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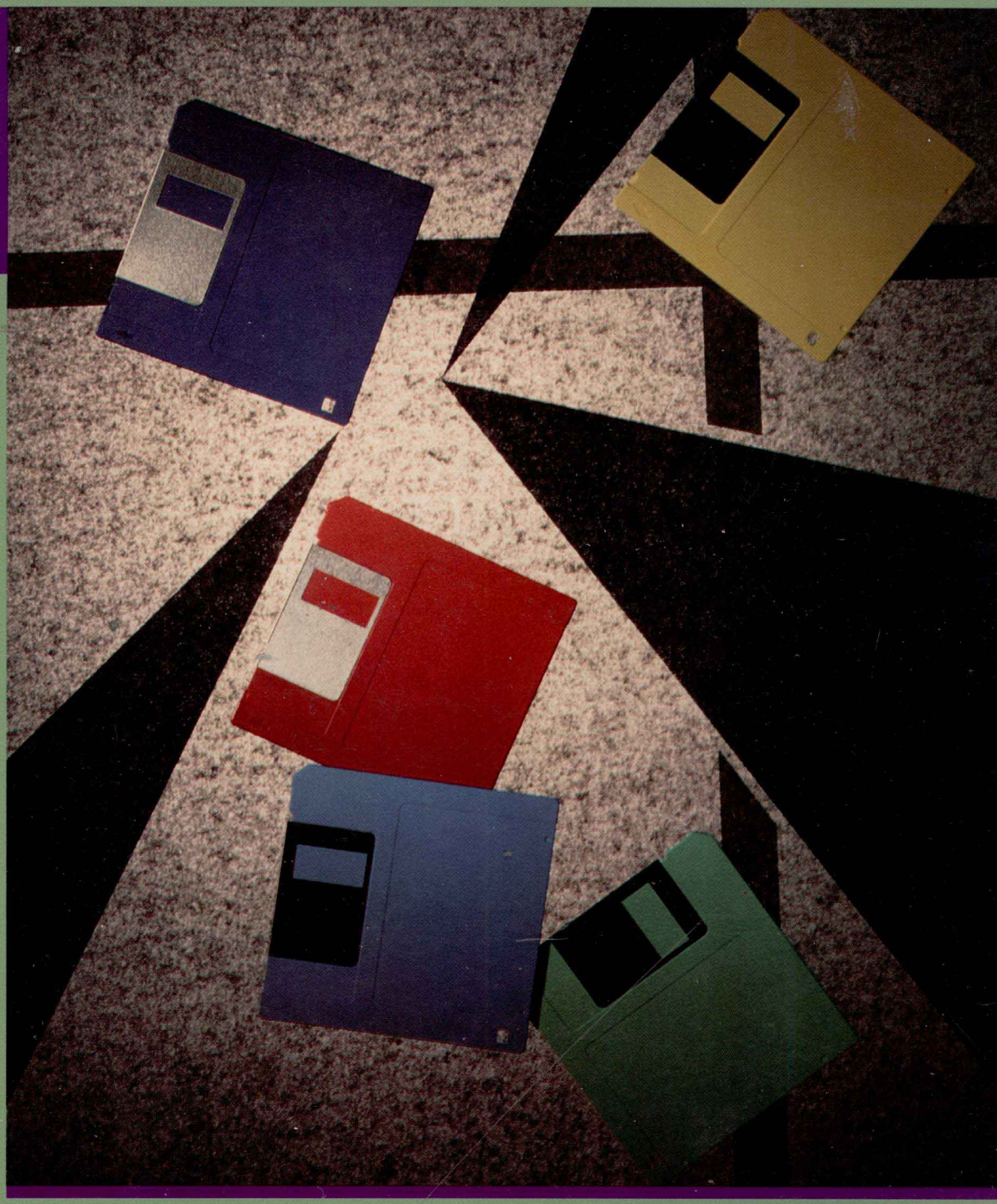

ACCESS 2.0®
for Windows™

ACCESS 2.0®
FOR WINDOWS™

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THE ADVANTAGE SERIES
FOR COMPUTER EDUCATION

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USING THIS GUIDE

This tutorial is one in a series of learning guides that lead you through the most popular microcomputer software programs available. Concepts, skills, and procedures are grouped into session topics and are presented in a logical and structured manner. Commands and procedures are introduced using hands-on examples, and you are encouraged to perform the steps along with the guide. Although you may turn directly to a later session, be aware that some sessions require, or at least assume, that you have completed the previous sessions. For maximum benefit, you should work through the short-answer and hands-on exercises appearing at the end of each session.

The exercises and examples in this guide use several standard conventions to indicate menu instructions, keystroke combinations, and command instructions.

MENU INSTRUCTIONS

When you need to execute a command from a menu, the tutorial's instruction line uses a comma to separate menu options. For example, the command for saving a file is shown as:

CHOOSE: File, Save

This instruction tells you to press the F key to choose the File option and then the S key to choose the Save option. Keys separated by commas are not pressed at the same time.

KEYSTROKES AND KEYSTROKE COMBINATIONS

When you must press two keys together, the tutorial's instruction line shows the keys joined with a plus sign (+). For example, to move the cursor a screen to the right, hold down Shift and then press Tab. The instruction for using this command is shown as:

PRESS: Shift+Tab

COMMAND INSTRUCTIONS

This guide indicates with a special typeface data that you are required to type in yourself. For example:

TYPE: `George Washington`

When you are required to enter unique information, such as the current date or your name, the instructions appear in italics. The following instruction directs you to type your name in place of the actual words: "your name."

TYPE: *`your name`*

Instructions that use general directions rather than a specific option or command name appear italicized in the regular typeface.

PRESS: *the cursor-movement keys to highlight the print block*

Contents

SESSION 1
ACCESS 2.0 FOR WINDOWS: FUNDAMENTALS 1

SESSION 2

ACCESS 2.0 FOR WINDOWS: WORKING WITH TABLES 41

SESSION 3

ACCESS 2.0 FOR WINDOWS: RETRIEVING INFORMATION 87

SESSION 4

ACCESS 2.0 FOR WINDOWS: PRESENTING YOUR DATA 123

SESSION 5

ACCESS 2.0 FOR WINDOWS: ADVANCED TOPICS 155

SESSION 1

MICROSOFT ACCESS 2.0 FOR WINDOWS: FUNDAMENTALS

Modern database management systems for microcomputers enable you to store and manage large amounts of data. Whether your computer is used to track inventory products, issue invoices, manage personnel records, or store phone numbers, you will find a computerized database management system a welcome addition to your software library. This session introduces you to the fundamentals of working with Microsoft Access for Windows, a powerful database management application.

PREVIEW

When you have completed this session, you will be able to:

Describe the features of a database management system.

•

Load Windows and start Access for Windows.

•

Open a database and edit a table.

•

Use the UNDO command to reverse editing mistakes.

•

Use the Microsoft Access Help facility.

•

Copy, rename, and delete database objects.

•

Exit Access and Windows.

SESSION OUTLINE

WHY IS THIS SESSION IMPORTANT?

This guide leads you step-by-step through using Microsoft Access for Windows, a very powerful relational database management package. Aside from using Access to store and manage large amounts of information, you can query the database for specific information, and create custom forms, labels, reports, and independent applications. By the completion of this guide, you will have the fundamental skills for working with Access.

In Session 1, you learn how to load Microsoft Access, navigate around the database window, view and edit a database, and access the Help facility. After creating a database in Session 2, you add records to a table, view the table, and then modify the table structure. Session 3 introduces querying the database for specific data and linking databases. Session 4 provides lessons for presenting information using custom reports and mailing labels. Session 5 discusses some advanced topics including graphics, file management, and programming.

In order to run Microsoft Access for Windows, your computer system must have the following:

- 80386 (or higher) microprocessor (a minimum speed of 20 megahertz is recommended)
- 19 megabytes free on the hard disk for a typical installation
- At least 6 megabytes of random access memory (RAM); 8 megabytes is recommended
- EGA or VGA display (VGA or higher is recommended)
- A mouse

In the next few sections, before loading Access, we will familiarize you with fundamental database concepts and terminology.

Before proceeding, make sure the following are true:

1. You have access to Microsoft Access 2.0 for Windows.
2. Your Advantage Diskette is inserted into either drive A: or drive B:. You will save your work onto the diskette and open files that have been created for you. (*Note*: The Advantage Diskette can be duplicated by copying all the files from your instructor's Master Advantage Diskette.)

WHAT IS A MICROSOFT ACCESS DATABASE?

Picture an office with a row of file cabinets that extends as far as you can see—and you're responsible for them! Each filing cabinet has multiple folders containing customer-related information, organized in alphabetical order by surname. Everything is perfectly organized and you know exactly where to look to find information on each customer. Great. But what if you need to pull out all folders that contain information on customers who live in Boston? Or produce a list of all customers who haven't purchased anything in the past six months? Your alphabetical organization scheme is no longer useful. Your manual filing system has many limitations of which you are becoming quite aware. You need a microcomputer database management system! A **database management system (DBMS)** is a software tool that facilitates creating and maintaining an information database and producing reports from it. The term **database** describes a collection of data stored for a variety of business purposes.

As with any software package, you must be familiar with the concepts and features of a DBMS before you can use it productively. In defining these concepts, we will use the analogy of a phone book. Make sure that you are comfortable with the following terms:

- ***Database***: A collection of related information. For example, a phone book is a database of names, addresses, and phone numbers. Although the term database is often used to refer to a data file, in Microsoft Access a database includes a collection of *objects*—data tables (described shortly), queries, reports, forms, and other objects. In Access, an **object** is something that you can select and manipulate as a unit.

  In Access, all the tables in a database, as well as its associated objects, are stored in a single file that has the extension of MDB. When you open a Microsoft Access database, you're not only opening the data table, you're also making available all the tools (objects) that will help you to use the information stored in the data table. We describe Access objects in more detail shortly. (*Note*: When you create a database, Access also creates an LDB file with the same filename; in multiuse environments, this file contains locking information. You don't need to worry about backing this file up when you copy the database.)

- ***Table***: A Microsoft Access object that is used to collect data relating to a particular subject. In Access, tables are organized into

columns and rows. A table is analogous to a data file. For example, phone book data would be stored in a table. We describe tables in more detail shortly.

- ***Record***: An individual entry in a table. For example, each person's name, address, and phone number are a single record in a phone book. A record of data represents a row in a table.

- ***Field***: A piece of information in a record. For example, you can divide a person's record in the phone book into fields for last name, first name, address, city, and phone number. A record is composed of fields. A field is a column in a table.

A database application is any task that would be handled manually using a filing cabinet. A computerized DBMS is preferable to a manual filing system when there are many records to store, update, or summarize, and there are many details or fields for each record. The primary purpose of a DBMS is to translate large amounts of raw data into accurate, relevant, and well-organized information.

There are two distinct types of DBMS software available: relational and flat-file. A **relational database program** allows you to work with several database files at the same time and share information. To implement an accounting database system, for example, you require relational capabilities to link together information in the various ledger files. A **flat-file database program**, on the other hand, allows you to create many databases but only work with one file at a time. Using a flat-file database program, you can create simple applications such as a mailing list database or a personnel file. Microsoft Access is a relational database package.

WORKING WITH MICROSOFT ACCESS

A Microsoft Access database employs tables as the primary element for storing and manipulating information. Each table has an associated family of objects, including queries, forms, reports, macros, and modules. Each of these objects, including tables, is described in more detail below. An Access database can be up to 1 gigabyte (billion bytes) in size.

TABLES

A table is used to collect data on a particular subject. You can use many tables in a database, each used to store data on a different subject. If you create a database that contains many tables, you should plan the database design carefully. We discuss database design considerations in Session 2.

As we described earlier, a table is organized into rows and columns, similarly to a spreadsheet. Each row in a table represents an individual record, while each column represents a field or category of information. The following is an example of a very small table that stores phone information:

	Firstname	Middle Initial	Lastname	Address	Phone
	Rod	J.	Bannister	7279 Ridge Drive	221-2441
	Evelyn	P.	Chabot	2613 Henderson Hiway	221-5000
▶	Michael	W.	Antonucci	4901 101st Place SW	222-1000
	Karen		Shepherd	3107 Peachtree Drive	205-2111
	Arthur	K.	Sotak	1217 Carlisle Road	221-8888
*					

In Session 2 you learn how to create the structure for a table and add data to it.

QUERIES

A **query** is a question you ask of your database and the result of a query is a **dynaset**. For example, when using a database that stores customer data, you might query the database for a list of those individuals who live in Chicago. The resulting list of records (representing those individuals who live in Chicago) is the dynaset. The data that answers the query, or question, can be from more than one table.

The main difference between a table and a query or dynaset is that data is actually stored (on a disk) in tables, but isn't in queries or dynasets. You learn how to create queries in Session 3.

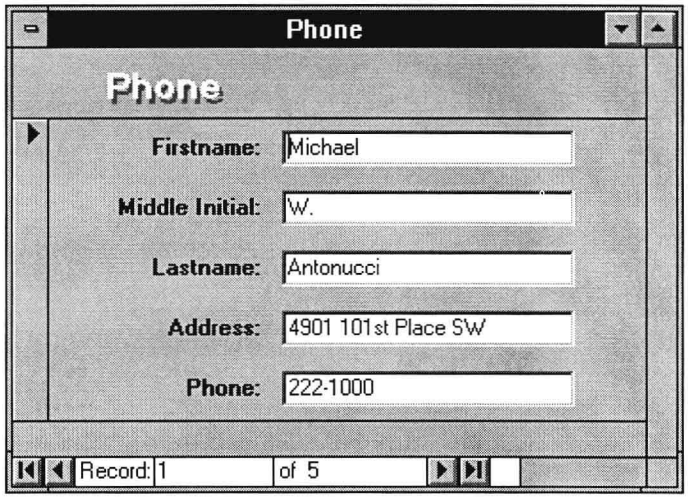
FORMS

When you view the records in a database, Access displays many records on the screen at once in a table layout. This mode is fine if you want to view many records at once. Forms and reports enable you to customize the way the data stored in tables is displayed. (*Note*: Reports are described in the next section.)

A **form** enables you to view one record on the screen at once and to customize the display of that record. For example, you can include a list of values to choose from, use colors to emphasize important data, and display error messages when incorrect data is entered. Figure 1.1 provides an example of a form that you might use with a phone database.

Figure 1.1

A sample form



The different elements on a form are called **controls**. Using a control you can display data from a field, the result of a calculation, text for a title or message, a graph, or other object. Controls are also used in reports. You learn how to create forms in Session 2.

REPORTS

Reports are used to present table data in a polished format on the printed page. With a report you can include totals, subtotals, and grand totals across a set of records and tables. Like forms, controls are used to represent the different elements in a report. Figure 1.2 shows a report that is sorted into order by the Lastname field and excludes the Middle Initial and Address fields.

Figure 1.2

A sample report

Phone Numbers

24-May-94

Firstname	Lastname	Phone
Michael	Antonucci	222-1000
Rod	Bannister	221-2441
Evelyn	Chabot	221-5000
Karen	Shepherd	205-2111
Arthur	Sotak	221-8888

You learn how to create reports in Session 4.

MACROS

Using a **macro**, you can automate frequently-performed procedures. For example, when you open a database, you might also want Access to open a form. Or you may want to include a command button on a form that performs a particular function, such as printing a dynaset. We lead you through creating command buttons in Session 5.

MODULES

Macros and other objects provide you with a lot of control over your interaction with a database. For even more control, use **Access Basic**, the programming tool that is included in the Access package. A **module** is an object that contains Access Basic programming instructions, or procedures. You can create a module that will, for example, print a dynaset over and over until a condition you set is true. In this learning guide, we don't lead you through creating modules, but it is important that you know this powerful capability exists.