EXCEL

A Step-by-Step Guide to Learning the Fundamentals of Excel

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Introduction

I want to thank you and congratulate for downloading the book, “ *Excel: A Step-By-Step Guide to Learning the Fundamentals of Excel ”* . In this book, you will begin with the basic knowledge of this program. As you move through, you will then be given a tremendous amount of different functions that are utilized in everyday business from being an engineer all the way to organizing your own DVD collection.

Once you have finished reading through the book, it is highly suggested that you use the book as a reference in order to practice this program, as Excel is a program of large magnitude. Most companies’ use Excel-based programs and other programs that are similar. If you arm yourself with this knowledge, you will be unstoppable.

Even though this is just a computer program, the history is a good one. It was originally marketed as a spreadsheet program and was called Multiplan in the year 1982, which was extremely popular on CP/M computer systems. However, on MS-DOS systems, it had lost its popularity due to lotus.

This had prompted the development of new spreadsheets called Excel, which had started with the intention of doing everything that Lotus 1-2-3 does, only better. The first version of Excel was released to the public in the year 1985 on the Mac and then on Windows in the year 1987.

Lotus was pretty slow to bring 1-2-3 to the Windows operating computers and by the year 1988, Excel had begun to outsell Lotus. It helped Microsoft earn the lead in PC software development. This accomplishment solidified this company as the valid competitor and had shown its future of developing graphical soft wares.

Microsoft then pushed its advantage with the new releases, about every two years. The current version for Windows platform is called Excel 11. Most functions and formulas from the first version still work newest version; however, there are always new and improved functions to learn with the upgrade.

Now that you have downloaded the book and you know the great history of their tremendously powerful program, you can move on to learn what you need to know to become a pro.

Chapter 1: Navigating Around Excel – The Basics

In this chapter, you are going to learn the basics in order to get started on this advanced program. Once you have learned this program you will find that many companies have documents and systems that are based on the same principles. You will also be able to utilize this program for personal aspects like budgeting and much more.

What can you do with Excel?

The benefits to using Excel for a small business can be pretty obvious, it offers a grid-like platform that you are able to utilize and transform data into for different information. Here are some reasons why you would use this program.

Fact Checking

While it is possible to do calculations that are required for a spreadsheet inside of your head or on paper, with the program you will not need to do any of that. You could make an error, whereas using this program will ensure accuracy. Excel will relieve you of any need to perform any calculations with just a few features that are included.

Printing Press

Although the business will have to take care of printing, Excel can turn the small business into a small printing press without needing to enlist a graphic designer, any publishers, or any layout personnel.

Accessible Records

One of the most beneficial reasons to use this program is how you are able to access information at any time on the spreadsheets. Unlike keeping the data in a ledger, which

will get messy with the cross-outs, liquid paper, and erases, the spreadsheets will remain in great condition, yet change as you see fit. You can even enlarge the document using the zoom features any time that you need to get the information. You are able to update the records by creating templates that you are able to open, add to, or delete from. You can then re-save them as a different version.

Collection Spot

Excel offers you innumerable ways to assist in daily business function of math and finance, but it can also serve the business by being a catchall. If you are preparing just one spreadsheet from multiple documents that includes other spreadsheets, portable document format files, images, and other files, this program will help you corral everything into just one file. Use the Insert tab to add in other objects to your spreadsheet. This will keep everything together for you. You can add extra sheets to the spreadsheet towards the bottom of the working page or you can keep everything on just one sheet and take advantage of your scroll bar.

What is the Toolbar?

The toolbar is a bar in which buttons are presented in order to work through the program and perform certain actions. Excel has many different toolbars and many more buttons that you will utilize and some that you will rarely use. The great thing is that you are able to customize the toolbars so that you have the buttons that you are using quite often are more accessible while you are working on your documents.

How to Hide or Show Your Toolbar:

- Right click on your Toolbar.
- Observe your shortcut menu.
- Select the toolbar that you would like to turn off or on. The toolbars with the checkmarks are the toolbars that are on.

How to Move Your Toolbars:

- Observe your toolbar that you would like to move or to make it float.
- Point to the left of the toolbar that is docked. You will see a vertical row of two dotted lines.
- Click and hold the toolbar. Drag your toolbar to the new location.
- Release the mouse.

How to Dock Your Toolbars:

- Observe your floating toolbar that you want to be docked.
- Point to the top of your toolbar that is floating.
- Click and hold the toolbar. Drag it to the new location.
- Release the mouse.

How to Customize the Toolbars:

- From the menu ‘Tools’, choose Customize in order to open the Customize box.
- Click on the Commands tab.
- From the list ‘Categories’, select the category of the command that you want to find.
- From the list ‘Commands’, select the command that you want.
- Drag your command into the toolbar.
- Repeat this to add the rest of the buttons that you want in the toolbar.
- Click on Close when you have finished.

How to Rest the Toolbars:

- From the menu ‘Tools’, choose the Customize option in order to open the dialog box ‘Customize’.
- Click on the Toolbars tab.
- Select your Toolbar that you would like to reset back to its default.
- Click on the Reset button.
- Click on OK in order to confirm that you want to do this.
- Click on the Close button when you have finished.

WINDOWS USERS: Customize the Menus:

- Be careful when you are following the steps. It is extremely easy to lose the menus.
- From the menu ‘Tools’, choose the Customize option in order to pen the dialog box ‘Customize’.
- Click on the Commands tab.
- From the list ‘Categories’, select the menu that you would like to add.
- From the list ‘Commands’, select the command that you would like to add.
- Drag the command to the appropriate menu.
- Repeat this for the rest of the menus that you would like to add.
- Click on the Close button when you are finished.

MACINTOSH USERS: How to Customize the Menus

- Be extremely careful when you are following these steps. It is extremely easy to lose your menus.
- From the menu ‘Tools’, choose the Customize option in order to open the dialog box ‘Customize’.
- Click on the tab ‘Toolbars’.

- Check your Worksheet Menu Bar. Another menu bar will appear under the existing toolbars.
- Click on the tab ‘Commands’.
- From the list ‘Categories’, select the menu in order to add commands.
- From this list, select the command that you would like to add.
- Drag the command to the appropriate menu using the new menu bar that will appear.
- Repeat this for additional menu options.
- Click on Close when you have finished.

How to Restore Menus:

- From the menu ‘Tools’, you will need to choose the Customize option in order to open up the Customize dialog box.
- Click on the tab ‘Commands’.
- Click on the menu that has a command that you would like to remove.
- Select the command and then right click on it.
- Choose the Delete option from the list that drops down.
- Repeat this if you need to remove additional menu options.
- Click on Close when you have finished.

What is the Formula Bar?

The formula bar is the bar at the top of your screen that resembles an address bar found in an Internet browser. It is also called the formula box. It is a section inside this program, as well as other spreadsheet programs and applications. It displays the contents of a cell and will allow you to view or create formulas. In order to begin creating a formula, you will click the cursor on the bar and then you will enter an equal sign. We will cover the formulas in another part of this book.

What are Cells?

The cells in this program are where you will type in the content that you would like to put in the document. They are the small boxes that are on the screen. It is in the like a grid. Each cell is an individual place for content. We will go through manipulating and editing the cells later on in this book.

What are Graphs and Charts?

Graphs and charts are used in order to display information side by side in a visual aspect in order to view information simultaneously or to compare easily. You will use a graph or chart whenever you would like to visualize data, making it very clear and easy to comprehend. At times one glimpse of a chart will save a lot of time and effort of trying to figure out any meaning of data.

You should always verify information before you create a chart. Ensure that the data is organized in the correct manner. It should have a table layout that has no spaces in between the columns or rows.

There are different types of charts that you are able to choose from. However, there are a few that are the most popular when it comes to displaying organized information in a visual way. These three are Line, Column, and Pie charts.

There are some aspects of the chart that you need to keep in mind before you create one. They are the Legend, Labels, and the Y-axis scale. The Legend can be put in any desired spot around your chart, but it can also be hidden. It represents the meaning of the lines or columns. You will also have Labels. You are able to add small numbers to your columns in order to show the exact values.

Chapter 2: Functions and Formulas

This program is very powerful. It uses functions and formulas as the basis of structure. You will use many different functions and formulas for different reasons and in different types of documents. In this chapter, you are going to learn all about the functions and the formulas that can be utilized in this program. But, what is a function?

A function is a calculation or an operation that offers a result. The inputs of the function are called arguments. All of the functions will begin using an equal sign. This is what lets Excel know that the content in a cell is a formula. It is important to note that the program uses upper case letters for formulas; however, you do not have to.

In order to use a function or a formula, you will type it into the formula bar that is at the top of your worksheet. It resembles an address bar in your favorite Internet browser. You must always enter the equal sign before typing in the function. Here is an example.

For this example, we are going to assume that we have to add cells A:2 and A:4. The total will be in the cell that you click on and enter in the formula or function. Here is what it would look like.

=sum(A:2,A:4)

Now that you are aware of how to use the functions, you are able to go through the list that is provided. It is an extensive list of categories so that you are able to sort through and find the appropriate function that you need for your document.

If you should be an office administrator, then you probably already use Excel. The same goes if you are a sales person. If you happen to be a financial analyst, then you will most definitely need this program. For these and so many other types of professions, working in spreadsheets is a very essential tool in your daily routine.

Those who are wizards with math will probably take to Excel immediately and use it just as they would a natural extension of their computational processes. The rest of us will probably need a bit of help with this program. If you were one of those who did not pay attention to algebra in high school, don’t worry. All you will need to do is learn some of the basic formulas and functions from this book so that you are able to apply them while you are working.

If you do not know whether or not if you need Excel, then you probably have not seen what this program is able to do. Once you know, then you will find many ways to use it in

work in order to make it less complicated and tedious.

Microsoft Excel is not just a program that you can enter names and numbers into. For example, if you want to make a list of names of the students that are in your class, then you are able to just make a Word document for this. But if you want to make a list that does calculations like for grades, then you need Excel.

Getting to Know Your Interface

Before you dive into the formulas, you will need to review the interface. You may know this already, or you may be starting from scratch. Although there was a brief overview in Chapter 1, in this section we are diving into more of the specifics of the program so that you are ready to go as you move through this chapter.

When you have opened a blank spreadsheet, it is called a ‘workbook’ or a ‘book’ and each of these spreadsheets in a book are known as a ‘sheet’ or a ‘worksheet’. The top of your program is dominated by a gray ribbon, which is subdivided into tabs like ‘Home’, ‘Insert’, Page Layout’, etc. These are then further subdivided into sections.

Below your ribbon is a name box. This name box allows you to rename cells and then, to the right, is an area in which you can use to create formulas. If you hover over the icons, you are able to see what the purpose of each of the buttons is. However, what we are more concerned about is the area where the formulas and the functions will be shown.

Finally, your worksheet is arranged into columns, which are denoted using letters; as well as rows that are indicated by the use of numbers. Each of the locations is called a cell, and a group of these cells is called a range. If you have many sheets in one book, you are able to quickly flip through them by using the tabs that are at the bottom of your sheet. Below that is the status bar, which you are able to adjust the page views and zooming level on.

Functions Categories

If you find that you cannot remember the formulas that you need while you are working, you can use the Function Library under the Formulas tab. There are thirteen different categories for functions. Some of the categories include:

- Mathematical
- Date and Time
- Text
- Logical
- Lookup and Reference

Defining and Creating Formulas

In this section, we are going to start with the basic rules of creating formulas and using the functions. One of the best ways that you can learn is through practice, so there are many examples and explanations with much detail. The topics that are covered in this section include:

- Columns and Rows
- Example of Math Function
- Operators
- Operator Precedence
- An Example of Financial Function
- Using a String Function

Formulas are a mix between function, operators, and the operands. Before you write a few formulas, you need to first create a function. However, before you can create a function you will need to firstly understand column and row notation. The rows are horizontal and the columns are vertical. In order to remember this is to think of a column holding up the roof, columns go up and down, which means that the rows go left to right.

Columns are labeled using letters and the rows are labeled with numbers. The first cell in your spreadsheet will always be A1, which means that it is in column A and row 1. The columns are labeled from A to Z. When the alphabet ends up running out, then it will do a double alphabet; AA, BB, CC, etc.

All right, now let us demonstrate on how you should use a function. You will use functions by just typing them directly into the cell or by using the function wizard. The

function wizard will open when you either choose a function from your Formulas menu on the Function Library. Otherwise, you type in the equal sign into the cell and a drop down menu will show you what functions you are able to pick from.

The wizard will tell you what arguments you will need to provide for each of the functions. It will also provide a link to the online instructions should you need more help understanding the function and how to use that particular function. For example, if you were to type in =sum into your cell, the in-line wizard will show you what arguments are needed for the function SUM.

When you choose a function from the menu ‘Formulas, the wizard will pop up in a box. For the first function, let us use the function SUM(), which will add a list of numbers together. Try it out. Here are the steps to take.

1. Type this into the cells:

- A1: Family Vacation
- A2: Airline Tickets
- A3: Rent Beach House
- A4: Charter Fishing Boat
- A5: Dog sitter
- B1: Leave Blank
- B2: 2345
- B3: Rent Beach House
- B4: 800
- B5: 60

In order to calculate the complete cost, you are able to click on the cell where you would like the total. You will then type in =b2+b3+b4+b5. However, it is easier to just use the formula =SUM(). In the program Excel, you will look for the symbol Σ , which is located at the top left side corner of the screen. This is the AutoSum button. Mathematicians use this letter, which is Greek, for adding a series of different numbers together.

If your cursor is below the family budget numbers in the example, the program is intelligent enough to know that you would like to sum the list of numbers that are above where you have placed the cursor, so it will highlight the numbers. You will then press the

Enter button in order to accept the range that was selected by the program or you can use your cursor in order to change it.

In the formula =SUM(B2:B9) the program sums up the numbers from cell B2 all the way to B9. It is important to know that the math functions will not work if you use letters. If there is an error, the program will display #NAME?. If you find that the error is displayed in the cell that you placed the formula, there could be some different reasons for the error. Here is a list of the errors that it could be:

- A bad cell reference.
- Using a letter or letters in the math function.
- Omitting the required arguments.
- If you have spelled the function name wrong.
- If there is an illegal math operation like a division by the number 0.

The simplest way to select arguments in the calculation is to use your mouse. You are able to add to or even remove it from the list of arguments in order to function by enlarging or even making the box smaller so that the programs draws when you move your mouse or click on a different cell.

Calculation Operators

There are two different types of operators. These operators are math and comparison. There are also other operators that are not related to the mathematics like the & sign, which means to concatenate two different strings. For example, if you want it to say “Excel is Fun”; you would type in =“excel”&“is Fun”.

- Math Operators
    - + This means addition. It will add cells together when put into a cell with the equal sign.
    - - This is the subtraction sign or negation sign. It will subtract a cell by another cell when entering the cell locations.
    - * This is the multiplication sign. When using this sign you can multiple cells.

    - / This is the division sign. Use this when you want to divide a cell by another cell.
    - % This is the percent sign. You can get the percentage of a cell or multiple cells by using this sign.
    - ^ This is the exponent sign.
- Comparison Operators
    - = This will equal the cells. Example: 2=4 or “b” = “b”
    - > This is the greater than sign. If a number is greater than another.
    - < This is the less than sign. This is to show a number is smaller than another.
    - >= This shows that a number is equal to or larger than another number.
    - <= This means that a number is equal to or is smaller than another number.
    - <> This means that it is not equal. For example, 4<>6

As you are able to see above, the comparison operators work with text and numbers. It is important to note that if you have entered =“a”>“b” into one of your cells it will return with “FALSE” since “a” is not more than “b”. The letter B comes after the letter A in the alphabet.

Operator Order Precedence

Order precedence is an idea from mathematics. This program follows the same rules as mathematics. The topic is a bit more complicated, so take a deep breath before we move further. Order precedence means that there is an order in which the computer will calculate your answer. Therefore, it is important that you understand the order precedence so that you can write your formula correctly. Here is the order in which the program works.

- The program will evaluate the parentheses first.
- It will then use the order precedence rules that are followed in mathematics.
- When two of the items have the same exact precedence, the program will work from left to right.

Here is the order of operations in math so that you can apply it in your program for your formulas:

- Work the parentheses first.
- Then it will be any multiplications and divisions working from the left to the right.
- The last step is to do all the additions and the subtractions working from the left to the right.

There are other rules for precedence that is related to the strings and the reference operators. For the moment, we are going to stick with what was just covered.

Entering Formulas and Functions in Excel

You will use a lot of different formulas and functions for different reasons from keeping your books or for organizing inventory. You can even use this program in order to keep client records and more. Formulas and functions are your keys to staying organized and conducting business in a professional manner. In this section, you are going to learn how to enter a formula into a cell. Here are the steps you will take in order to do it.

1. Select the appropriate cell that you will want the content to be. This is where you will type in your formula.
2. In order to show Excel that you would like to enter the formula, you will type in the equal sign. (=)
3. For an example, assume that you had entered the number 2 in cell A:1 and the number 3 in cell A:2. In order to add these together, you would go to cell A:3 to add these together. The formula that you will use would look like this: =A1+A2 (TIP: Instead of typing in the cell numbers, you are able to type in the equal sign, click on the first cell, add in the plus sign, and then hit the Enter key. This will add the cells together for you automatically.)
4. If you have noticed that you made a mistake with a number in the cells that you are adding together, you can change it and the cell with the formula will automatically update. For example, if you find that you should have typed in the number 3 instead of 2 inside of A:1, then just replace it with the 3. The total will then change.

Editing Formulas and Functions in Excel

There will come a time when a formula is messed up or you need to change it for some reason. In this section, you are going to learn how to edit the formula to ensure that the worksheet is correct, along with the rest of the content within it. Here are the steps that you will follow in order to edit your formula.

1. You will need to click on the cell where the formula was entered. When you click on it, the formula will be displayed at the top of the worksheet inside of the formula bar. This bar resembles an address bar in your favorite Internet browser.
2. You will edit the formula right inside of the formula bar. Ensure that it is correct.
3. Once you are done entering the information that needs to be inside of the cell and perfected your formula, you will then press the “Enter” key.

Remember, Excel uses an order that is the default when it comes to calculations. If a piece of your formula is inside of parentheses, then that part will be calculated before anything else. It will then perform the division or multiplication calculations. Once this is finished, the program will then add and subtract the rest of the formula.

- Firstly, Excel will perform multiplications. (A1*A2)
- Then, Excel will add the value of the cells.

Copying and Pasting Formulas and Functions

Copying and pasting formulas can be a very big time-saving tool. When you are working with a worksheet that requires multiple cells having the save formula, then you will be happy to know that you will be able to use the copy and paste functions in order to keep from having to type the formula in every single cell that it needs the formula. When you copy and paste a formula, the program will automatically adjust the cell references in order to ensure that the codes are correct. Here is how you will complete that, including an example to practice with.

- Enter this formula into A4: =A1*(A2+A3)

- Select the cell that includes the formula. In this example, it is cell A4.
- Right click on the cell and click on ‘Copy’.
- Choose the cell in which you would like to paste your formula. In this example, we will assume that you need to paste the formula in cell B4.
- Click on cell B4. Right click the cell, and then under ‘Paste, click on ‘Paste Options’.
- You are also able to drag the formula to the cell. You will select the formula cell, which is A4 in the example. You will click on the lower right corner of A4. You will then drag it to cell B4. This is a lot easier and it will give you the same result as if you were to copy the formula from the cell and paste it.
- The result of copy and pasting the formula will give you the same function as if it were in the A cells, only it will calculate the B cells.

Inserting Functions

Every function has the very same structure. For an example, the SUM function will remain the same no matter what cell it is in. The only thing that will change is the cell name. An example of this formula would look like this: **=sum(A1:A4)** Notice how in this example the : is used instead of a plus sign. This means that the formula will add all the cells from A1 to A4 together. Unlike the formula =sum(A1+A4), which will add only those two cells together. If you have issues remembering the functions that you may need, then you will be able to insert a function.

It is pretty difficult to remember all of the functions that you may need for different tasks. Fortunately, you are able to use the Insert Function feature. It will help you insert functions that you need. Here are the steps that you can take in order to insert a function while you work.

- Firstly, you will select the cell in which you would like to insert the formula.
- Once you have selected the cell, you will then click on the Insert Function button. This can be found to the left of the formula bar. It will appear like this: ***fx***
- After you click on the button, the Insert Function dialog box will be displayed for you to use. You will be able to search for a function or you can select a function

from categories. As an example and exercise, click on COUNTIF underneath the ‘Statistical’ category.

- You will then click on the OK button. The Functions Argument dialog box will then appear.
- You will then click on the Range box. Select your range to be A1:C2.
- You will then click on the Criteria box, and then type >5.
- You will then click on the OK button.
- The result of this formula will have Excel count the cells that are greater than 5. It will give you a total of the cells that display a number that is greater than the number 5. If you know this formula and need it, all you would have to do is type in the formula to the cell or into the formula bar.

Most Used Functions

The Excel functions will greatly enhance your own ability to perform daily tasks. While there are virtually hundreds of functions, there are some that you will need to use consistently. Whether you work in an office or you own a small business, using this program to keep track of the finances or to use it casually, these functions will prove to be extremely important and offers the saving of precious time. It will also enhance your ability to really create a great performing spreadsheet.

VLookup Function

The Vlookup function is one of the most crucial functions that is out there, yet there are many people who don ’ t know how to use it or know anything about it. This function will look for a certain piece of content that is in a very large table of data. It will pull in any field from this table into a new table.

Let us use an example. Assume that we have two tables. The first table is just a list that consists of three names. The second list has 25 names with three test scores that each person took. What you want to do is to pull the second test score from the large table and put it into a smaller list of names. Here is what you will see in this example.

Subject 2
Morty Seinfeld
Kramer
David Puddy

Now you would want to use the function VLOOKUP in order to pull the test score from the Subject 2 from the larger table. You will do this instead of looking up the scores for each name yourself. You are able to do the function. In order to do the function follows these steps:

- You will need to go to the cell that is next to the name Morty Seinfeld inside the small table. Insert the function or you can click on the Fx button by the formula bar.
- Once you have pressed that, you will need to choose the vlookup function. You can also type it into the search box to find it.
- Click on the function, you will then see the wizard displayed. This is where you are able to begin to enter the variables. You will see some different elements in this wizard. They are:
    - Lookup_value: This is your cell where you are trying to find in the larger table. In this certain example, you are looking up Morty Seinfeld. You could just type it in there; however, you want to be able to copy and paste it into the rest of your table, so you need to make it a reference.
    - Table Array: This is the range in which the larger table is. Tip: The leftmost column will need to contain the field that you are looking for. Another Tip: Highlight the whole column. If you just highlight a range, then once you copy your formula, this entire range is going to change as well.
    - Col_index_num: This is the column that you want to pull. In the larger table, name is in column 1. Subject is in column 2, and so on.
    - Range_lookup: This is either true or it is false. If you choose False, then the program is going to look for the exact match. In this case, it will look for

Morty Seinfeld. If it does not find it, it will return with #N/A. If you enter 'True', then it will look for a match; however, if it does not find it, it will return something that fits the closest.

Sum Function

The Sum function is the most widely used of functions that are out there. If you are familiar with this program, you probably already know this. We have also gone over this one a couple times. A gentle reminder of the SUM function though is that it will add cells and ranges together by using the formula: =SUM() by placing the range or cells into the parenthesis.

Max and Min Function

Max and Min functions will return the largest or the smallest results from a certain range of numbers. Let us use the test score example. If you have a list of the test scores and you need to find the highest score and the lowest score for each of the subjects, then you will follow these steps.

- First, go to the cell that is next to the highest score in the insert function. Go to the MAX function. This function will offer you the highest value.
- All you will need to do next is to drag the cursor over the cells that you would like to find the max value in.
- For example, if you want to find the highest score in Subject 2, you will drag your cursor down column C in order to make the program look in that subject only.

IF Function

The 'IF' function is utilized to determine if a statement is False or if it is True, then it will perform an action that is based on the results. The IF statement is written like this:

IF(Criteria,True Value,False Value)

For an example of this function, we will assume that we have a table of Forecasted sales for a group of salesmen. There is one column that states “Is Forecast over 150k?” We will want to make an IF statement that asks if the sales are over 150 thousand. If so, then do this action. If not, then do something different. The user will move to the cell where they want the results. Here is how you would use this function with this example:

- Click on the cell where the results need to be displayed.
- You will then insert the IF function.
- You will then fill out the fields inside of the wizard that pops up.
    - Logical_test: Here you will put the reference in order to Forecast the amount and check if it is over 150 thousand. You will type in –D4 > 150000
    - Value if True: This is where you will enter what you would like the result to be if True. You can then put any word or combination of different words. You are able to put in an amount or even put in a different formula.
    - Value if False: This is where you will enter what you would like the result to be if False.

Once you have copied this formula down, then it will test all of the fields in column D in order to Forecast and give you your results.

SUMIF Function

The SUMIF function will look up specific criteria and if it finds it, then it will sum it up with related cells. In the example table of the salesmen with their forecasts and the month of the forecast close, assume that the months are listed to the right. We will want to sum up their Forecasts for each of the months. You will go to the very first cell and then insert the SUMIF function. Here are the fields of this wizard:

- Range: This is a group of cells that you will look in. In the example, you want to find the months in the column.
- Criteria: This is the cell that you are looking for. In this specific example, January will be used.

- Sum Range: This is the one column that you need to look in, in order to pull out the dollar amount. In this example, it is the Forecast column, which is in column D.
- After copying it down, you will then get the results. This will change as the values in the original table changes.

COUNTIF Function

The COUNTIF function will work the same way as the function SUMIF; however, it will just count the fields that match your criteria, instead of summing them up. Sticking with the Salesmen example, a table will be added to the right that says, “Count by Month”. In this example, you would click on the cell K4 and then insert the function COUNTIF. Here are the steps that you would take in order to fill in the wizard fields.

- Range: This is where the range of data that you want to be counted is placed. You will check for specific criteria in this spot.
- Criteria: This is what it will be looking for inside the range. If you enter something like the month June, it will look there. However, you will want to make it a reference so that you can copy it down, so you will enter the number 14, which is the number January is in.
- You do not need anything else since you are only counting the cells and you are not adding anything up. So once you do this, it will then find four instances of the month January. You will double-check it by counting them. Just copy this formula down and you can get another table.

AND Function

The AND function is a function that is logical and checks multiple criteria. It will return a True value if all of the set criteria are True. Otherwise, it will show False. This type of statement normally gets linked inside of the IF statement. Where the statement IF is performed, there are certain actions that will depend on if the statement AND is false or if it true.

We will imagine a name sheet. This one has data on how many hours that are slept by men and women, along with their last year’s income. Let us say that we would like to find out

if each person is a man AND if the income was over 100 thousand. Since we need two fields to be True, then will need to use the AND function.

So let us fill in the wizard. You are able to fill it out with many different criteria fields. The first one is to ask is if they are a man or a woman. So, we will want C3="man". We are now checking the man and woman column and it will return True if they are a man. In this example, C3 says woman. So you will see the wizard that shows the word False.

Next, you will need to see if the income is over 100 thousand. So, you will enter D3>1000000. Column D is the income field so you will check if it is over the 100 thousand mark. In this example, it is not, so it will return as false.

Overall, you will need all criteria to be True so that the AND statement will be true. Since it is not, it will show false. You will then be able to copy down the rows.

OR Function

The OR function works in a much similar way as the AND statement. It will check multiple criteria. However, it will only require one statement to be true in order to make the entire statement true. Keeping with the sleep and income chart between men and women example, here are the steps to do this:

- You will be using the same data, but now you are looking for either criteria; if they have slept over eight hours or if their income is under 50 thousand annually.
- Since you are only looking for one of them to be true, then you can use the function OR.
- Criteria 1: B3>8 Here is where you are checking for the hours of sleep to be over 8. In this case, it's eight, so the result will be false. It is not over 8.
- Criteria 2: D3<50000 Since the income is over 10000, it is true. And since only on of the statements need to be true, it will make the entire statement true.

Left, Right, and Concatenate Function

The left, right, and concatenate functions are great functions for manipulating the data in many cells. You are able to take any of the numbers or the words in the cells and pull them

to the left or to the right inside of new cells. Conversely, you are able to combine cells into a new cell. Let us start by assuming that we have two columns. One with names and to the right, there is a column of phone numbers that go with the names.

Now say that you want to have a column with just the area code in it. You are able to use the left function on the phone number and then pull the three leftmost characters to the left. Here is how you would do this.

- Insert the function in the cell where you would like the column to begin with the area codes.
- Text: This is where you will look at and pull the information from. In this case, you will use the first cell that has a phone number inside the column that has the list.
- Num_chars: This is where you will choose the quantity of characters to move. Since the area code is three digits, you will put a 3 in this field.
- You will then copy the cell down for it to get all of the area codes from all of the phone numbers.

The right function works in the same manner. However, it just pulls the information to the right and not the left. Say that you would like to pull the last 4 digits of the phone number. You will use the right function to do this.

Concatenate: This is the function that will combine multiple cells or words into just one cell. Let us say that now you would like to combine the area code with the last 4 digits of the phone number into one cell. You will put the word ‘phone’ in the front of it. This can be accomplished using this function.

You will just put either the cell reference of the word in each of the text. For example, the beginning of the phrase is the word phone. Since you want the same word, you will just type it in the exact word. Then the next two you will just put in the reference so that you are able to copy it down.

ROUND Function

The round function is used in order to take the amount that has many decimals and then round it to the number of decimals that you would like to have. It is better than formatting all of the cells because if you format the cell 10.3678 into decimals, it will show you 10.37. However, the number in the formula will still be the expanded form. In this

example, we will assume that we have a table that has four quarters in column A, with labor, total expenses, and labor percentage following it. Imagine that you need to divide the labor into the Total expenses into column D. If you just use the formula B2/C2, then you will get a long number after your decimal.

Now that you can format the cell into 2 decimals, it will display correctly. However, if you are going further with calculation using that same amount, it will throw things off. So, instead, you will need to use the round function instead.

PROPER Function

The proper function is the text function that you use to capitalize each of your words. This will also make the rest of the letters in the worksheet small. For example, if you have some cells that look like this:

I like excel
EXCEL IS GREAT!
excel is great for solving probLems.

You will want to make each of the phrases into a proper looking text, which would be to have the first letter of each of the words capitalized and the rest small. So you will insert the Proper function.

NOW Function

The now function is a very simple one. It is an easy function that will just tell you what time and day it is. You are able to format it as a date in order to show the date and the time, or eve just the date. You can just type ‘NOW()’ into any cell or insert it. It will automatically look like this unless changed (of course, it will be that day and time):
10/12/2016 22:09

Chapter 3: Shortcuts

The cool thing about excel is all of the shortcuts that come with it. Even though you might know where it is, a little shortcut can make your Excel experience that much easier on you. This chapter will go over the shortcuts, what they do for you, and how you can use each of these in order to guide yourself through Excel. With a program like this and how extensive it is, often, knowing the shortcuts can save you a boatload of time.

- **Undo something**: this is used when you need to take out a previous action in order to edit it. This is good for when you mess up one of the columns, and you need to rectify it. To do so, you need to press Ctrl+Z
- **Redo**: this is used when you need to redo an action. For example, if you need to undo something, realize you didn't need to undo it, and then put it back in again, you use this. To use this, you press Ctrl+Y
- **Copy cells**: copying is used when you're trying to take parts of a cell out and copy them, for example, if you wanted to paste them in another location. It's a simple task, but it's great for those working to make sure that they do have everything squared away. In order to do this, you press Ctrl+C
- **Cutting cells**: when you're cutting a part out, you're taking it out entirely. This differs from using the copy function, because with copying, you still have the cell there, you just have to put the same information in a different cell on the spreadsheet. To do this, you can press Ctrl+X in order to put it into there.
- **Pasting**: when you want to put in a new sort of action, such as something you cut or copied, you use the paste function. It is used if you want to put multiple types of information into these various cells. To do this, you press Ctrl+V
- **Creating a new table or chart**: if you want to create a new table to work with, it's imperative that you know this. This is similar to some of the other various actions in other Word programs, but it should be known because it's easier to use the shortcut than navigate the File menu. In order to get to this, you press Ctrl+N in order to get there.
- **Hyperlinking**: a hyperlink is when you want to put in a link in one part of the document, in order to get you to another part. For example, maybe you have a portion of the table linked up to another portion of the table. This is also great if you're working to shortcut your navigation to other sections of the document. To

do this, you have to press Ctrl+K in order to do so.

- **Switching between sheets**: if you're working with various sheets in order to put together various charts in the workbooks in Excel, it's important to know how to do this with the shortcut. Now, you could just click on the tabs, but the shortcut is much easier because it'll allow you to move through the worksheets. To do this, you press Ctrl+PAGE UP to go up, or Ctrl+PAGE Down to do so.
- **Moving cells**: you might want to move cells in order to get them into different places. Perhaps one line of cells looks better in one area than it does another. In order to move this, you go to the home tab, clipboard, and then press Ctrl+X or Ctrl+C in order to move them. About Selecting rows: when you're selecting various rows, you will want to make sure that you choose the right thing. With this, you can move various rows around. To do so, you can press SHIFT+Spacebar in order to do this.
- **Selecting columns**: you might want to get an entire column of information and move it about. Instead of working to highlight it, which in general is just plain tedious, you can move it about by pressing Ctrl+Spacebar in order to do so. This works for most of the formats, and it's a neat trick that you can use in order to work with moving excel parts around.
- **Extending cells**: you might want to move a part of a cell up or down to make it bigger. Most of the time, this will naturally be accommodated, but in order to move it about, you press Shift+Arrow key. For example, if you want to extend the row 1 character, you'll press the left arrow key, and if you want to move it up and down, you'll be able to do so with that. With many of these programs, it's more naturally done, but this is a great way to make it easier on yourself, and your ability to navigate this.
- **Aligning cells**: when you are aligning a part of a cell, you need to know which way you want to go. For example, if you want to align it right, press Ctrl+R, or if left, you press Ctrl+L. if you want to have it be in the center, you press Ctrl+E. This is a function that is used less in Excel but more in Word, however, it can be used to get the text formatted and placed in the correct sort of table.
- **Increasing fonts**: with font size, sometimes you might want to make sure that you do increase and decrease it in the manner that you want it to be. With font sizes, often you can go up to the corner to make it easier, but if you don't want to use the mouse, you can do so in order to make sure that you get it right. Now, to do this, you will click the shortcut of Ctrl+Shift+P in order to have the font size pop up.

Once that happens, you can enter it in, and then press Enter. Once that's done, you will have the font increased in no time.

- **Text formatting**: with the Text in Excel, you can format it in the way that you want it to be. For example, let's say that you want to make the font more italicized for some reason. This is really a simple fix, in that you press Ctrl+I in order to italicize it, just like how you would with a Word document. With underlining, you press Ctrl+U in order to make sure that you do have this type of underlined nature in there. If you're looking to bold a part of your text, which you might need to do if you're going to emphasize something of the nature or sort, you press Ctrl+B in order to do so. These are the three major types of formatting, and they are typically what a person will use in order to make sure that they have the correct format for something.
- **Currency**: if you're working with numbers, all too often you might have to work with a different sort of currency that you might not know how to find. When you try to use it with a mouse, it's a pain in the butt to navigate, which is why the shortcut is more heavily encouraged rather than using the mouse with this one. In order to find this, you'll be able to do so by going to Ctrl+Shift+$ in order to put in the correct currency that you believe will be befitting of this.
- **Percentages**: percentages are also calculated in different manners based on what type of document you're working with. It's important to know the different types, including what will work for what. However, using the mouse and clicking on various tabs will make you feel like you're going completely mad. However, you can do this easily with actually looking for the various percentages you want, simply by pressing Ctrl+Shift+% in order to dictate the type of format that you want.
- **Scientific**: with the scientific format, this is more used when you're working with a universal system, such as the metric system and the like. If you're working with numbers such as this, you will want to make sure that you know exactly what types of various formats that you need to keep this in. You can use this up to two decimal places, which is great for those who are looking to have this put into their Excel document. To do this, you press Ctrl+Shift+^ in order to input these various factors into this.
- **Spell check**: spell check is good if you want to work on editing the document and making sure that it's spelled correctly. You can do this easily, and you don't have to do much in order to get to this. To get to this, you press F7 to enter the spell check

mod to make sure that you do have this entire put in.

- **Save as**: when you're saving a document for the first time, you will be asked to go to Save As and put in the save functions for this. While this is good, you do want to make sure that you can get to this easily. You can do this easily by going to F12 and then entering the name of your sheet so that you can put this in and make sure that you do have the correct name for this.
- **Replace**: if you're going to replace something in a document, you can do it easily with a shortcut. Typically, in excel they will ask you to go to Grammar and then click on all the tabs with that. While it's good to have that from time to time, it's not necessary. With this, you'll be able to ensure that you do have the correct formatting, and you're able to replace various parts that you don't need. In order to go to this, you press Ctrl+H as a shortcut to go there.
- **Repeating a number or words**: if you want to repeat another action, you can do so with this. To get to it, you press F4, and you'll be able to repeat everything that you did time and time again.
- **Opening a file**: for those looking to open another file, you can do so with a shortcut. While you can use the File, Open, and then open the file in order to do this, this takes time, and you might not have all the time in the world to navigate this. In order to make sure that you do have the ability to easily open a file, you can do so by pressing Ctrl+O in order to get to a new file.
- **Printing a file**: if you have a worksheet that's done, ready to get going, and then you start to print it out, you can do so by pressing Ctrl+P. With printing, you'll be able to make sure that you can get the document out, show it to others, or have it for yourself. It should be noted you obviously need to have a printer in order to do this, so make sure that you do take the time to have that plugged in before you print it.
- **Saving**: when you're working on this, you will want to make sure that you do save from time to time. Not saving frequently leads to a lot of troublesome issues, and that's something you don't really need to have in your life. There are many times where people forget to save, and it tends to bite them in the butt when they are doing this. In order to prevent this from happening, you can press Ctrl+S in order to make sure that the document is saved in time.
- **Help**: if you're working on a document and you're unsure of how to do an action for whatever reason, or you just need help in general, there is a help option for this. It's simple, and you can look through the index and contents in order to find your

action that you need, and you can from there, make sure that you get the help you desire. In order to go to that, you press F1.

- **Switching between refs**: when you're creating a formula, you might need to go in between absolute and relative refs. If that is the case, there is a simple way to switch. You can simply go to this by pressing F4, and to switch between the two, you simply do that.
- **Extend mode**: if you want to go into a mode that extends everything, this is how you do it. By extending all of this, you'll be able to get a larger set of cells in order to increase them to your desired size. In order to get to this, you simply press F8 to do so.
- **Recalculating workbooks**: when you're working with a workbook that needs to be calculated from time to time, it can be cumbersome in order to make sure that you have all of this correct. In order to ensure that it's all naturally calculated, you can press F9 to do so. This will be done automatically, so you don't have to go through and do it with every single cell in the spreadsheet.
- **Activate menu bar**: when you want to open up the menu for whatever reason in order to access something, you can simply activate the menu bar. The menu bar will allow you to choose various formats and such, and you can go to this by pressing F10.
- **New chart**: now, it was discussed earlier how to put in a new table, but what if you have to insert something into your current document, such as a new chart to this? Well, that's where this comes in. You can put in new charts by pressing F11 and from there, work with the new chart as its placed in Excel. It's a simple technique, but it works wonders.
- **Current time**: if you need to put a time stamp on anything for whatever reason, you can insert the current time as it's based on your computer. In order to do this, you press Ctrl+: in order to put the correct time into your document as well.
- **Put in current date**: sometimes you need to put in the current date, such as if you're going to someone and giving him or her the exact time of day that you worked on something. However, it is a lot simpler than you think. In order to put in the exact time, especially if you don't feel like typing it in twenty times, just press Ctrl+; to insert it.
- **Copy value from a cell above**: if you want to copy a number from the cell above the one that you're working with, such as if you don't feel like copy/pasting it like in other sorts of occurrences, you simply press Ctrl+" to do so.

- **Copying formulas from above cells**: perhaps you have a formula that works in multiple cells. You could write it out each time, you could try to copy and paste it time and time again, but let's face it, that's not what you really want to do. However, by pressing Ctrl+', you can simply copy the formula from the cell above it, and it'll be placed there.
- **Finding various parts**: let's say that you are looking for a specific portion of a document, and you don't feel like trying to navigate it too heavily. Well, there is a way to do this, and it works wonders. To find anything in a document really, you press Ctrl+F, and from there, you type in the words that you're working to find. It is case sensitive; so do make sure that you type it in correctly so that you can find it easily, and without too many problems.

This is a comprehensive list of all of the many shortcuts that you can use in excel. The reason why shortcuts exist is not just because they're simple, but also because when you look at Excel in general, it's very hard to really sort through all of that information. There are many who feel fear when they use Excel simply because of all the shortcuts taking a toll on their sanity. However, that doesn't necessarily have to be the case. With this chapter, you saw just how easy it is to use the excel shortcuts and to get to just about everything that you need.

When you are learning excel, learning the shortcuts can be essential. From this alone, you can see that there are a ton of different functions out there for you to choose from. You can use shortcuts to navigate the document easily so that you don't feel swamped when you're working on this. If you ever feel like it's overwhelming, just go to this chapter, look at the shortcuts at hand, and from there you'll be able to determine which shortcut will work the best for you, and what shortcut will allow you to get to where you need to be so you can engage in the correct functions as well.

Chapter 4: Macros

If you are unsure of what a macro is, then this chapter is going to help you tremendously. The definition of a macro is that it is a set of programming instructions that are stored in a VBA code that is used in order to eliminate in order to repeat the steps of typically performed tasks.

These repetitive tasks may involve some complex calculations that require formulas or they may be as simple as formatting tasks like adding in number formatting new data or needing to apply other types of formats like shading and borders. Other tasks that are repetitive that are used with macros include:

- Removing or adding columns and rows.
- Unprotecting and protecting worksheets.
- Selecting ranges of cells.
- Adding current dates to your worksheet.

Macros are able to be triggered by shortcuts on the keyboard, a toolbar icon, or a button that is added to your worksheet.

Macros Versus Templates

While you are using macros you can use these as a big time saver for those tasks that are repetitive. If you are routinely adding certain format features or other content like headings or a logo, it may be better to use a template by creating it and saving it.

VBA and Macros

As mentioned, macros are written in a Visual Basic for Applications. Macro writing using the VBA is done in an editor window, which is able to be opened by just clicking on the VB icon that is in the tab ‘Developers’.

Macro Recorder

For those who can’t write VBA code, Excel has a Macro Recorder that is built in. It will allow you to record steps using a mouse and keyboard that Excel will then convert into a code. Like the editor, the Macro Recorder is located on the tab ‘Developers’.

Adding Developer Tab

By default, the Developer tab is not on the Ribbon. In order to add it in, follow these instructions:

- Click on the tab ‘File’ and open the drop down menu of the options.
- On the list, click on ‘Options’ in order to open the Excel Options box.
- In the left side of the panel of the box, click on Customize Ribbon in order to open the Customize Ribbon window.
- Under the section ‘Main Tabs’ in the right window, click on the check box that is next to Develop in order to add this into the Ribbon.
- Click the OK button in order to close the dialog box and to get back to your worksheet.

Using Macro Reader

The Macro Recorder simplifies creating macros even when it is for those who are able to write VBA code. However, there are just a few points that you should be aware of before you start using this tool.

Plan Your Macro

Recording the macros with the Macro Recorder will involve a bit of a learning curve. In

order to simplify your process, plan ahead, even to the point of you writing it out.

Keep Macros Specific and Small

The bigger the macro, the more complicated that it will be to plan and record it. It will be a bit harder to successfully create it if it is truly complicated. Larger macros also run a bit slower, especially the ones that involve a lot of calculations in the larger sized worksheets. They are a bit harder to correct and debug if they do not work the right way. By keeping the macros small and very specific it will be much easier to verify their accuracy and to see what went wrong should there be a bug.

Name Them Appropriately

Macro names have several naming restrictions that need to be observed. The first and most important is that the macro name needs to begin with a letter. Subsequent characters are able to be numbered, but names are not able to include any spaces, punctuation marks, or symbols. Nor can the name have any of these words:

- If
- GoTo
- New
- Select

While the name can be up to 255 characters, it is very seldom that it is that long. It is also not advisable to name one that long. If you have many macros and you do plan on running them from a dialog box, long names will cause congestion and make it very hard to pick the right macro that you would like to use.

Using the Mouse Versus Keyboard Keys

Having a keyboard for the macro record will record the moving cell cursor or the selecting of a range of cells. Using the keyboard combinations like Ctrl+End or even Ctrl+Shift+Right Arrow key in order to move the cell cursor to the edges of your data area rather than pressing the arrow or tab keys is a better process of using the keyboard; even when it comes to applying certain commands.

Conclusion

Thank you again for downloading this book! You should now be able to begin working in the program Excel like a pro. This program is handy when working at home, for your own business, or by knowing how to maneuver through the program in order to complete work for your employer. Due to the extent of this program, you will need to practice using the functions and more in order to fully understand how to work with this program.