

Microsoft Excel 2000

Step By Step

Module 2

Textbook Sample

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Concepts and Skills – Session 1

At the end of Session 1, you should understand these concepts:

- Deleting and clearing data
- Non-contiguous cells
- Date math
- Format Painter
- AutoFill
- Fill Handle

At the end of Session 1, you should be able to perform these tasks:

- Write a formula using the **If()** function to display information based on a condition which computes to true or false
- Clear the contents of a range, column or row
- Delete the contents of a range, column or row
- Select multiple, contiguous columns and rows
- Select non-contiguous columns and rows
- Insert columns and rows
- Use **Find** and **Replace** to search for cell data and replace it
- Use the spell checker to check the spelling of a worksheet
- Create and format date values
- Use the **Format Painter** to apply the format of one date to other cells
- Use the **Now()** and **Today()** functions to display the current date
- Use the **Date()** function to compute any date
- Perform date calculations
- Use the **Datevalue()** function to convert a text date to a date value
- Use **AutoFill** to copy formulas into other cells

The If() Function

In Module 1, we looked at several Excel functions, including **Sum**, **Average**, **Min** and **Max**. Each of these functions performs a specific computation using algorithms that are built into Excel. They save you the time and trouble of having to create such computations from scratch.

We learned that each function is preceded by an equal sign (=), and requires one or more arguments enclosed in parentheses. For instance, the argument required with Sum is the range of cells whose values you want to total:

=sum(a7:a45)

Each of the functions mentioned in the first paragraph usually requires just one argument, which is the range of values being calculated.

In this first session of Module 2, we'll introduce a function that requires three arguments: the If function.

The If function examines a condition specified by the user. If the condition is *true*, it displays one value or label specified by the user. If the condition is *false*, it displays another value or label specified by the user. It has this format:

=if(condition,true,false)

Each argument is separated by a comma. Therefore, you cannot insert any other commas in the formula. For example, if your formula includes a large number like **85,000**, you must enter it as **85000**.

The two arguments following the condition may be calculations (e.g., formulas) or simple text, such as a message you want to display. These logical equation symbols may be used in the condition:

=	Equal to
>	Greater than
<	Less than
>=	Greater than or equal to
<=	Less than or equal to
<>	Not equal to

Let's demonstrate with a simple example.

1. Make sure Excel 2000 is loaded, and that you are looking at an empty workbook

2. In cell A1 type:

Your age:

3. In cell A3 type:

Reply:

4. In cell B3 type:

=if(b1>=21,"Have a beer!","Isn't it past your bedtime?")

5. Press **Enter**

When you do, Excel should display:

Isn't it past your bedtime?

6. Move to cell B1

7. Type:

46

8. Press **Enter**

Immediately the message in B3 should read:

Have a beer!

9. Move back to B1 and type:

11

10. Press **Enter**

Now the message in B3 should read:

Isn't it past your bedtime?

How does this work? Excel first evaluates the condition:

B1>=21

When you first created the formula, cell B1 was empty, so in effect it stored the value **0**. Therefore, the condition was *false*. Excel skipped the instructions immediately following the condition, and instead displayed the message about your bedtime.

When you typed the value **46** in cell B1, the condition was *true* (46 is greater than 21), so Excel executed the instruction immediately following the condition, inviting you to have a beer.

When the arguments are textual, you must enclose them in quotation marks. However, if the arguments are numeric, such as a formula, do not enclose them in quotation marks.

For a more practical application of the If function, we've provided a file on your data diskette called **Bonus**.

1. Open a copy of **Bonus**

This worksheet is used to calculate the contributions of five salespeople for the past four quarters, compute total sales for each and determine the bonus each has earned.

2. Center-align the title across columns A – G
3. Center-align the headers in row 3
4. Write a formula in cell C5 which calculates a 10% increase in sales for Smith for the second quarter
5. Write a formula in cell C6 which calculates a 2% increase in sales for Jones for the second quarter
6. Write a formula in cell C7 which calculates a 4% increase in sales for Adams for the second quarter
7. Write a formula in cell C8 which calculates a 3% decrease in sales for White for the second quarter

(HINT: To calculate a decrease in earnings, subtract the decrease from 100%. Use the result as your multiplier).

8. Write a formula in cell C9 which calculates a 4.6% increase in sales for Thomas for the second quarter
9. Copy the formulas in C5:C9 into the range D5:E9

The worksheet should look like this:

	A	B	C	D	E	F	G	H
1	Stinger Computer Corporation - Sales Performance							
2								
3		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Bonus	
4								
5	Smith	55000	60500	66550	73205			
6	Jones	23000	23460	23929.2	24407.8			
7	Adams	9000	9360	9734.4	10123.8			
8	White	47000	45590	44222.3	42895.6			
9	Thomas	19000	19874	20788.2	21744.5			
10								
11	Best							
12	Worst							
13	Average							
14								

10. Write a formula in cell B11 which uses the **Max** function to compute the best sales figure for the first quarter
11. Write a formula in cell B12 which uses the **Min** function to compute the worst sales figure for the first quarter
12. Write a formula in cell B13 which uses the **Average** function to compute the average sales figure for the first quarter
13. Copy the formulas in the range B11:B13 into the range C11:E13
14. Write formulas in cells F5:F9 which calculate the total sales for the four quarters for each salesperson

Our next task is to compute the bonus earned by each salesperson. The bonus is based on the following formula:

- A. If Total sales exceeds \$100,000, the salesperson receives 15% of his/her total sales as a bonus
- B. If Total sales does not exceed \$100,000, the salesperson receives 8% of his/her total sales as a bonus

You will use the If function to compute the bonus.

15. Move to cell G5

16. On your own, write a formula to compute Smith's bonus

(NOTE: If you are unable to write the formula, or want to verify that yours is correct, you'll find a solution at the end of this chapter).

Rather than repeat this calculation for each of the other salespeople, you can copy the formula down into their cells.

17. Copy the formula in G5 into G6:G9

18. Format the range B5:G5 as Currency with two decimals

19. Format the range B6:G13 as Comma with two decimal

20. Change the width of columns B – G using the AutoFit technique

The worksheet should look like this:

	A	B	C	D	E	F	G	H
1	Stinger Computer Corporation - Sales Performance							
2								
3		Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Bonus	
4								
5	Smith	\$55,000.00	\$60,500.00	\$66,550.00	\$ 73,205.00	\$255,255.00	\$38,288.25	
6	Jones	23,000.00	23,460.00	23,929.20	24,407.78	94,796.98	7,583.76	
7	Adams	9,000.00	9,360.00	9,734.40	10,123.78	38,218.18	3,057.45	
8	White	47,000.00	45,590.00	44,222.30	42,895.63	179,707.93	26,956.19	
9	Thomas	19,000.00	19,874.00	20,788.20	21,744.46	81,406.67	6,512.53	
10								
11	Best	55,000.00	60,500.00	66,550.00	73,205.00			
12	Worst	9,000.00	9,360.00	9,734.40	10,123.78			
13	Average	30,600.00	31,756.80	33,044.82	34,475.33			
14								
15								

21. Save this version of **Bonus**