

Easy Way



Teach yourself...

Microsoft Access 2010

(Level 1)

- ☒ Easy to follow
- ☒ Step-by-step instructions
- ☒ Written in plain English

A Cheryl Price Publication

Easy Way - Microsoft Access 2010 (Level 1)

This book is designed to teach beginner topics for learning Microsoft Access 2010. It contains simple step-by-step exercises to guide you through the learning process.

There are dozens of exercises including consolidation exercises, both theory and practical at the end of each section.

The process of consolidation and accumulation of learning is unique to the Cheryl Price books.

Retrievable exercise files are used with this book. These are available for free download from our web site at www.cherylprice.co.nz. Instructions for downloading are included on the next page.

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Downloading Exercise Files

Exercise files can be downloaded from the Cheryl Price web site as follows:


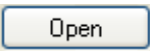




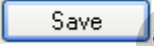
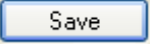
1	In your web browser, type: www.cherylprice.co.nz
2	Press Enter on the keyboard to display the Cheryl Price website.
3	Click on the Resources tab as shown at the right. 
4	Click on <u>Easy Way – Microsoft Access 2010</u>
5	Click on the <u>Free download</u> hyperlink, ie Access 2010, Level 1 <u>Free Download</u> The File Download dialog box will display.
6	If you have Winzip use the following instructions otherwise move to step 7.
	a Click on  .
	b Click on the  of the  button.
	c If My Documents folder is not displayed click on Set default unzip folder at the bottom of the list. Ensure My Documents is selected then click on Select Folder .
	d Click on the  of the  button and click on the My Documents folder. The files will be unzipped.
7	Click on  and ensure My Documents folder is displayed. Click on 
8	Click on Open Folder which will display My Documents folder. Right click on the zipped exercise file and select Extract All. Click on Extract. A folder will be created containing the exercise files. You will need to double click on this folder to use the exercise files in this book.

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Exercise Files used in this book

(Instructions are at the front of this book for downloading retrievable files from our web site.)

Names of files
Database Plan
Friends Database
MovieMaker Database
Student Database
Wedding Database

Learning Outcomes

At the end of this section you should be able to -

- ☐ Understand database concepts and the uses of databases
- ☐ Understand the different types of databases
- ☐ Start Access 2010
- ☐ Open an existing database
- ☐ Understand the database window and database objects
- ☐ Open a database table
- ☐ Identify parts of a table
- ☐ Navigate through records in a table
- ☐ Manipulate data in a table by filtering and sorting records
- ☐ Add a new record to a table
- ☐ Delete a record from a table
- ☐ Close a database table
- ☐ Close a database
- ☐ Exit Access 2010

What is a Database?

A database is an organised collection of information on a specific subject. We use databases all the time in everyday life – the telephone directory, for example, is a database.

Other examples of databases are:

- Recipe book
- List of employee details (start date, name, address, date of birth, salary)
- List of CD collection (name of CD, date of release, artist/band)
- Stock listing (product name, number of stock, supplier, type of product)
- Library (where all the books are categorised and then stored alphabetically within the category making them easy to find)

The data in an Access 2010 database is stored in one or more tables. A table is made up of records, and records are made up of fields. In a **Customers** table, a record could be:

Smith Jane 319 Alfred St East Sydney NSW 2010 (02) 9955 2523

The fields could be called:

Surname FirstName Street Suburb State PostCode PhoneNumber

Uses of Databases

Databases hold information. This information can be searched and selected.

For example:

- A telephone directory is used to search for the telephone number of a person whose name is known to you. You already know the contents of the Surname field, and usually the FirstName field – these are your *search criteria*.
- The *search criteria* are then used to look up the additional information about the person – ie to find the particular record and therefore the address and telephone number of the person.
- If you only know one criterion value (eg the Surname), you will find many more matching records than if you know more criteria (eg the Surname, FirstName and StreetAddress).

Advantages of Databases

Databases are designed to store large amounts of data. They allow you to control the way the data is organised and displayed.

Once the required information has been stored in a database, it can be used in many ways. For example, you can format and print it as a report. Charts can also be created using information in the database.

Other examples of database programs are Lotus Approach, DataEase, and Dbase IV.

Different Types of Databases Models

There are several different types of Database Models: Flat File, Relational, Hierarchical, and Network models. Each is briefly described here.

Flat File Data Model (Single Table)

This data model stores data in a single table in rows and columns. There are no links to any other sources of data. Data stored in a single Excel spreadsheet is an example of a flat file database.

If only one table is used for a database all data will be stored in and accessed from that table. This is an example of a Flat File Database.

Clients' Pet Visits

ClientID	Title	FirstName	LastName	Address	PetName	PetType	VisitDate	Reason
Andrw1	Mrs	Judy	Andrews	2 Ocean View Rd	Lassie	dog	30/11/2005	Injury
Evans1	Mr	Bill	Evans	34 Hopetown Rd	Matthew	cat	22/11/2005	Illness
Robbn1	Dr	Jonathan	Robbins	122 Crowley Court	Tippy	bird	19/11/2005	Illness
Evans1	Mr	Bill	Evans	34 Hopetown Rd	Jennifer	bird	18/11/2005	Injury
Evans1	Mr	Bill	Evans	34 Hopetown Rd	Matthew	cat	11/11/2005	Routine
Evans1	Mr	Bill	Evans	34 Hopetown Rd	Matthew	cat	03/11/2005	Illness
Andrw1	Mrs	Judy	Andrews	2 Ocean View Rd	Zachary	dog	02/11/2005	Illness

You will notice that data duplication occurs in this Flat File Data Model. For example:

- Mr Bill Evans's name and address appears in each of his records.
- He has two pets, a cat and a bird and has visited the Vet several times with these pets. Their names and types are also duplicated.

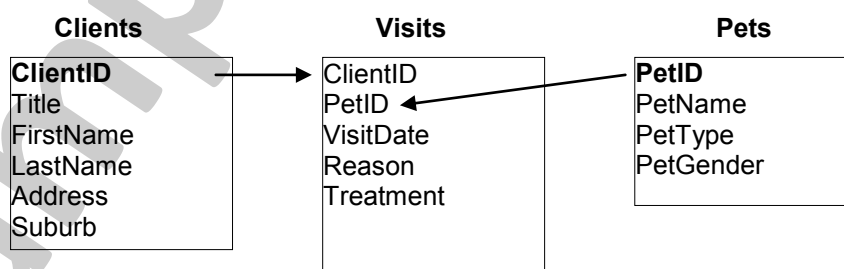
Data duplication is a problem with the Flat File Data Model, and when the same data is entered repeatedly the chances of it being entered incorrectly increases.

Relational Data Model (Multiple Tables)

Data in this model is stored in multiple tables, each on a specific subject. Sometimes you will want to combine data from two or more tables, and this requires that Relationships are created between them.

If we took the single table example above and converted it into a relational database, we would split the data into three separate tables. This would remove the problem of duplication of data.

The diagram below shows an example of relationships between tables.



The tables would appear as shown on the following page. Each table is storing data on a specific topic. The tables are related by a common field: **Clients** and **Visits** by ClientID, and **Pets** and **Visits** by PetID.

Clients Table

ClientID	Title	FirstName	LastName	Address	Suburb
Evans1	Mr	Bill	Evans	34 Hopetown Rd	Takapuna
Andrw1	Mrs	Judy	Andrews	2 Ocean View Rd	Torbay
Robbn1	Dr	Jonathan	Robbins	122 Crowley Court	Epsom

Pets Table

PetID	PetName	PetType	PetGender
1	Jennifer	bird	F
2	Matthew	cat	M
3	Lassie	dog	F
4	Zachary	dog	M
5	Tippy	bird	F

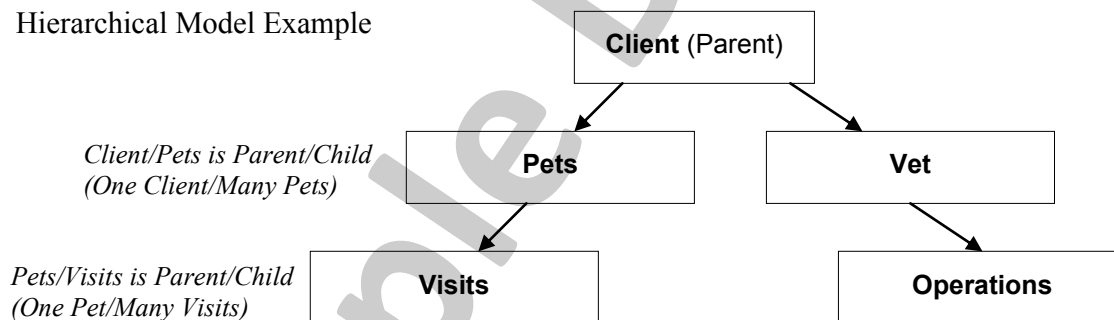
Visits Table

ClientID	PetID	VisitDate	Reason	Treatment
Evans1	1	18/11/2005	Injury	Bandage leg
Evans1	2	03/11/2005	Illness	Medication for cat fever
Evans1	2	11/11/2005	Routine	Full examination, no problems
Evans1	2	22/11/2005	Illness	Under observation
Andrw1	3	30/11/2005	Injury	Operation
Andrw1	4	02/11/2005	Illness	Injection for diarrhoea
Robbn1	5	19/11/2005	Illness	Ointment

Hierarchical Data Model (Tree-like Structure)

The Hierarchical model is organised in a tree-like structure. This means it allows repeating information in the data that uses parent/child relationships. A parent/child relationship means that each parent may have many children but each child will only have one parent.

Hierarchical Model Example



If we were to use this on the Client and Pets example the Client is the Parent and the Pet is the Child. Under a Hierarchical structure One Client may have many Pets, but each Pet may only have One Client (Owner).

Network Data Model (Tree-like Structure)

The Network Model uses objects and their relationships in a more flexible way. The important thing about a Network Model is it is viewed as a graph using object types which are referred to as nodes, and relationship types which are referred to as arcs.

When you compare the hierarchical model with the tree structure (which has one parent and many children records) this model gives the flexibility of having multiple parent and child records which make up a graph type of structure.

This model was used widely in the early years of computing. However, as computer processing became faster, people began using the Relational Model in preference to the Network Data models.

Explanation of a Relational Database

In business and personal life, you keep track of information from a variety of sources, each related to a particular topic or purpose. Your knowledge and organizational skills are required to coordinate information from all these sources.

Customer addresses in a mailing list

Product information in a file cabinet

Invoices in a spreadsheet

Supplier phone numbers in a card file

Once you've added data to your database, you'll want to analyze the data in different ways. You can use a query to perform calculations and totals, or to select only certain kinds of data. For example, you can define a query to show all customers who have placed orders of \$5000.00 or more within the last year.

Customers
Company Name
Contact Name

Orders
OrderDate

Order Details
UnitPrice
Quantity

Field	CompanyName	ContactName	OrderAmount: Sum([UnitPrice]*[Quantity])	OrderDate
Table: Customers	Customers	Customers	Orders	Where
Total: Group By			Expression	
Sort: Ascending				
Show				
Criteria			>5000	Between Date() And Date()-365

Ernst Handel
Folies gourmandes
Roland Mendel
Marine Rance

It's usually easiest to add data to a database by using a form. In Microsoft Access, you can use a form to add, view, and edit your data one or more records at a time. You can also work with data from several tables at once with forms, and automate tasks by including macros or Visual Basic in your forms.

You can create a form that looks just like a printed paper form with instructions on how to fill it out.

Automate tasks

Orders

Bill To: Franchi S.p.A.
Via Monte Bianco 34
Torino 10100 Italy

Salesperson: Suyama, Michael

Order ID: 10000 Order Date: 12-Jun-95

Print Invoice

Product	Unit Price	Quantity	Extended Price
Alice Mutton	\$27.00	4	\$108.00

Using reports, you can print your data in a broad variety of layouts and type styles. Reports can print data from fields; text you define; totals and the results of calculations; or charts, pictures, or other objects — even another report. You can also use reports to print mailing labels.

Use a report to print mailing labels to send a discount offer to your best customers.

Antonio Moreno Taqueria
Mataderos 2312
Mexico D.F. 05023
Mexico

Around the Horn
120 Hanover Sq.
London QA1 1DP
UK

Berglunds snabbköp
Berguvsvägen 8
Luleå S-958 22
Sweden


Blondel père et fils
24, place Kléber
Strasbourg 67000
France

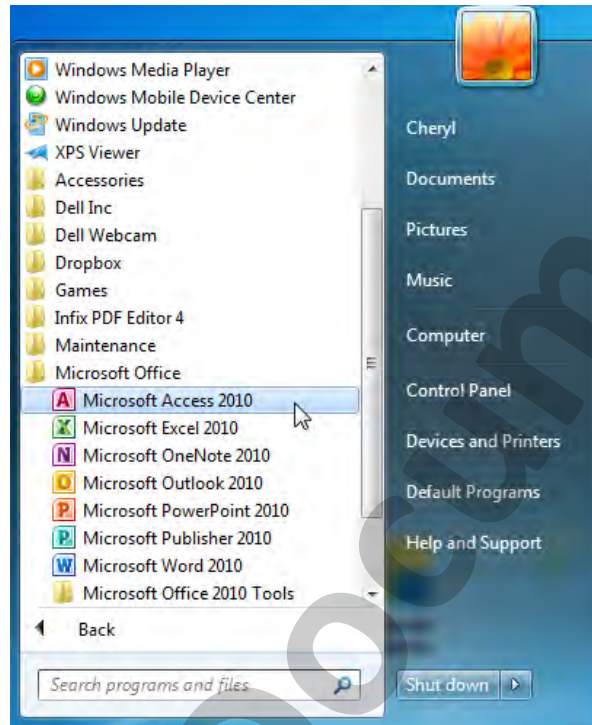
Bon app'
12, rue des Bouchers
Marseille 13008
France

Bottom-Dollar Markets
23 Tsawassen Blvd
Tsawassen BC T2F 8M4
Canada

Starting Access 2010

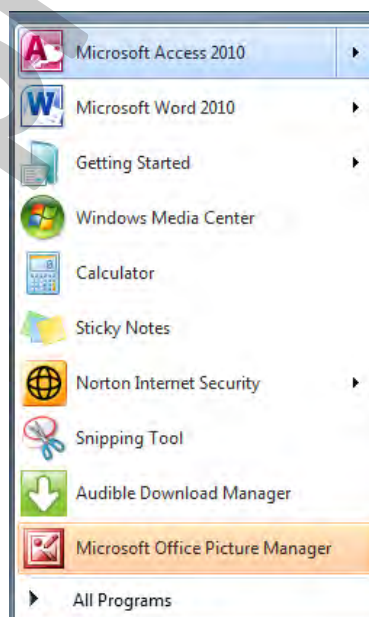
Exercise 1

- Click on the Start button , and click on All Programs. Click on Microsoft Office and then on Microsoft Access 2010.

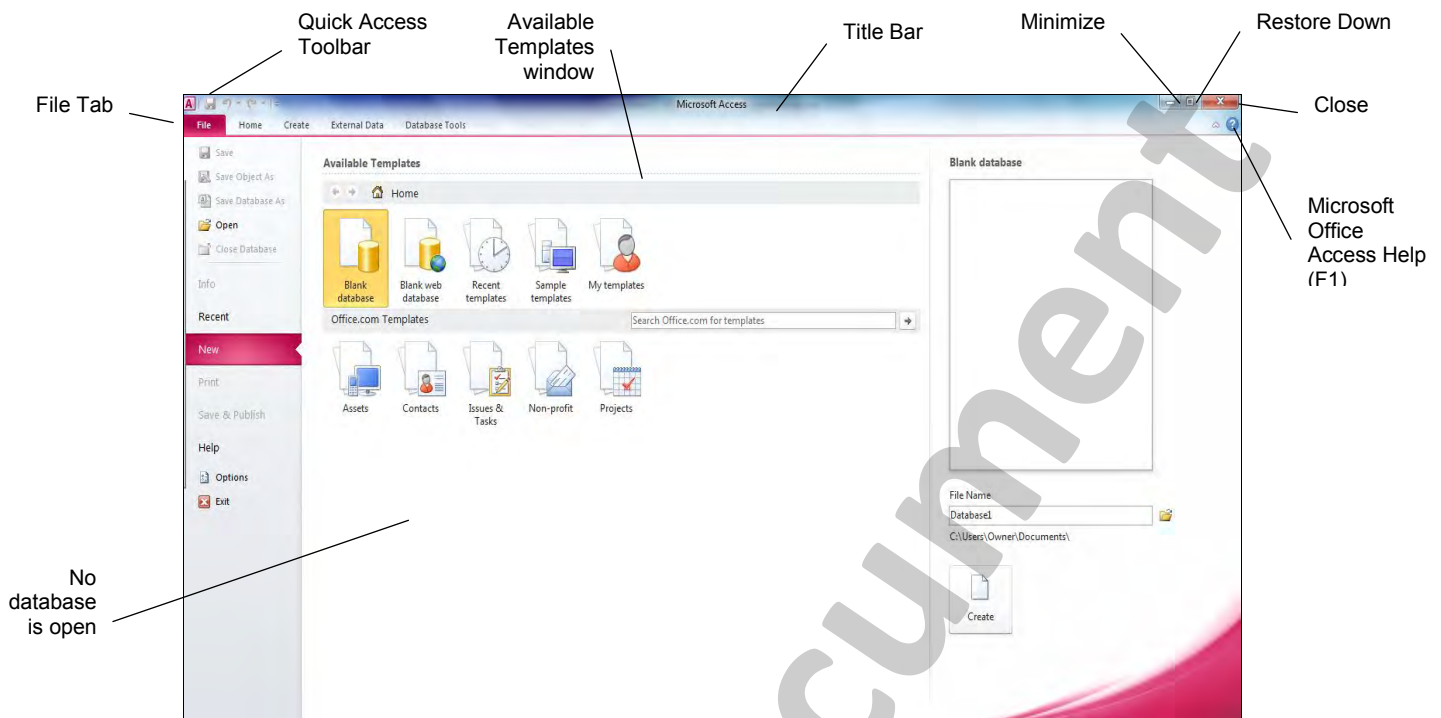


The full name of the application is Microsoft Office Access 2010 but for the rest of this book it will be referred to as Access 2010.

Note When you have used Access 2010 a few times it will appear on your Start menu as shown below. You can just click on it to start Access. Click on the arrow to the right of it to see a list of recently used Access databases.



The Microsoft Access Backstage View



File Tab

The File Tab displays a drop-down menu which gives easy access to Access 2010 commands, ie New, Open, Save, Save As, Print.

Quick Access Toolbar

The Quick Access Toolbar is a useful feature for keeping all of your most frequently used commands in easy reach.

Available Templates Window

The Available Templates window is displayed when Access 2010 is first opened. It displays a list of templates available to use when creating a new database. These will already have all the fields set up in the tables so that it is easy to add data to your new database. Some templates are loaded in Access 2010, and others can be downloaded from Microsoft's web site.

Title Bar

When a database is open its name appears on the window title bar. (Because a database is not open in the above illustration there is no file name showing.)

Minimize, Maximize and Restore Down



These two buttons are used to increase (maximise) the size of the main window (Access 2010) and reduce the main window to a button (minimise) on the Taskbar. When the window is maximised, the Maximize button will display as the Restore Down button.

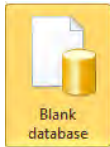
Close 

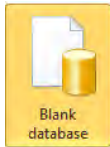

This is used to close Access 2010.

Microsoft Office Access Help (F1)

This displays a list of Help topics in the „Microsoft Office Access Help (F1)“ window. You can also type a question into the „Type words to search for“ box and search for a help topic. When Enter is pressed a list of help topics relating to the question will appear.

Exercise 2



- With  selected in the Available Templates section click on  at the bottom right of the window.



Using the Quick Access Toolbar

The Quick Access Toolbar is a useful feature for keeping all of your most frequently used commands in easy reach. Commands can be added or removed and the toolbar itself can be positioned either above or below the Ribbon.

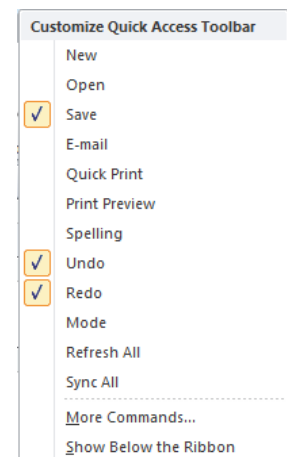


Quick Access Toolbar List

Exercise 3

- 1 Click on the Customize Quick Access Toolbar button  to the right of the Quick Access Toolbar. A menu of commands will display. A tick is shown to the left of every command that is currently on the Quick Access Toolbar.
- 2 Click on the **New** command to add it to the Quick Access Toolbar.
- 3 Click on the  again and click on the **Open** command.
- 4 Add the following commands to the Quick Access Toolbar using the same steps.

Quick Print, Print Preview, Spelling



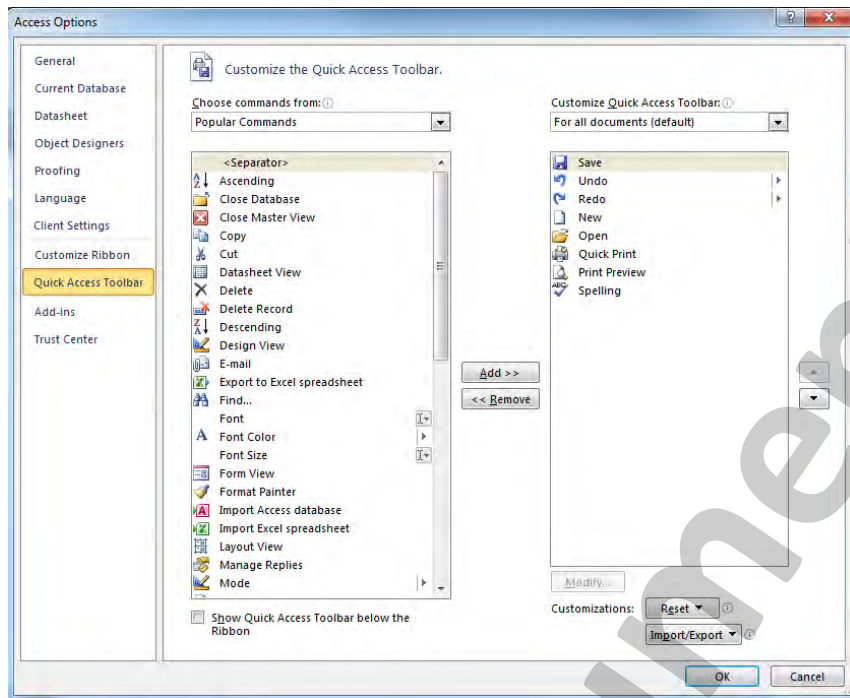
Customise Quick Access Toolbar


Some other useful commands are not on the Quick Access Toolbar list, but these can be added using the following steps.






Exercise 4

- 1 Click on the  to the right of the Quick Access Toolbar and select *More Commands...*

The Access Options dialog box will display, with the Quick Access Toolbar option selected as shown on the next page.

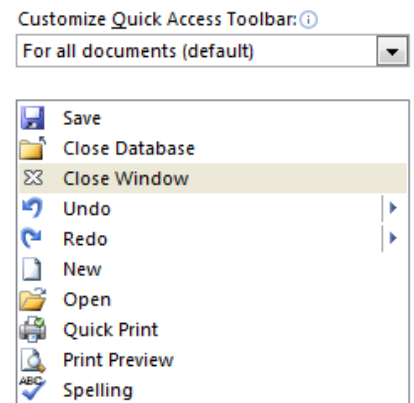



Note You could also click on the File Tab, click on , then select **Customize**.

- 2 Click on the **Choose Commands from:**  and select **All Commands**. The commands are listed in alphabetical order.
- 3 Scroll down the list until the **Close** commands are displayed.
- 4 Click on  **Close Database** then click on .
- 5 Click on  **Close Window** then click on .

The two commands will be added to the Quick Access Toolbar list as shown on the right.

- 6 Click in the following option to display the Quick Access Toolbar below the Ribbon ☒ **Show Quick Access Toolbar below the Ribbon**
- 7 Click on OK to close the Access Options dialog box.



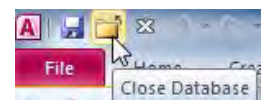
Note You can click on the  of the Quick Access Toolbar and select Show Above the Ribbon or Show Below the Ribbon at any time.

- 8 Ensure the Quick Access Toolbar is displayed above the Ribbon.



The commands that you have just added in the two previous exercises will be used throughout this book.

- 9 Click on the Close Database button on the Quick Access Toolbar as shown at the right.

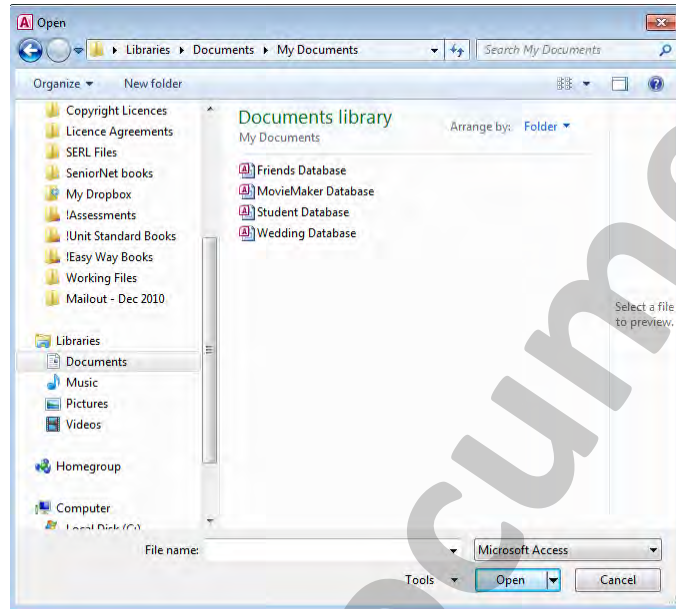


Opening a Database

Exercise 5

- 1 From the File Tab menu click on  **Open** to open an existing database.

The Open dialog box will display existing database files (they may be in another folder).



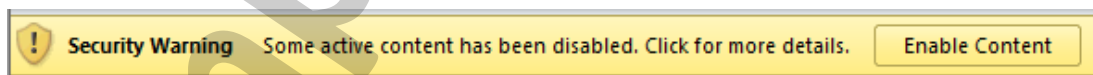
Open Dialog Box

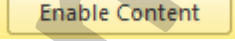
- 2 Click on the **MovieMaker Database**.

- 3 Click on .

Access 2010 has improved security measures to protect your PC from viruses. Many database files contain shortcut programs called *macros* that are designed to help the user work more efficiently. A macro could also be a virus however, and Access 2010 may try to warn you about this.

Unless your security settings are already set to the lowest level, Access 2010 may display the following security warning when you click on Open.



- 4 Click on . The Moviemaker Database is clear of viruses. The database is now enabled so it can be accessed.

Security Settings

Security settings can be changed from High to Medium or Low but we recommend that you continue enabling content when you open a database instead of changing the security as this could be hazardous to your computer.

It is your responsibility to look after the security of your computer by using and maintaining up to date anti-virus software.

MovieMaker Database

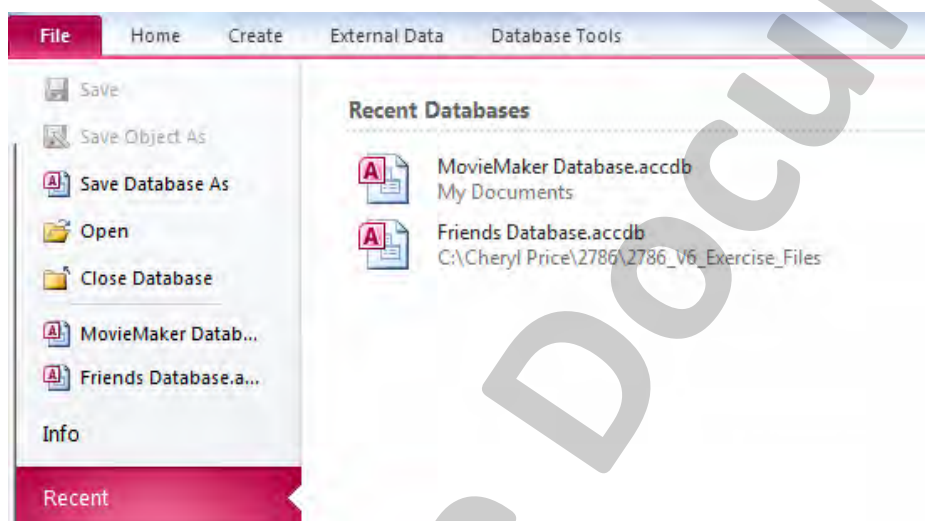
The database that has been opened is a simple flat file database designed to keep track of videos in a video shop.

The MovieMaker Database can be used as follows:

- To search for specific videos
- To find a specific type of video, eg action, romance, comedy
- To see in how many videos the lead role is played by a specific actor or actress
- To search for a specific director
- To see if a video is in the shop or on lease

Using the File Tab

The File tab is located at the top left of the screen.



Exercise 6

- 1 Click on .

A menu with commands for working with your *files* will display, eg to open a database, create a new one, or to save or print the file you are working on.

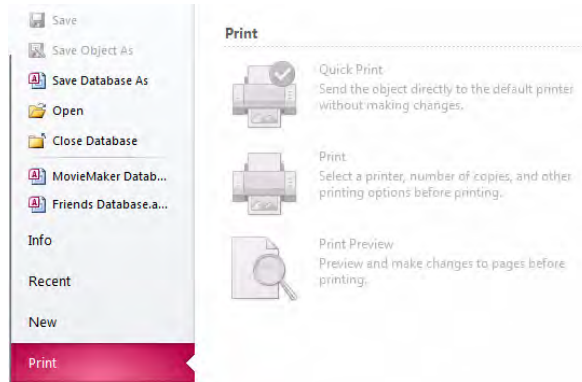
Recent Documents

The menu includes the Recent command. Select this to display a list of the databases that you have been working on most recently. Click on a database name to open it. (Recently used databases are also listed on the File tab above the Info option.)

If you haven't used Access 2010 before, the Recent Documents list will be empty.

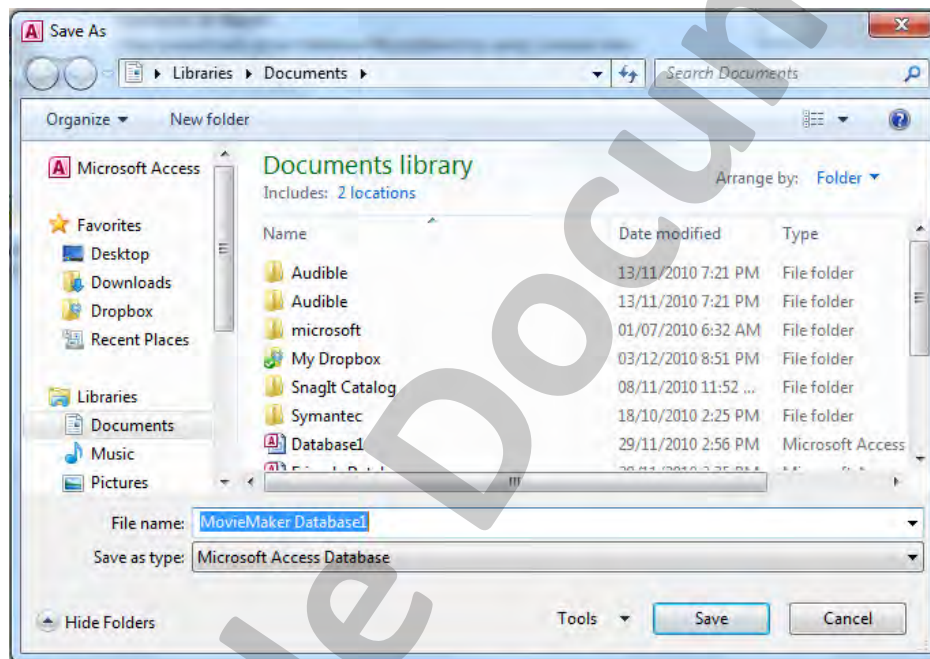
Command Options

Some commands have options that you can select from. Click on the menu item to display them, eg Print as shown on the next page.

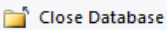


The Print options shown here allow you to choose between Print, for selecting printing options, Quick Print, to send the whole document straight to your default printer, and Print Preview.

The Save Database As command displays the Save As dialog box.




Closing a Database

If you want to keep Access 2010 open for other work, use the Close Database button you added to the Quick Access Toolbar, or the  button on the File tab menu to close the database you are working on.

2 Closing Backstage View

Press Esc to close Backstage View.

Access 2010

You can click on the Close button  at the top right of the screen to close Access 2010.