

# Getting acquainted with Access

## Topic objectives

This topic will show you how to:

- understand the definition and use of databases
- understand the Access window and the database window
- use help and the Office Assistant
- be aware of the components of an Access database application.

## What is a database?

A database is a structured collection of related data. While not all databases are in electronic form, today most are and so it is electronic databases that are the theme of this book. All organisations collect data, and use this to keep records of the transactions they perform with suppliers and customers. Large database applications have been common in industry for many years. Databases of parts are important in production and maintenance applications in the engineering industry. Service-based industries, such as the health service or the banking industry, are particularly interested in databases of customers or clients. Each department or function within a business maintains a database that supports its specific activities. Thus finance departments have large databases that allow them to record the financial transactions that have been undertaken in the business, ranging from payment of salaries to sales and purchases. Marketing departments will maintain databases that show sales orders placed, the performance of specific sales staff and customer profiles. Earlier databases tended, largely, to be text and number based but now images, pictures, video clips and sound may be embedded in multimedia database applications.

Typically, a database holds data in the form of records. Each record relates to one transaction (e.g. a sales order) or one item or individual (e.g. a patient). Any specific database has a standard record format, and the same details are stored in each record. So, for example, if the database stores the name, address, age and sex of one customer, it will generally store the same data for each other customer whose details have been entered on the database. You may find it useful to look at the data in the Appendix as an example of the type of data that can be stored in a database.

The Appendix shows several sets of data. Most database applications involve a number of linked tables. Accordingly, as we develop the application in this book (a database for Total Health and Fitness), you will need to create a number of tables. We discuss the approaches to linking tables together more fully in Topic 22. Linking tables means data can be drawn from more than one table to support the creation of a subset of all the data held in the database.

When data is stored in a computer, software is needed to present that data to us – as users – in a form we can work with. If we want to add to, edit or retrieve the data

then the software must be able to translate our commands into a form the computer can use. This kind of software is known as a database management system (DBMS) and Access is one of the most powerful industry-standard DBMSs that runs on a personal computer.

## The Access window

When you first start Access, by double-clicking on its icon and choosing **START USING ACCESS**, the Access window shown in Figure 1.1 is displayed. Here you may choose whether to create a new database or open an existing one. The background window is inactive but notice it has the following components:

- **TITLE BAR** – shows you are in Microsoft Access.
- **ACCESS CONTROL MENU** – in the very top left-hand corner.
- **ACCESS MAIN MENU** – showing the menus.
- **TOOLBAR** – most icons are not available as the **MICROSOFT ACCESS** dialog box is active.
- **STATUS BAR** – at the bottom of the screen. Indicates status, e.g. 'Ready'.

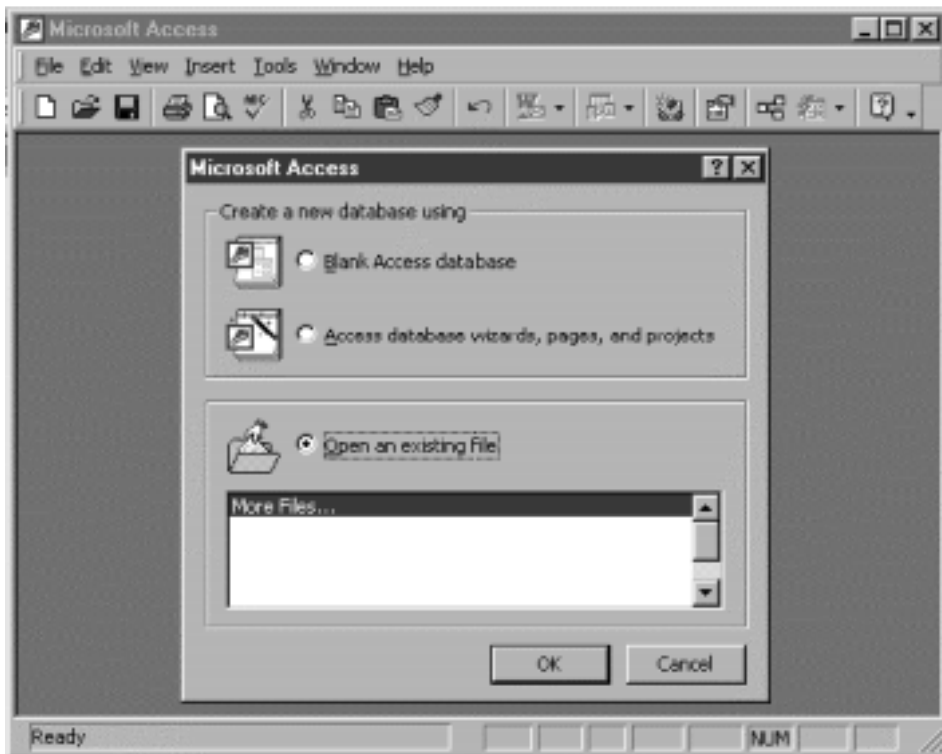


FIGURE 1.1

## The database window

Once you have created (you will see how to do this in Topic 3) or opened a database, a window like the one in Figure 1.2 is displayed. This window allows you to create or access any object (table, query, form, report, etc.) in the database by clicking on one

of the objects in the **OBJECT** list on the left side of the window. Initially, the **TABLES** object is selected and a window displays all tables in the database. If the window contains 'Create table' options only, as illustrated, then no tables have been created.

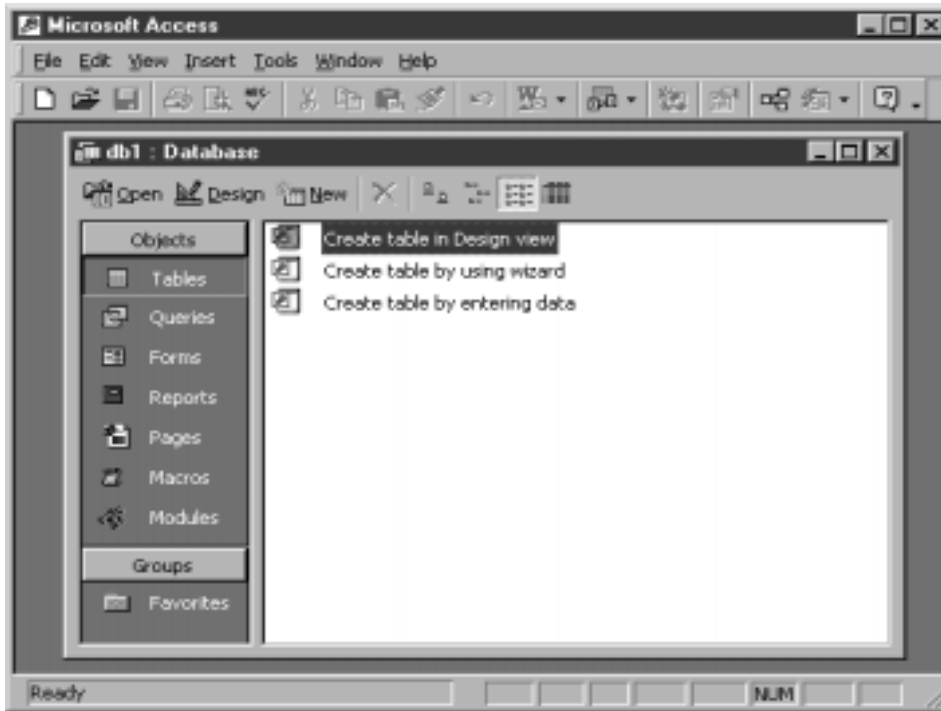


FIGURE 1.2

When the Database window is open, the Access window has the following components:

- **TITLE BAR**, which shows the Control menu icon (the key), the name of the application, and the window-sizing buttons.
- **DATABASE WINDOW MAIN MENU** showing the **FILE**, **EDIT**, **VIEW**, **INSERT**, **TOOLS**, **WINDOW** and **HELP** pull-down menus.
- **TOOLBAR** with only two active buttons, for either starting another new database or for opening an existing one. Note that all toolbar options have equivalent menu selections.

The Database window has the following components:

- **TITLE BAR**, which shows the Control menu icon (three documents), the name of the database and the window-sizing buttons. Note that if you do not specify a name for your database then Access will give it the name **db1**.
- **TOOLBAR** which allows you to create a new object, open an existing object or open an existing object in Design view.
- **OBJECT LIST**, which allows you to choose which type of object you want to work with.
- **MAIN WINDOW AREA**. This lists all the objects of the type selected in the Object list. When you create tables, queries, forms and reports you will give them names to identify them and these will be listed here.

- **STATUS BAR.** Messages are displayed on the left of the status bar, for example, **Ready**. Modes are displayed on the right. For example, **NUM** indicates the number section of the keyboard is in number rather than cursor control mode.

## What is an Access database?

Access is a database management system and it provides a means of storing and managing data or information. Microsoft refers to Access as a 'relational database product' since it allows you to relate data from several different sets or tables. This concept will be considered in Topic 22.

There are four main components of (or *objects* in) an Access database. These are:

- tables
- queries
- reports
- screen forms.

### Tables

Access stores data in tables that are organised by rows and columns. The basic requirement of having a database is that you have at least one table. The columns in the table represent specific details (for example, the selling price of a property). The rows contain the collection of specific details and are known as records. Records are discussed in more detail in Topic 2.

4

### Queries

A query is a question. There isn't a lot of point in storing data if you can't ask questions of it. For example: what is Dave Green's telephone number? How many sales were made in the south-east region during the last quarter? How many houses in a particular district are for sale? Queries are used to select records from a database to answer such questions. This type of query is known as a *select* query and, although Access provides other types of query, it is the one most commonly used.

### Reports

Reports are used to print information. This may be based on all the data, in which case the report takes its input from a table, or it may be based on a selection of data, in which case the report takes its input from a query. Reports, therefore, can show the data from either a table or a query. In addition to data from records, they may show summary information relating to the data in the records displayed.

### Screen forms

Screen forms are used to customise the way in which the data from records in tables or queries is displayed on screen. Their main purpose is to provide a user-friendly interface for the entry of new records or for the editing existing records.

Text can be added to a form to act as labels and instructions to the person entering the data. The appearance of text on a form can be changed by changing the font or by adding bold or italic emphasis. Text can also be shown as raised or sunken or

displayed in a specific colour, and lines and rectangles can be added to give the form a pleasing appearance.

To emphasise the distinction between reports and forms: reports are intended to be printed; screen forms are normally displayed on screen, although facilities often exist for printing them.

Most applications will have a few screen forms for data entry and a larger number of standard reports. These reports can be created by using and arranging subsets of the same information. For example, a mailing list of clients may simply show customer name and address, but a list showing outstanding orders to a specific client will also show details of the items customers have ordered, their value and other associated information.


## Components of databases

Answer the following questions:

- 1 What components of a database can a report be based upon?
- 2 What is a 'select' query?
- 3 What is a table? Why is it the most important component of a database?
- 4 What is a screen form?

## Help and the Office Assistant

There are several main methods of getting into the help system. You only need to use one of these:

- Pull down the **HELP** menu and select **MICROSOFT ACCESS HELP**.
- Press the function key **F1**.
- Click on the **OFFICE ASSISTANT**  button on the toolbar. The Office Assistant dialog box will pop up with a choice of topics related to what you are currently doing as well a request box into which you can type a question.
- Pull down the **HELP** menu and select **WHAT'S THIS** or press **SHIFT + F1**. The pointer changes, with a question mark after it, and it can be used to point to anything. Clicking on that object will then bring up help. For instance, in this way you may get help on the meaning of all the items in the status bar. To remove the question mark, press **ESC**.
- In most dialog boxes there is a help button. This has a ? (question mark) on it, on the title bar. Click on this and then click on the part of the dialog box you want more information about.

## Working with toolbars, menu bars and shortcut menus

If you are new to Office 2000 you may be unfamiliar with the approach Microsoft has adopted for toolbars, menu bars and shortcut menus. To find out more about these click on the Office Assistant and key in the question **working with menus**. Click on **SEARCH** and then select **WORK WITH TOOLBARS** and then start by choosing **READ ABOUT TOOLBARS, MENU BARS AND SHORTCUT MENUS**.