

Introduction

Welcome to *Learn Excel 2007 Expert Skills With The Smart Method*. This book has been designed to enable students to master Excel 2007 advanced skills by self-study. The book is equally useful as courseware in order to deliver classroom courses.

Smart Method publications are continually evolving as we discover better ways of explaining or teaching the concepts presented.

Feedback

At The Smart Method we love feedback – both positive and negative. If you have any suggestions for improvements to future versions of this book, or if you find content or typographical errors, the author would always love to hear from you via e-mail to:

feedback@LearnMicrosoftExcel.com

Future editions will always incorporate your feedback so that there are never any known errors at time of publication.

If you have any difficulty understanding or completing a lesson, or if you feel that anything could have been more clearly explained, we'd also love to hear from you. We've made hundreds of detail improvements to our books based upon reader's feedback and continue to chase the impossible goal of 100% perfection!

Downloading the sample files

In order to use this book it is sometimes necessary to download sample files from the Internet. The sample files are available from:

<http://www.LearnMicrosoftExcel.com>

Type the above URL into your web browser and you'll see the link to the sample files at the top of the home page.

Problem resolution

If you encounter any problem downloading or using the sample files please send an e-mail to:

feedback@LearnMicrosoftExcel.com

We'll do everything possible to quickly resolve the problem.

Typographical Conventions Used In This Book

This guide consistently uses typographical conventions to differentiate parts of the text.

When you see this

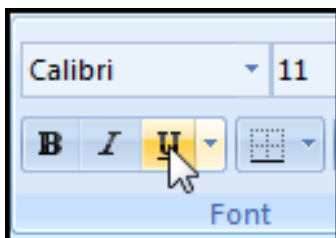
Click *Line Color* on the left-hand bar and then click *No line*.

Here's what it means

Italics are used to refer to text that appears in a worksheet cell, an Excel dialog, on the Ribbon, or elsewhere within the Excel application.

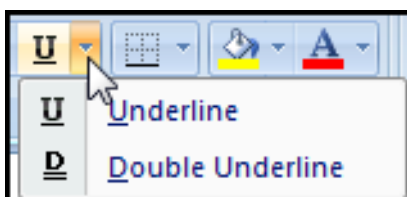
Italics may sometimes also be used for emphasis or distinction.

Click: Home→Font→Underline.



Click on the Ribbon's *Home* tab and then look for the *Font* group. Click the *Underline* button within this group (that's the left-hand side of the button, not the drop-down arrow next to it).

Click: Home→Font→
Underline Drop Down→Double Underline.



Click on the Ribbon's *Home* tab and then look for the *Font* group. Click the drop-down arrow next to the *Underline* button (that's the right-hand side of the button) within this group and then click *Double Underline* on the drop-down list.

Click: Office Button→Excel Options→
Popular→Edit Custom Lists→Import.



Office Button

This is a more involved example. The *Office Button* is at the top left hand corner of the Excel screen.

1. Click the *Office Button*, and then click the *Excel Options* button.

A new dialog pops up.

2. Choose the *Popular* list item and then click the *Edit Custom Lists* button.

Yet another new dialog pops up.

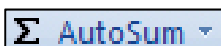
3. Click the *Import* button.

Type **European Sales** into the cell.

Whenever you are supposed to actually type something on the keyboard it is shown in bold faced text.

Press <Ctrl> + <Z>.

You should hold down the **Ctrl** key and then press the **Z** key.



When a lesson tells you to click a button, an image of the relevant button will often be shown either in the page margin or within the text itself.

note

In Excel 2007 there are a possible 16,585 columns and 1,048,476 rows. This is a great improvement on previous versions.

If you want to read through the book as quickly as possible, you don't have to read notes.

Notes usually expand a little on the information given in the lesson text.

important

Do not click the Delete button at this point as to do so would erase the entire table.

Whenever something can easily go wrong, or when the subject text is particularly important, you will see the *important* sidebar.

You should always read important sidebars.

tip

Moving between tabs using the keyboard

You can also use the <Ctrl>+<PgUp> and <Ctrl>+<PgDn> keyboard shortcuts to cycle through all of the tabs in your workbook.

Tips add to the lesson text by showing you shortcuts or time-saving techniques relevant to the lesson.

The bold text at the top of the tip box enables you to establish whether the tip is appropriate to your needs without reading all of the text.

In this example you may not be interested in keyboard shortcuts so do not need to read further.

anecdote

I ran an Excel course for a small company in London a couple of years ago...

Sometimes I add an anecdote gathered over the years from my Excel classes or from other areas of life.

If you simply want to learn Excel as quickly as possible you can ignore my anecdotes.

trivia

The feature that Excel uses to help you out with function calls first made an appearance in Visual Basic 5 back in 1996 and had the wonderful name: *IntelliSense*. The Excel...

Sometimes I indulge myself by adding a little piece of trivia in the context of the skill being taught.

Just like my anecdotes you can ignore these if you want to. They won't help you to learn Excel any better!

The World's Fastest Cars

When there is a sample file (or files) to accompany a lesson, the file name will be shown in a folder icon.

You can download the lesson or file from: www.LearnMicrosoftExcel.com. Detailed instructions are given in: *Lesson 1-2: Apply a simple filter to a range*.

Putting the Smart Method to Work

Excel version and service pack

This edition was written using *Microsoft Excel 2007 Service Pack 1* running under the *Microsoft Vista Service Pack 1* operating system. You'll discover how to confirm that your computer is running these versions during session 1.

If you are using an earlier operating system (for example Windows XP) this book will be equally relevant, but you may notice small differences in the appearance of some of the screen grabs in the book. This will only occur when describing an operating system (rather than an Excel) feature.

This book is written purely for Excel 2007 and, due to huge changes in this version, will not be useful for earlier versions (97, 2000, 2002 and 2003).

Sessions and lessons

The book is arranged into Sessions and Lessons. In a *Smart Method* course a Session would generally last for between forty-five and ninety minutes. Each session would represent a continuous period of interactive instruction followed by a coffee break of ten or fifteen minutes.

When you use this book for self-instruction I'd recommend that you do the same. You'll learn better if you lock yourself away, switch off your telephone and complete the whole session without interruption. The memory process is associative, and we've ensured that each lesson within each session is very closely coupled (contextually) with the others. By learning the whole session in one sitting, you'll store all of that information in the same part of your memory and should find it easier to recall later.

The experience of being able to remember all of the words of a song as soon as somebody has got you "started" with the first line is an example of the memory's associative system of data storage.

We'd also highly recommend that you do take a break between sessions and spend it relaxing rather than catching up on your e-mails. This gives your brain a little idle time to do some data sorting and storage.

Read the book from beginning to end

Many books consist of disassociated self-contained chapters, often all written by different authors. This approach works well for pure reference books (such as encyclopedias). The problem with this approach is that there's no concept of building knowledge upon assumed prior knowledge, so the text is either confusing or unduly verbose as instructions for the same skill are repeated in many parts of the book.

This book is more effective as a learning tool because it takes a holistic approach. You will learn Excel in the same way you would be taught during one of our *Smart Method* courses.

In our classroom courses it's often the case that a delegate turns up late. One golden rule is that we can't begin until everybody is present, as each hands-on lesson builds upon skills taught in the previous lesson.

I strongly recommend that you read the book from beginning to end in the order that it is written. Because of the unique presentational style, you'll hardly waste any time reading about things that you already know and even the most advanced Excel user will find some nugget of extremely useful information in every session.

How this book avoids wasting your time

Nobody has things just as he would like them. The thing to do is to make a success with what material I have.

Dr. Frank Crane (1861–1928), American clergyman and journalist

The only material available to me in teaching you Excel is the written word and sample files. I'd rather have you sitting next to me in a classroom, but Frank Crane would have told me to stop complaining and use the tools I have in the most effective way.

Over the years I have read many hundreds of computer text books and most of my time was wasted. The big problem with most books is that I have to wade through thousands of words just to learn one important technique. If I don't read everything I might miss that one essential insight.

This book utilizes some of the tried and tested techniques developed after teaching vast numbers of people to learn Excel during many years of delivering *Smart Method* classroom courses.

As you'll see in this section, many presentational methods are used to help you to avoid reading about things you already know how to do, or things that are of little interest to you.

Why our classroom courses work so well

In *Smart Method* classroom courses we have a 100% success rate training delegates to *Essential Skills* level in one day (the subject matter of our *Essential Skills* book) and to *Expert* level in a further single day (the subject matter of this book).

One of the reasons we can teach so much in a single day is that we don't waste time teaching skills that the delegates already know. Class sizes are small (six maximum) and the instructor stands behind the delegates monitoring their screens. The instructor will say "Open the sample file *Sales* that you'll find in the *Samples* folder on the C drive". If everybody does this, no time is wasted explaining how. If anybody has difficulty, more information is given until all delegates demonstrate success.

Another key to learning effectively is to only teach the best way to accomplish a task. For example, you can save a workbook by clicking the *Save* button on the *Quick Access Toolbar* or you can press the <Ctrl>+<S> keys on the keyboard. Because clicking the *Save* button is the easiest, fastest and most intuitive method we only teach this in the classroom. In the book we do mention the alternatives, but only in a sidebar.

How this book mimics our classroom technique

Here's a lesson step:

1 Save the workbook.

When you are editing a workbook the changes you make are only held in the computer's memory. If there is a power cut or your computer crashes, you will lose any work that has been done since the last save. For this reason you should get into the habit of regularly saving your work.

Click the *Save* button on the *Quick Access Toolbar* at the top left of the screen.

Note

You can also use the <Ctrl>+<S> keyboard shortcut to save your work.

If you already know how to save a workbook read only the line: *Save the workbook* and just do it. Don't waste your time reading anything else.

Read the smaller print only when you don't already know how to do something.

If you're in a hurry to learn only the essentials, as fast as possible, don't bother with the sidebars either unless they are labeled **important**.

Read the sidebars only when you want to know everything and have the time and interest.

Avoiding repetition

2 Convert the table into a range.

This was covered in: *Lesson 1-9: Format a table using table styles and convert a table into a range.*

A goal of this book (and our classroom courses) is not to waste your time by explaining any skill twice.

In a classroom course, a delegate will sometimes forget something that has already been covered earlier in the day. The instructor must then try to get the student to remember and drop little hints reminding them about how they completed the task earlier.

This isn't possible in a book, so I've made extensive use of cross references in the text pointing you back to the lesson in which the relevant skill was learned. The cross references also help when you use this book as a reference work but have forgotten the more basic skills needed to complete each step.

Use of American English

American English (rather than British English) spelling has been used throughout. This is because the Excel help system and screen elements all use American English spelling, making the use of British English confusing.

Examples of differences are the British English spelling: *Colour* and *Dialogue* as opposed to the American English spelling: *Color* and *Dialog*.

Because this book is used all over the world, much care has been taken to avoid any country-specific terminology. In most of the English speaking world, apart from North America, the symbol # is referred to as the **hash sign**. I use the term *hash* throughout this book.

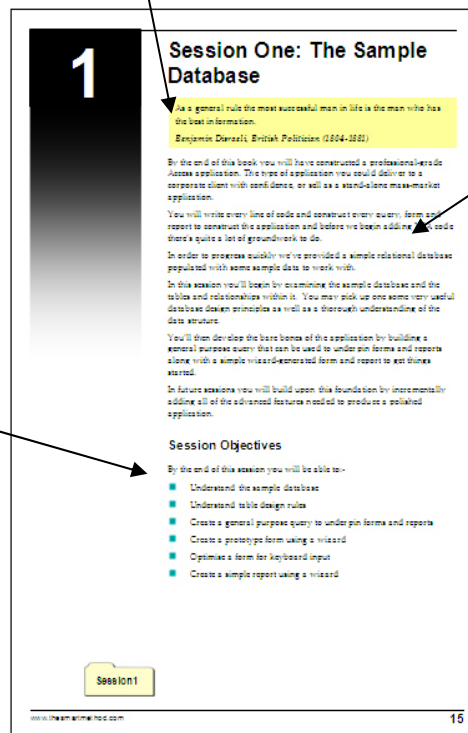
First page of a session

1/ The first page begins with a quotation, often from an era before the age of the computer, that is particularly pertinent to the session material. As well as being fun, this helps us to remember that all of the real-world problems we solve with technology have been around for a long time.

3/ The session objectives *formally* state the precise skills that you will learn in the session.

At the end of the session you should re-visit the objectives and not progress to the next session until you can honestly agree that you have achieved them.

In a *Smart Method* course we never progress to the next session until all delegates are completely confident that they have achieved the previous session's objectives.



2/ In the next few paragraphs we *informally* summarise why the session is important and the benefits that you will get from completing it.

This is important because without motivation adults do not learn. For adults, learning is a means to an end and not an end in itself.

The aim of the introduction is to motivate your retention of the skills that will be taught in the following session by allowing you to preview the relevance of the material that will be presented. This may subconsciously put your brain into “must remember this” mode—assuming, of course, that the introduction convinces you that the skills will be useful to you!

Every lesson is presented on two facing pages

Pray this day, on one side of one sheet of paper, explain how the Royal Navy is prepared to meet the coming conflict.

Winston Churchill, Letter to the Admiralty, Sep 1, 1939

Winston Churchill was well aware of the power of brevity. The discipline of condensing thoughts into one side of a single sheet of A4 paper resulted in the efficient transfer of information.

A tenet of our teaching system is that every lesson is presented on *two* facing sheets of A4. We've had to double Churchill's rule as they didn't have to contend with screen grabs in 1939!

If we can't teach an essential concept in two pages of A4 we know that the subject matter needs to be broken into two smaller lessons.

Tips, important information and notes appear in sidebars.

Each step is numbered and begins with the thing you need to do in bold type. Sometimes this is all you need to read to accomplish the task.

Step notes sometimes provide precise instructions on how to progress if the one-line description is inadequate. Notes often also include interesting information about the current task.

If you are not working through the course sequentially, a file is available on our web site that contains the starting point for every lesson. The file name you need to download is stated in the file icon at bottom left of every lesson page.

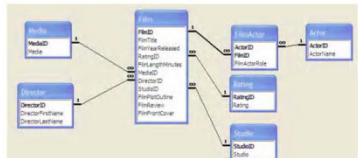
Learn Access VBA 2003 with The Smart Method

Lesson 1-1: Understand the sample database

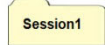
The sample database will manage a collection of films. The schema incorporates some of The Smart Method's preferred naming conventions and design rules.

- 1 Create a new folder for your application on the C:\ drive called C:\FilmLibrary.
- 2 Download the FilmLibrary-Session1.zip file from http://www.thesmartmethod.com/Access_VBA_Sample_Files save it to this location, unzip it and then re-name it FilmLibrary.mdb.
- 3 Open the FilmLibrary.mdb database.
- 4 Select Tools → Relationships from the main menu to view the schema.

The schema is displayed.



- 5 Understand the table relationships. Note the relationships between the tables. It is often useful to read the relationships to a client from the schema to ensure that they are correct. For example:
 - “One film may have one and only one director but a director may direct many films.” (A one to many relationship).
 - “One film may have many actors and one actor may perform in many films.” (A many to many relationship).
- 6 Understand the relationship types. Right-click on the relationship between the Film and Director tables and choose Edit Relationship... from the shortcut menu. The Edit Relationship dialogue is displayed.



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Learning by participation

Tell me, and I will forget. Show me, and I may remember. Involve me, and I will understand.

Confucius (551-479 BC)

Confucius would probably have agreed that the best way to teach IT skills is hands-on (actively) and not hands-off (passively). This is another of the principal tenets of the *Smart Method* teaching system. Research has backed up the assertion that you will learn more material, learn more quickly, and understand more of what you learn, if you learn using active, rather than passive methods.

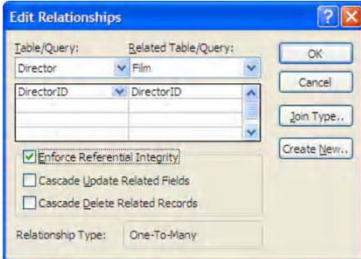
For this reason pure theory pages are kept to an absolute minimum with most theory woven into the hands-on sessions either within the text or in sidebars. This echoes the teaching method in Smart Method courses, where snippets of pertinent theory are woven into the lessons themselves so that interest and attention is maintained by hands-on involvement, but all necessary theory is still covered.

important

Amateur database designers often leave their databases open to corruption by not enforcing referential integrity between their tables.

The usual excuse for not enforcing referential integrity is that it will stop users entering incomplete records (for example users may wish to create a Film record when the Director name is not known).

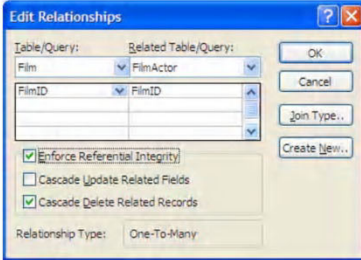
The simple solution to this problem is to make sure that the default value of the foreign key within the parent table (the DirectorID field within the Film table) is always Null (Null means the absence of any value at all). It will then be possible to create Film records when the Director is not known.



Screen grabs are provided in-line with the text when they can explain what you need to do more clearly than words alone.

7 Understand when to use Cascade Delete.

Close the Edit Relationships dialogue. Right-click on the relationship between the Film and FilmActor tables and choose Edit Relationship... from the shortcut menu. The Edit Relationship dialogue is displayed.



Note that the Cascade Delete Related Records check box is checked.

This is one of the rare examples when Cascade Delete Related Records makes sense because we would want to automatically delete the association between a film and it's actors in the event that the user wanted to delete a film record.

note

You might wonder what would happen if you checked the Cascade Update Related Fields check box.

If you follow our design rules all primary keys will be meaningless (see tip sidebar and Appendix-A: The Rules).

Amateur database designers (and even ones that have simply read the wrong books!) often create meaningful primary keys causing all sorts of problems.

Cascade Update Related Fields is simply a work-around for one of the problems caused by breaking this design rule – the case when a meaningful primary key must be changed and propagated throughout the entire database.

In a properly designed database you'll never have to use this option.

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