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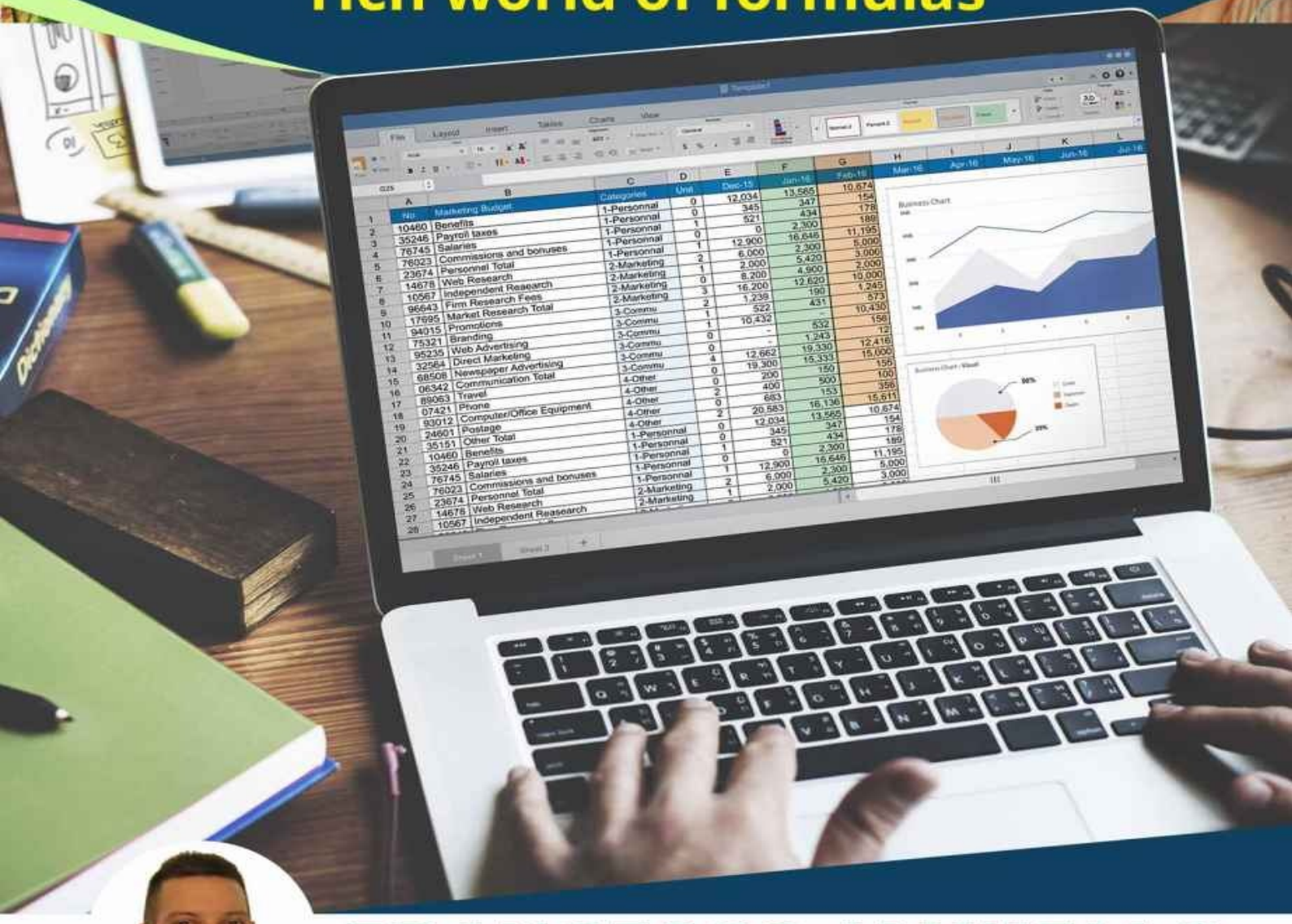
EXCEL FOR EVERYONE

The simpliest way to enter the rich world of formulas



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Excel for Everyone:

The Simplest Way to Enter the Rich World of the Calc Spreadsheet

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Introduction

I want to thank you and congratulate you for downloading *Excel for Everyone: The Simplest Way to Enter the Rich World of the Calc Spreadsheet*. Microsoft Excel is one of the most commonly neglected programs that nearly everyone owns or has access to. By purchasing this book, you are now on your way to saving time and energy by easily completing a wide variety of common tasks with the help of this ubiquitous program. As you begin to work with Excel regularly there are a number of actions and required steps that may seem strange or even arcane at first. It is important to persevere, however, as proper Excel use is a skill, which means that like any other skill the only way to improve is to practice as frequently and repeatedly as possible.

This book contains proven steps and strategies designed to ensure you get the most out of every interaction you have with Excel. Inside you will learn the basic purposes of the program and how it can help you be more effective in a number of different ways. From there you will learn about the primary ways to interact with Excel, how to sort and filter complex data, how to use formulas and functions effectively, how to print and create graphs and how to understand common error messages and how to avoid them.

Thanks again for downloading this book, I hope you enjoy it!

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Chapter 1: Understanding Excel

Once you understand what is required, using Excel can provide you a wide variety of options when it comes to working with data in a multitude of forms. One of the primary ways to use Excel is most often associated with the financial sector and allows the user to create their own formulas and then use them to calculate everything from an annual report to a simple sales forecast. It can also be used for a variety of tracking and organizational purposes such as creating status reports, contact lists, invoicing and nearly anything else you could ever need. It can also come in handy when it comes to dealing with large sets of complex numbers which may require charting, graphing or statistical analysis.

Excel groups related data into workbooks with each workbook then containing numerous worksheets dedicated to specific tasks and functions. Each workbook and worksheet is completely customizable and can be interacted with and manipulated in a number of ways. Data is stored in a mixture of vertical and horizontal rows with each row and column then being broken down even further into individual cells. Get used to the cells, they are the primary method of interacting with the spreadsheet. Each cell can store either letters or numbers but it is best to generally stick with one or the other as many sorting functions can only search for one type of character at a time.

Each cell can then be attached to additional cells through the use of what are known as formulas. Formulas can be created on the fly or users have the option of applying numerous formulas that come premade. Preprogrammed formulas include things like finding the standard deviation, common mathematical formulas and even calculate interest payments. Each cell also has the ability to use a formula and then display the results based on a variety of criteria. Cells can also be colored uniquely as well as given unique fonts, borders and more.

When it comes to creating charts and graphs, Excel offers up many more options than a simple word processing program can. Excel can translate data into a wide variety of form from a diverse multipoint pivot chart to the classic pie chart, if you know where to look, Excel does it all.

This also makes Excel a natural choice when you are looking to identify trends in what may otherwise seem like meaningless data. It also makes a numerous additional variables much easier to view on the fly. The easy ability you will have when it comes to manipulating variables will make predicting future patterns easier than you ever thought possible.

This is in part because of the way that you can use Excel to bring disparate points of data together through the use of workbooks and interconnected worksheets. Essentially, what it all boils down to is that if you are not regularly using a spreadsheet to make your life easier, you are working harder, not smarter.

Chapter 2: Primary Interactions with the Excel

When you first start up Excel, you most likely opened up a new worksheet. This new worksheet automatically spawns a new workbook and two additional worksheets for you to switch between, specifics for worksheet management will be discussed later. On the new worksheet screen you will notice that the columns are labeled A, B, C etc. while the rows are labeled 1, 2, 3, 4, etc. Combing the two for a specific cell gives that cell its unique cell reference. Cell references can then be used to indicate to other cells that they need to refer back to the cell with that specific reference. This is what is known as a formula and a basic example is written thusly: =B4+A9

A cell's individual reference is always listed in what is known as the Name Box when that cell is selected. The name box can be found in the top left of the screen, directly below the Home Tab. To the immediate right of the name box is what is known as the Formula Bar. If the selected cell contains information, it will be displayed in the formula bar.

Interacting with cells

Choosing cells

- You can select individual cells by left clicking on them with your mouse or by using the arrow keys.
- If you push the ENTER key the cell directly beneath the cell which is currently selected will become selected. This can be changed by selecting the File tab, then choosing Options and Advanced Options. From there, choose Edit and then the option labeled Enter Move Selection, this will let you determine what direction the selection cursor will move when ENTER is pressed.
- Pressing the TAB key will select the cell to the right of the cell which is currently selected.
- If you wish to select an entirety of a column or row, left click on the row or column in question.
- If you wish to select a group of cells that are next to one another, left click on the first cell you wish to select and drag the cursor to the final cell you wish to select. The selected cells will be shown in black.
- If you wish to select a group of cells that are not next to one another, left click on the first cell you wish to select while at the same time holding down the CTRL key, click on each cell you wish to select while continuing to hold down the CTRL key.
- If you wish to select the entirety of the current worksheet, click on the space between the label for A and the label for 1.

Adding information to cells

- Information can be added to any cell by simply left clicking on it and then entering the required data.
- You can edit the data in any cell by first selecting the cell and then editing the information in the formula bar. Clicking on a different cell or pressing the ENTER key will save the changes.
- If you wish to edit the information in a given cell in the cell directly, simply double click the left mouse button to show the entirety of the data. This can also be accomplished by left clicking once and then pressing the F2 key.

Copying information between cells

- If you wish to copy the data from a cell to the cell or cells below it, simply select the cell with the required data as well as the cell below it and press the CTRL key in conjunction with the D key.
- If you wish to copy the data from a cell to the cell or cells to the left of it simply select the cell with the required data as well as the cell or cells to the left of it and pressing the CTRL key in conjunction with the R key.
- In addition to these handy time savers, the information in any cell can be added to any other cell with the use of what is known as the Fill Handle. Start by selecting the cell with the data to be copied before moving your cursor to the lower right corner of the cell until the cursor changes shape. Now simply select the cell or cells that the data should be copied to.
- If the data to be copied is either one in a series, a unit of time or a date the fill option will include the next logical part of the sequence in each subsequent cell. For example, using the fill option on a cell filled with Monday would make the next box Tuesday, then Wednesday etc.
- To copy a cell and all of its data completely, select the cell in question before right-clicking on it and selecting the copy option. The cut option and the paste option will also work as expected.

Adding a date or time to a cell

- Start by selecting the cell you wish to add data to
- To include a specific date, add the date to the cell as either 1/2/33 or 1-Feb-1933.
- To enter a specific time in the second half of the day write it as 1:00 p as Excel assumes times all times are A.M. unless told otherwise.
- The current time and date can be added to any cell by pressing the SHIFT key in conjunction with the CTRL key and the SEMICOLON key.
- To make a specific cell always display the current time add NOW to it and press enter.
- To make a specific cell always display the current date type TODAY and press

enter.

- To determine the default way the time and date are determined press the SHIFT key in conjunction with the CTRL key and the 2 key to bring up the Regional and Languages menu and select the settings you prefer.

Set cells to always modify entered data

- Select the File tab and the Options menu before choosing the Advanced option.
- The Editing option will allow you to determine how many decimal points are shown per cell.
- The Places option determines the number of places that are shown, a positive number indicates more places, a negative number indicates fewer places. For example, if you entered a 2 into the places box, typing the number 124 would result in 1.24 being displayed.

Enter numbers in cells in sequence

- Start by adding a number to the first cell in the eventual range.
- Add the second number into the next cell in the sequence.
- Select both cells before choosing the fill handle option and dragging the handle to cover the number of cells that will encompass the sequence.
- Release the mouse and the cells should populate automatically.

Add columns and rows

- Columns and rows can be added to a worksheet by right clicking on the letter or number to the right or below of where you want the new column or row to be. New columns are always created to the left of the original and new rows are always created above the original. After adding one, more can be added by simply pressing the F4 key.
- Columns and rows can be deleted from a worksheet by right clicking on the letter or number of the column or row and selecting the delete option. Multiple columns and rows can be deleted by selecting the first and then dragging the cursor to the last. Multiple individual columns or rows can be deleted be holding down the CTRL key before clicking the delete option.
- If you wish to ensure a particular column or row is always visible, even when moving to other parts of a workbook, activate what is known as the Freezing feature. Start by selecting the column or row to the right of the column or below the row you wish to freeze. Choose the View tab and select the Freeze Pane option. You can unfreeze things the same way. This option will also let you freeze the first row or column currently visible without having to select it first.

- Columns and rows can be resized manually by clicking and dragging individual column labels as needed.
- To manually make a column or row the size of the largest cell of data in the row or column simply left click twice on the right side of the column or row header.

Formatting cells

Keep in mind that in instances where formatting of cells changes the visible value of what is displayed in the cell, the true value will be used for formula references. To access the formatting options for a cell or set of cells, select them and then right click and choose the Format Cells option.

The number tab: When you open the Format Cells option you will be greeted with the Numbers Tab which provides you with the opportunity to change how numbers in cells are displayed. You can alter how written numbers are displayed, the number of decimal places shown, how fractions are displayed, how percentages are displayed, how time and dates are displayed, how currency is displayed as well as how monetary units are displayed.

Be aware, formatting a cell for a specific type of numerical data will ensure that any other type of information entered into that cell will not be allowed or will be deleted once it has been entered. If you find you are unable to enter data into a cell, choose the format cell option and reset the cell to the default General option, you will need to reenter the data in question.

Alignment: The alignment tab under the Format Cell option is used to determine how the cell will reflect data that is entered. There are specific options to determine the orientation of text as well as its direction, indention and text wrapping options. You will also find the option to shrink text so it is completely visible in the specified cell. Finally, you will find the option to merge a group of cells so that all of the selected cells are considered a single cell. The option to unmerge cells can be found in the same place.

Font: The Font Tab contains the same options commonly found in word processing programs. You will have the option to modify the font used in the selected cell, change the style, size and color. If you are interested in adding additional effects to the data in the cells, those options are also available.

Border: The border tab provides you with the opportunity to visually differentiate individual cells with a wide variety of colors, the result will outline the selected cell or cells. The Style option will determine what the resulting border will look like, and the Color option will set the color. The remaining options are dedicated to determining which parts of the border are visible. It is important to always select the options on the left before choosing the specifics on the right.

Fill: The Fill Tab provides you with several opportunities in regards to choosing the background color of the selected cell or cells. Numerous pattern styles are also available as are additional options regarding multiple colors and shading options.

Protection: The final tab relates to protection and determines if specific cells are locked or are not visible to formulas. Individual cell options will not activate until protection for the worksheet has been turned on.

Worksheets

Working with multiple spreadsheets

- The option to switch between spreadsheets can be found at the bottom of the spreadsheet where it says Sheet 1.
- Additional sheets can be added by simply pressing the plus button next to the Sheet 1 button.
- Right clicking on Sheet 1 will bring up a list of options including renaming it, inserting new sheets (added to the left of the current worksheet) and deleting the worksheet.
- Worksheets can be repositioned in the same workbook by simply left clicking on the sheet you wish to move and dragging it to the desired location.
- Right clicking on a worksheet and selecting the move or copy option will allow you to then paste it into a different workbook. The resulting menu will allow you to choose all the specifics regarding which book it will be moved to and where in the order it will be placed.
- Right clicking on your desired worksheet will also provide you with the opportunity to lock a spreadsheet. Choose this option if you wish to close the specific worksheet to modification by others. You will be offered the opportunity to create a password when you select this option.

Editing multiple worksheets at once

- To edit multiple worksheets at once, start by selecting one of the worksheets using the tabs at the bottom of the screen.
- After selecting the first sheet, hold down the CTRL key before selecting additional sheet.
- Right clicking will then bring up all the options which are available to multiple sheets at once.

Entering data on multiple worksheets simultaneously

- Start by selecting the first worksheet you want to add the data to, followed by the desired cell.
- Click and drag to include additional cells on the same worksheet.
- Hold down the CTRL key and select the next worksheet and then click a desired cell and drag.
- Select the first cell to enter the data into and enter the data.
- Pressing the tab key should copy the data to the next cell. Continue as needed

Saving

Workbooks can be saved in a wide variety of file formats depending on several specific needs. If you find yourself in need of changing how a specific workbook is saved, start by choosing the Save As option found underneath the File tab. This will allow you to change the name of the original file so that the change doesn't affect it as well. The Save As Type option will provide you with a list of available extensions such as ODS, EXPS, PDF, XLA, XLAM, SLX, DIF, PRN, CSV, TXT, XLT, XLTM, XLTX, HTML, HTM, MHTML, MHT, XLM, XLS, XLSB, XLSM and XLSX.

Chapter 3: Sorting and Filtering Data

Sorting

Excel has a series of controls in place which will help to accurately determine when specific ranges of cells are related to one another. It requires to blank columns or rows in the related areas in order to work properly. Sorting can be done in numerous ways, text can be sorted alphabetically, numbers can be sorted highest to lowest or lowest to heist, times and dates can be sorted based on age and custom sorting includes things like cell color, font size, icon and more.

Specific sorting criteria can also be saved into individual workbooks so they are easy to reapply when the workbook is reopened. Sorting specifics can only be saved when the data included is already formatted into a table, and to format data into a table, it first needs a name.

Naming cells

- Naming this data will make it easier to refer to later, add a name in the Name Box and save it by pressing the ENTER key.
- Names cannot contain spaces and must start with a letter, a backslash or an underscore. Each name must always be unique.
- The remaining characters can be underscores, periods, numbers and letters. Excel will not distinguish capital and lowercase letters. If you wish to make the name, and therefore the cell or group of cells visible to the current workbook as a whole, add the prefix Sheet1! to the start of the name where Sheet1 is the sheet you are basing the data in.
- You can also select the group of cells you wish to name, right click and either choose a name yourself with the Define Name option or let Excel label the data for you with the Pick From Drop Down List option.
- Additional naming options can be found on the Formulas tab under the Defined Names Sections.

Naming rows and columns

- Start by selecting the row or column you wish to rename.
- View the naming options which can be found underneath the Formulas tab.
- Select the name manager option, then edit to change the name of the row or column. The scope option will determine if the change will apply to the entirety of

the workbook or just the current worksheet.

Defining names

- If you have included row or columns names these can be converted into table names.
- Start by selecting the group of cells you want to be included under the name.
- Select the Formulas tab and the Defined Names grouping of options before choosing the option to Create from Selection.
- The resulting dialogue box will list any related labels that already exist and allow you to choose the one which will cover the entire table.

Creating names with the new name dialogue box

- Select the Formulas tab and the Defined Names grouping of options before choosing the Define name option.
- Add the name and the scope (workbook or worksheet) of the name. This box will also allow you the opportunity to enter a descriptive comment relating to the name which will appear when you hover your cursor over the name.
- In the box labeled Refers To, enter the cell or group of cells that the name refers to. Formulas can also be named in this fashion.

Managing named content

- Select the Formulas tab and the Defined Names grouping of options before choosing the option labeled Name Manager.
- This option will display all of the named ranges or tables that are in the current workbook. You can see names, values, what the name refers to, its scope and any related comments.
- You have the option on this screen to add new names, edit existing names and delete names.
- The button directly above the close button will highlight and show the cells the selected name refers to.
- The name manager will not appear if you are currently editing a named range or table.

Creating column and row headings

- Select the Page Layout tab before choosing the Sheet Options selection.
- From there you will be taken to the Page Setup dialogue box.

- Underneath the list of options under Print you will find the option to turn on Row and Column Headings.

Creating a table

- Start by selecting the data you wish to convert into a table.
- Select the tab labeled Insert and select the option for Tables then click the option for a single table. You can also perform this action by pressing the CTRL key in conjunction with the L key or the T key.
- If you have named individual rows and columns in relation to the range in question, make sure you select the option indicating My Table Has Headers, otherwise these will be created automatically. Ensuring headers do not show at all can be done by right clicking on the completed table, choose the Design option, the Table Style option and then deselect the Header Row option.
- Choosing the OK option will cause Excel to consider the first column as the header column and the first row and the header row for table creating purposes. To ensure proper labels appear through the worksheet, follow the steps listed in chapter 2 to free the heading columns/rows.

Formatting tables

- Data can also be formatted as a table by choosing the Home tab followed by the option for Styles and Format as Table. You will be able to choose between dark, medium and light options.
- This option will also allow you to create your own style by selecting the more option after selecting Cell Styles.
- Selecting New Table Style will allow you to name your style, before formatting using all of the formatting options available when formatting existing cells. You will have the option to preview the style you are creating as well as determining if it becomes the default when creating new tables.
- The Table Style Options grouping of options will allow you to turn headers on or off, turn totals on or off, determine if special formation is allowed and if alternating rows or columns will be alternating colors to make the table easier to read.
- If you wish to format an already existing tables simply select the table in question before following the steps listed above.

Create a dropdown list

- Start by adding content to a worksheet in contiguous cells.
- Assign a name to the data as if you were creating a table.
- Select the cell that you wish for the dropdown menu to be connected to.

- Choose the Data tab followed by the Data Validation option found in the Data Tools grouping.
- Under the Settings tab look for the box named Source and enter the name of your list preceded by the = sign.
- Under the Input Message tab enter a title and any additional message you want the dropdown list to display.
- Check the box offering In Cell Dropdown and select OK.
- You can also include a variety of error alerts to prevent incorrect data from being entered into the cell.
- When you click on the cell in question the new dropdown box should then appear.

Text

- Start by selecting the row or column of your table that you want to sort.
- The Sort And Filter group can be found on the Data tab and it will automatically allow you to sort in ascending or descending order of letters or numbers. Dates and times can also be sorted the same way.
- The Sort button will give you access to a more detailed level of sorting where you can choose the order in which multiple things are sorted. The Options button will determine if your search is case sensitive or if the sorted items are sorted top to bottom or left to right.
- If the data you are sorting is in a table then the sorting will be saved for the future. To reapply, visit the Sort group under the Data tab and select the Reapply option.
- To clear sorting in a table, select the table, visit the Sort group under the Data tab and select the clear option.
- Clicking on the header of a specific row or column header will also automatically sort that data from biggest to smallest or alphabetically.

Formatting options

- Start by selecting the row or column of your table that you want to sort.
- The Sort And Filter group can be found on the Data tab
- Select the Sort button and choose the Column option followed by Sort By.
- The resulting Sort On option will allow you to sort your table by cell color, cell icon and font color.
- Choose the order option and determine the order of the sorted items. Cells with the same color, icon or font can be all group together to the top or bottom, left or right.
- The Add Level Option will allow you to further specify ordering specifics so you

can for example sort by color first, then font and finally icon.

Custom

- To create a custom sorting option, first select the File tab followed by the selection for Options.
- Choose the Advanced section and look for the Edit Custom Lists option found under the General heading.
- This option already has custom lists relating to days and months both abbreviated or non.
- Add the list you want to use to use to the box labeled List Entries and then select the add option.
- If you have already organized a table in the way you want the list to automatically copy, instead select the list in question and choose the Import option.

Filtering Data

After you have converted a range of cells into a table, you can then easily filter certain type of data out of the table automatically. Assuming you have table headers enabled (see above for more details) then each header will have an arrow at the end of its name. To filter the data

- Start by clicking the arrow of the column you want to filter.
- This will present you with a list of options including all of the variables you can deselect from the current table. This is also the list that will allow you to clear any filters that are currently applied.
- Broader filters such as numbers, text and color are also provided depending on what the current table contains.
- Additional options are available under the Data tab and the Sort and Filter grouping of Options underneath the option labeled Advanced
- Text and Number Filtering options will provide you with additional dialogue boxes that relate to the content being filtered and include custom filters that allow you to provide your own unique filters.
- Numeric filters are numbers that are equal to something specific, not equal, greater than, less than, greater than or equal to, less than or equal to, between, top 10, above average or below average
- Text filtering includes the option to filter for words that are or are not the search term, as well as those that begin or end with a certain letter and those that contain or do not contain a certain letter.

Chapter 4: All About Formulas and Functions

When it comes to spreadsheets, the words function and formula are typically used interchangeably. A formula is any expression that is used to determine the value of a specific cell or group of cells. Functions are a set of predefined formulas that are already available in Excel. When it comes to writing formulas, it is important to remember that Excel uses the order of operations when making calculations which means that any part of a calculation that can be found in parentheses is calculated first, before any other calculations come into play. When writing a formula, it is important to always start it with = so that Excel knowns to find the answer to the formula in questions

To enter functions or formulas

- Start by selecting the cell you want to contain the formula or function.
- Enter the desired function into the formula bar, making sure to start every function with an equal sign =.
- Add the formula or function you wish to use and, when done properly, the result will appear in the selected box.
- Once a cell has been given a formula, that formula can be changed in the formula box.

To switch between relative cell references and absolute cell references

Cells can be copied and pasted using common copy and paste commands. Typically, when a formula or function is added to a cell that directly references another cell or set of cells the receiving cell interprets that data in relation to itself. For example, Cell B1 sees cell A1 as one cell to the left. If you moved the data in B1 to F1, then the A1 reference would instead be seen as E1. In order to ensure your references are referring to specific cells and not directions, follow the steps below.

- Select the cell or cells you wish to change to an absolute frame of reference and press the F4 key.
- Alternatively, you can start by entering a formula into a desired cell when listing the formula make sure you include a $ before the result of the indicator of the result of the formula before ultimately pressing the Enter key.
- Select the fill handle and drag it to the desired cells, the formula will be copied using exact references.
- References can be checked by left clicking twice on any of the new cells.

To quickly enter common functions

- Start by pressing the SHIFT key in conjunction with the CTRL key and the “key. This will copy the value from the previous cell into the current cell’s formula bar.
- Pressing the ‘ key in conjunction with just the CTRL key will show the formula working in each of your currently active cells.
- The =SUM function can be used by typing SUM(list of cells) where the list of cells is the cells you wish to add together.

Conditional Functions

AND, OR, NOT, IF written as IF(logical_test,value_if_true,value_if_false)

- Logical_test: The condition you are looking to determine.
- Value_if_true: The value you want to appear if the condition is true.
- Value_if_false: The value that you want to appear if the condition is true.
- The function is set up in the same way for AND, OR and NOT.

Function to add and subtract units of time

- Adding periods of time together is as easy as putting the first unit of time in one cell and the other unit of time in a second cell.
- In a third cell write = the first cell + the second cell.
- Excel calculates time based on the amount elapsed from midnight. The result is displayed in full day increments

Function to determine a running balance

- Start by setting up a table that has three columns, the first column should be money going in, the second money going out and the third written as SUM(the cells in the row)
- The Sum column can then be extended using the Fill Bucket to extend the formula to include the previous sum in addition to the current sum.

Function to determine the average, mean, median and mode

- Select a cell adjacent to the group of cells you wish to find the mode, median or mean for.
- In the Home tab, find the Editing group of options and then the option labeled AutoSum, select which form of average you want to find and hit the ENTER key

- If you wish to find the Average of a group of numbers that are not next to one another, write the formula as AVERAGE, MEAN, MEDIAN, MODE(the cells in question) with the cells in question being the cells you are looking for more information on.

Function to subtract

- A subtraction function can be written as =number-number or it can be written as SUM(number, negative number)
- There is no specific subtraction function in Excel.

Function to multiply

- To multiply two numbers in a cell, write the function as =5*10
- To multiply a column or row by a specific number, write the formula so the cell to be constantly multiplied by is written with a pair of $ around the column designation. For example, if you wished to multiply multiple cells by cell A1 you would write it as A1.
- Writing the formula once and then using the Fill Bucket will allow you to multiply the entire column or row easily.
- Non-contiguous cells can be multiplied together by writing the formula as PRODUCT(cell1,cell2) where cell1 and cell2 are the cells that are being multiplied, adding a comma and an extra number inside the parentheses will multiply the cells and then the result by the extra number.
- Ranges of cells can also be multiplied by writing them as Range Cell1: Range Cell2.

Function to divide

- Writing =number1/number2 will cause the current cell to produce the results of dividing the two numbers. Not including the = in this case will cause Excel to interpret the data as a date.
- =Cell1/Cell2 will also work
- To divide a column or row by a specific number, write the formula so the cell to be constantly divided by is written with a pair of $ around the column designation. For example, if you wished to multiply multiple cells by cell A1 you would write it as A1.
- There is no specific function related to division

Function to raise a number to the power of x

- Writing the function as number1^number2 will result in the first number being multiplied by the power of the second number.
- POWER(cell1,cell2) will take the first cell and multiply it to the power of the second cell.

Function to find the biggest or smallest number in the range

- Assuming the numbers are all located next to one another select a cell that is connected to the other cells to receive the results before selecting the AutoSum option. The Min option will find the smallest number and the Max option will find the largest number.
- Functions to find the same when the cells in question are not located next to one another are MIN, MAX, SMALL or LARGE. These are written FUNCTION(Cell1,Cell2) including another number after the second Cell will pull another number related to the function. For example, MAX(Cell1,Cell2,2) would find the second highest number in the set. Any number can be placed in the final number slot.

The COUNTIF function

The COUNTIF function is useful when you need to determine the exact number of times a specific word or value appears in the current worksheet.

- Writing a COUNTIF function should look like this =COUNTIF(range,criteria)
- In this case, range is the area you wish the formula to include, for example to COUNTIF columns A and B, you would write A:B.
- In this case the criteria is the data that you want Excel to search for

Function won't calculate

If you find that you have entered a specific formula into a cell that then appears to not calculate properly and instead simply lists the formula, then there are a few possible things to consider. First, double check to make sure that your cells are formatted as they should be (see Formatting Cells in chapter 2). Specifically, this problem can occur if your cell is set to Text instead of General. This frequently occurs when a new column is added next to a column that is formatted for text as it will take on the faulty formatting.

If your formatting does not seem to be the issue, it is important to ensure that you have not accidentally left the option to see all formulas on. To double check, press the CTRL key in conjunction with the ~key.

Formula won't update

If you know you have entered a function properly, but changing the references doesn’t affect the results cell this is likely because of incorrect settings.

- Go to the File tab and Choose the option for Options.
- Find the option labeled Formulas on the left side of the window.
- Next, find the option for Calculation, then the check box marked Automatic and make sure it is selected.

Chapter 5: Sharing Your Work

Printing

To add page breaks to your worksheets

- Start by looking at the current page break setting by opening the Print Options dialogue box.
- To do this go to the File tab and chose the Print option. This dialogue box can also be reached by pressing the CTRL key in conjunction with the P key.
- The result should be a view of all current page breaks.
- This view can also be reached by selecting the View tab and then the Page Break Preview option.
- Choose the row or column you wish to mark the point of the break and then choose the Insert Page Break option.
- Page breaks can also be simply dragged into position by choosing the File tab, followed by Options, then Editing Options and finally Advanced.
- Check the box offering Cell Drag and Drop before selecting OK to save you choices.
- With that box checked, dragging preexisting page breaks will move them to new locations.

To preview results prior to printing

- Start by selecting the sheet or group of sheets that you want to view before printing them.
- Select the File tab before choosing the Print option and then the option to preview the sheet prior to printing.
- This option can also be selected by pressing the F2 key in conjunction with the CTRL key.
- The result options will provide you with the ability to set the margins for the printed worksheet as well as changing the footers and headers.
- This menu also provides options for repeating columns or rows in the printed version as well as adding extra gridlines, altering page or and things like showing cell errors on the printed version along with comments and any headings that are in use.

To scale the printed version

- Start by selecting the worksheet you wish to modify before selecting the Page Layout tab.
- Go to the Page Setup grouping of options and click the button next to page Setup.
- Select the Page tab and then the option related to scaling, this will allow you to make the current worksheet appear smaller or larger when printed or simply to ensure it all fits on a single page.
- The Fit To option will scale the worksheet to automatically fit on the specified number of pages. The Fit To option ignores any preexisting page breaks.
- The width as well as the height of the sheet can be set, the first box is width, the second height, and both can be set independently. Setting either to 1 will ensure the entire worksheet fits on one piece of paper.

To print only one part of a worksheet

- Go to the Page Setup grouping of options and click the button next to page Setup.
- Select the Page tab and then the option related to print area then Set Print Area.
- When you choose a selection it is important you deselect it after you have printed because it will not automatically revert to normal printing options without your input.
- If you select multiple ranges that are not close to one another, they will each print on a separate page.

Charts and Graphing

Chart basics

- Start by adding the data you will ultimately use in the chart to rows and columns in what you think will be the best fit. Excel will automatically suggest the type of chart it thinks will best display the data. It is important that all of the data be contiguous for the Excel to understand that it is all part of the same chart.
- The data for radar charts, surface charts, area charts, line charts, bar charts and column charts can be arranged in either column form or row form and should always have headers to prevent Excel from creating them.
- Doughnut charts or pie chart data should be arranged with one row or column of labels and another of data.
- Stock chart data should be written using dates and names as labels, they should also be written as high values, then low values and finally closing values.

Column charts

Column charts are useful for data in both row or column form. Colum charts are ideal when you wish to show changes to data over time or wish to compare specific subsets of data. The average column chart places categories on the X axis and values on the Y axis.

Clustered column charts: These charts are used to determine similarities in values across multiple related categories. The standard column chart will only show values as vertical two dimensional rectangles. The 3D version of the Cluster chart simply adds depth to the two dimensional version, without actually tracking a third variable on the depth axis. Cluster column charts are ideal when you are looking to show a physical representation of disordered names, scale arrangements or broad ranges of value.

Stacked column charts: These charts show a more direct relationship between individual items in terms of the whole. They are primarily used to show how various variables contribute to a larger whole. The two dimensional version of a stacked column chart is displayed as a number of stacked 2D rectangles. The 3D version simply adds depth to the chart, it does not track a third value based on individual depth.

100 percent stacked column charts: These charts are typically used to compare how much each variable contributes to a total value but expressed in percentage points. It differs from the stacked column chart as it is more useful when there are three or more separate data series. The two dimensional version of a 100 percent column chart is displayed as a number of stacked 2D rectangles. The 3D version simply adds depth to the chart, it does not track a third value based on individual depth.

Three dimensional column chart: Unlike the other types of charts that are just dropping a two dimensional chart into a three dimensional model, a true three dimensional chart has an X, Y and Z access and all three chart a specific piece of data. Typically, categories are listed to the X and Z access while the Y axis displays variables.

Other column chart options

All the columns in column charts can also be displayed as pyramids, cones and cylinders these is purely a cosmic difference, all data will be displayed the same.

Bar charts

Bar charts are quite similar to column charts and share all the same subtypes. Bar charts are useful when it comes to illustraiting how individual items compare to one another. When it comes to choosing between the two, consider a bar chart when working with durations of time as your values or when the axis labels are longer than average.

Line charts

Line charts are a useful method of displaying data continuously over a specific amount of time. Typically, it is used to show how multiple variables performed along a set scale when compared to one another. Any data that is placed into rows or columns can be turned into a line chart and the X axis holds category data and Y axis contains the value data. Line charts are especially useful when various category labels are written as text and are spread out evenly such as quarters, months or years. If you have more than ten labels you wish to plot, a scatter chart is a better choice.

Simple line chart: Line graphs and versions of line graphs with markers to distinguish between multiple data streams are ideal when it comes to showing broad trends over a period of time, particularly when a large number of data points are being used and the order they appear in remains relevant. If you end up plotting quite a few different data streams, then you will want to avoid using markers.

Stacked line chart: Can be created to use markers or not, ideal when it comes to showing larger trends as well as the contributions of each category in relation to the whole. It is important to use markers otherwise it can be difficult to determine if the lines are actually stacked.

One hundred percent stacked line chart: Markers can be used as needed, it is useful when showing larger trends as well as how each category contributed to the end result. Stacked area charts are typically easier to discern.

Three dimensional line chart: This chart contains a third axis that can be modified based on variables. A true three dimensional chart has an X, Y and Z access and all three chart a specific piece of data. Typically, categories are listed to the X and Z access while the Y axis displays variables.

Scatter chart

Line charts and scatter charts look quite similar, even more so if you utilize the option to add lines between the scatter chart points. Despite the visual similarity, however, the two chart data along the X axis and Y axis differently. Scatter charts work differently from other charts, in that they plot values along the X axis and also values on the Y axis. These charts are useful when you need to chart two different values for a single category.

Scatter charts are also able to change the scale of the horizontal axis to deliver a greater degree of specificity. It is also useful when you want to use a horizontal axis with a logarithmic scale, when the X values are easily segmented or when there are more than 10

points on the X axis. It is also a great choice when you want to display numerous data points where time is not a factor. To prepare data for being put into a scatter chart it is important to place all of the values that you want graphed on the X axis in a single column or row and then enter the Y axis values in the next column or row.

Scatter chart with markers: This type of scatter chart will compare a set of values and is best used when the addition of lines between the points would only lead to confusion of if the individual points are not expressly related.

Scatter chart with lines: The points on a scatter chart can be expressed with a line as well as markers or without. A line with no markers is typically useful when expressing an overall trend without a regard for specifics.

Pie chart

For data that can be expressed in a single column or row, the best choice to display it visually is typically a pie chart. Pie charts are typically used to show individual parts of whole in relation to the combined total of all of the parts in question. The percentage of each categories contribution will also be displayed as a percentage. Pie charts are the perfect choice when none of the relative values are negative, none of the values are zero, there are no more than seven categories being graphed and, most importantly, all of the values are related to a larger whole.

Standard pie chart: The most common variation of the pie chart can be displayed in either two or three dimensions, though the added dimension does not map to any variables and is just for show. Each section of the pie chart can also be left clicked on for additional emphasis.

Pie of pie chart: This pie chart will display the specific breakdown of one of the sections with its own pie chart or bar graph. This is the right type of chart to use if one section of the pie chart is too complex to simply be reduced to a single slice.

Exploded pie chart: This version of the standard pie chart gives each individual section add emphasis by placing space between each. This version of the pie chart can also be shown in two or three dimensions though the added dimension does not map to any variables and is just for show.

Doughnut charts

Doughnut charts are similar to pie charts in that they show individual values related to specific categories in terms of percentage of a larger whole. Doughnut charts are used

instead of pie charts when more than one value is being tracked per category. In many situations a stacked bar graph is easier to read than a doughnut graph. Doughnut charts contain all the various subtypes as pie charts

Area charts

Area charts are useful for making the magnitude of a category's values change over time more readily visible. They are also an easy way to emphasize each value in relation to the whole. Area charts typically show a variety of plotted values as well as their sum total.

Standard area chart: A standard area chart can be displayed in two or three dimensions, the unstacked variation of this 2D version can be difficult to view as parts of the data will be obscured. The 3D version allows you to include a third variable for the Z axis to chart though it can still be difficult to see all the layers of data.

Stacked area chart: This version of the area chart is the most commonly used as it displays various categories on top of one another for easy comparison. This version of the area chart can also be shown in two or three dimensions though the added dimension does not map to any variables and is just for show.

One hundred percent stacked area chart: These charts are typically used to compare how much each variable contributes to a total value but are expressed in percentage points. It differs from the stacked area chart as it more useful when there are three or more separate data series. The two dimensional version of a one hundred percent column chart are displayed as a number of stacked 2D rectangles. The 3D version simply adds depth to the chart, it does not track a third value based on individual depth.

Creating a simple chart

- Start by selecting all of the data that you want to include in the chart. You may also select a single cell and Excel will determine what other cells contain related data. Instead of clicking and dragging you may also select the first cell, hold down the SHIFT key and then select the last cell.
- Chart options are available from the Insert tab in the charts grouping.
- Each various type of chart has its own list of options which can be found by clicking the arrow beneath its picture. Created charts are embedded in their current worksheet by default

Changing a chart's location

- Once a chart has been embedded, you can move it to a different location in another worksheet or workbook by first selecting it by left clicking on it.

- The resulting Chart Tools option will now have new tabs for Format, Layout and Design.
- Select the Design tab and look for the Move Chart option in the Location grouping of options.
- The option to determine where to move the chart will be displayed and you will be able to choose the option to add the chart to a new sheet or other existing workbooks or worksheets.
- In order to make the chart embed properly in the new sheet it is important to select the Object In box and make sure it includes the destination worksheet.

Change the style of a chart or the way it is laid out automatically

Charts that have already been created can also be changed on the fly through the use of numerous predefined options. These predefined options can be further defined based on specific needs and preferences.

- Start by selecting the chart that you wish to change which will bring up the Chart Tools options list while at the same time ensuring the Format, Layout and Design tabs are readily accessible.
- The Design Tab will provide access to the Chart Layout grouping of options which will allow you to modify some basic visual elements of your current chart.
- Alternatively, you can use the Chart Styles grouping of options to modify your chart in a variety of ways primarily related to presentation color. Additional varieties will be available by clicking on the More arrow.

Change the style of a chart or the way it is laid out manually

- Individual elements of each chart can also be changed manually, to do so start by selecting the chart that you want to edit to bring up the Chart Tools menu with Format, Layout and Design enabled.
- Select the Format tab and then the Current Selection grouping where the arrow to the right of the Chart Elements option will provide you with access to a variety of chart elements.
- Options will include shape styles, shape effects, shape outline, shape fill.
- Text can be altered with a variety of effects as well as individual filling and outlining options. If you add anything using WordArt it cannot be removed later, it can only be changed or deleted.
- The Layout Tab will provide you with access to various elements as well including labels, data presentation, the legend for the chart, the labels on each axis, visibility of gridlines and the label for the chart. If 3D chart variations are enabled, then 3D options will also be available here.

Add/remove chart titles

Adding titles to charts and individual chart X and Y axes provides an easy way to make complex information more readily apparent. Title options can be found under Chart Tools once a chart has been selected to allow the access to the Format, Layout and Design tabs.

- To add a title to a chart select the Layout tab and the grouping of options titled Labels to find the Chart Title option.
- A box will appear labeled Box Title, fill it in and determine where you want the title to be placed.
- Text formation options will appear once the text is highlighted; traditional formatting options will also be available.
- To add titles to the axes, start by selecting the preferred chart and then viewing the Layout tab, the Labels grouping of options and the option labeled Axis titles.
- This option will provide you with the opportunity to label all the axes including multiple X or Y axes. To add a title for the Z axis, select the option labeled Depth Axis Title.
- Enter a title and you will be provided with formatting options as well.

Adding data point labels

Individual labels can be added to specific data point in some charts to emphasis specific areas of importance.

- To add a single label to all data points in a specific series or to a single point in a series start by selecting the desired chart to pull up the Chart Tools option.
- Select the layout tab, followed by the Labels grouping of options and the option for Data Labels
- This will provide you with options when it comes to naming individual or multiple labels as well as removing unneeded labels as well.

Add a legend

A legend is a quick and easy way to ensure that everyone viewing your chart knows exactly what they are looking at.

- To add a legend to a specific chart start by selecting the desired chart to pull up the Chart Tools option.
- Select the Layout tab and the grouping of options titled Labels to find the Legend option.
- Select the options related to your specific graph, additional options are available under the More Legend Options button.

- Legend adjustments can be made through this window or by dragging the legend using the mouse. Adjustments made through the options menu will automatically populate and make adjustments to data placing as needed.
- Selecting the legend and hitting the delete key will remove the legend from the chart.
- Selecting the individual legend entries will allow you to edit them individually.

Modify chart size

- Charts can be moved or resized by simply dragging them as required.
- Charts can also be resized from the Format tab by selecting the Size grouping of options then Shape Width and Shape Height. Entering a number and pressing the ENTER key will automatically make the requested changes.
- Additional options are located in the same place on the ribbon under the button next to the Size label. Here you will be able to determine if you want the chart to scale, rotate or be resized.
- The properties tab provides controls regarding how the chart moves in relation to how cells more or are resized in the worksheet.

Create a chart template

If you personalize a chart in such a way that you will want to use it again, that chart can be saved as a template for future use.

- Start by selecting the chart that you will want to save for future use.
- Select the Design tab and look for the grouping of options labeled Type and choose the Save as Template option.
- By default, after you enter a name for the template, it will be viewable under the Templates option in the Insert Chart menu.
- Giving the template a name and saving it will populate future charts with all of the colors, format and height and width specifications as the original. It can then be modified as normal.
- The template will be available across worksheets and workbooks.

Chapter 6: Error Messages and Bonus Tips

Common Error Messages

If you enter a function or formula into a cell and the result is an error message, then it is likely you didn't quite get everything right the first time. The error message that appears is not random, however, and what is displayed in the cell will give you an idea of what you need to fix to get the answer you were looking for.

- *#NULL!* Will appear if you list a point where two ranges intersect and they do not actually intersect at that point.
- *#DIV/0!* Will appear if your formula attempts to divide by zero.
- *#Value!* Will appear if one of the variables in your formula is an incorrect type based on Excel's specifications. This typically occurs if a text value is in the wrong place.
- *#REF!* Will appear if the formula you have entered references a cell that does not contain information.
- *#NAME?* Will appear if the formula has an unrecognized name or if some of the text within the formula returns as unrecognized.
- *#NUM!* Will appear if the formula contains a number that is somehow invalid.
- *#N/A* Will appear if a certain value that is referenced cannot be used by a specific formula.

If a cell returns ####

This issue can occur for several reasons, the simplest being that the cell in question is not large enough to show the entire result. Resizing the cell should be your first recourse. If the cell continues to show #### regardless of its width, then the next most likely scenario is that the cell is trying to display a time or date but the given information does not fit into the required structure. Double check what is meant to be in the cell and any formulas or formatting that is on the cell, just in case. Also double check to ensure the cell has the appropriate formatting (see Formatting Cells in chapter 2).

Tips

Remove duplicates

Removing duplicate information automatically in larger worksheets can be a significant timesaver and can make convoluted sheets much easier to sift through.

- Start by selecting the data you want to remove the duplicates from.
- Visit the Data tab and under the Tools grouping you will find the option to remove duplicates. This will remove individual cells with duplicated data as well as entire rows or columns.

Turn rows into columns

- Begin by highlighting the row or column you wish to change into a column or row.

- Right click on your selection and chose the option for Paste Special
- Select the transpose option from the resulting dialogue box and select OK to confirm your selection.

Split a cell into multiple cells

- Start by selecting the data you wish to manipulate
- Visit the Data tab and select the option labeled Text to Columns under the Data Tools grouping.
- The resulting options will provide you with several choices including Delimited which will allow you to break up the cells information based on tabs, spaces or commas. Delimited options include custom options so you can use any character you choose.
- The Fixed Width option will allow you to choose exactly where the split will occur.

Try conditional formatting

Conditional formatting will allow you to change things such as the color or font used in the cell based on information with the cell.

- Conditional formatting options can be found on the Home tab under the Styles grouping.
- When you first select it you will notice a wide variety options when it comes to what conditional formatting can do. Start by choosing New Formatting Rule.
- From this new screen you can choose the type of rule that you can result in the formatting. Consider minimum and maximum values as well as color gradients for each.
- Rule types include formatting all cells based on their values, formatting only cells that contain specific values, formatting only the highest and lowest ranked values, formatting only values that are above or below the average, formatting only values that are unique, formatting only the values that are the same and use a formula to determine cell formatting.

Adding an Excel chart to a word document

- Start by selecting the chart you wish to move into a word document.
- Press the CTRL key in conjunction with the C key to copy the chart to the clipboard.
- In the Word document, choose where you want the chart to be, this can be tricky as word documents are limited when it comes to spacing concerns.
- On the Edit menu, look for the Paste Special option.

- This will open a new dialogue box, choose the option for an Excel Worksheet Object
- Select the paste link option on the left side of the dialogue box.
- This will allow you to then view the chart in Microsoft Word, but you will not be able to edit any part of the chart further, make sure it is right before you copy it.

Conclusion

Thank you again for downloading this book! I hope it was able to help provide you with everything you need in order make the most out of the spreadsheet program that has most likely been on your computer for years. Excel can do almost anything you can possibly imagine; you just need to know how to set it in motion. While it may seem difficult at first, with practice everything that initially takes hour will someday be finished in what just seems like seconds.

The next step is to stop reading already and start practicing. Remember, using Excel properly is a skill, and like any other skill it needs to be used regularly if you ever hope to improve.

Finally, if you enjoyed this book, then I ’ d like to ask you for a favor, would you be kind enough to leave a review for this book on Amazon? It ’ d be greatly appreciated!

Bibliography

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Thanks to a hands-on approach education as programmer and long-lasting experiences in big companies, he has developed strong training and communication skills that have enabled him to hold courses, seminars and academic lessons aimed at different audiences.

He has mastered in the strategic usage of the calc spreadsheet and its application to create forecasts, monitoring and business modelings and in the application of the LEAN method in big production companies.

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