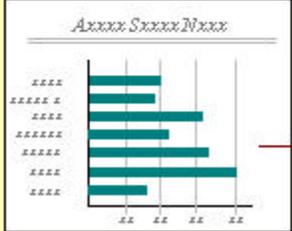
- A report is an effective way to output your data in a printed format in the way you want it

To analyze your data or present it a certain way in print, create a report. For example, you might print one report that groups data and calculates totals, and another report with different data formatted for printing mailing labels.

Customer: B's Beverages

Order ID:	Sale Amount:
10943	\$711.00
10947	\$220.00
11023	\$1500.00
Total:	\$2431.00

Sales by Category
31-May-96



Create mailing labels. ———

Calculate totals. ———

Show totals in a chart. ———

4. Terminology

Note that MS Access sometimes uses terms that differ from those used in class and the textbook.

MS Access	Lecture/Text
Table (Lab 2)	Relation (Ch. 7)
Column/Field (Lab 2)	Attribute (Ch. 3)
Row/Record (Lab 2)	Tuple (Ch. 7)
Relationship View* (Lab 3)	Lines indicate foreign keys (Ch. 8)

* Note that the Relationship View in MS Access looks similar but is different from ER Diagram.