



## **LESSON 3**

# **APPLICATION SOFTWARE: SPREADSHEET**

# OBJECTIVES

1. Identify various types of application software
2. Explain the purpose of a spreadsheet
3. Determine the appropriate software to be used to perform specific tasks
4. Create and format a spreadsheet/worksheets
5. Develop formulae to carry out calculation in a worksheet
6. Create charts and graphs using the data in worksheet

# APPLICATION SOFTWARE

- These are known as programmes and are used to complete a specific user task.
- Some task that application software may perform are typing letters, preparing purchase orders, managing contact lists, preparing budgets and financial statements, drawing, playing games, etc.

# INTRODUCTION TO SPREADSHEET

- A spreadsheet can be defined as an electronic worksheet that is made of grid lines in which you enter data to be processed into useful information.
- These are special productivity tools used to arrange and analyze data/tabulation.
- Replaces the columnar pad/paper accounting worksheet, pencil and calculator.
- Manipulates numeric data.
- Ideal for working with lists of data.

# INTRODUCTION TO SPREADSHEET

- Conducts automatic calculation and does complex calculations with great speed and efficiency/error-free calculations.
- Recalculates the results of formulae every times data changes.
- Allows sorting, search and extracting of data from a list.
- Allows formatting of a worksheet
- Creates graphs and charts to visualize the data.

# Examples of Spreadsheet software

- Visicalc – 1<sup>st</sup> (Apple computers)
- Microsoft Office Excel USED FOR SBA AND EXAM
- Lotus 1-2-3 (IBM)
- Calc (Open Office Suite)
- Microsoft works
- Coral Quattro Pro
- QuickBooks

File extension: Ms Office/Works/Corel

Expense2019.xlsx or budget.xls (old versions) or Balance sheet.xlr or Invoice.wbl

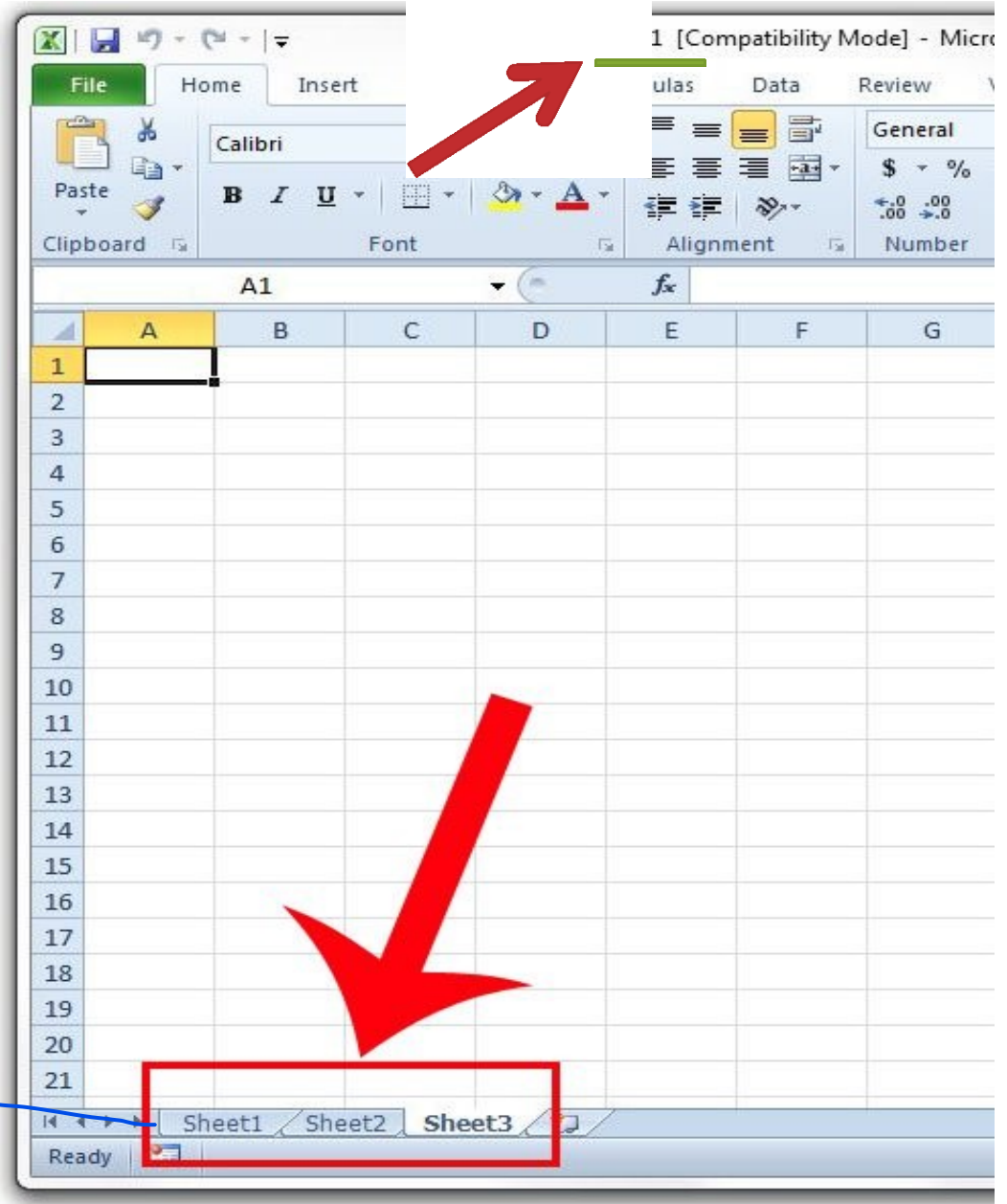
# Some basic components of a spreadsheet

- Workbook
- Worksheet
- Columns
- Rows
- Cell
- Cell referencing
- Cell Range
- Formula

- **Workbook** – this is the combination of multiple worksheets on one specific task. The entire Excel file. For e.g. a student data.xlsx

*Default name (Book 1)*

- **Worksheet** – this is a single page with rows and columns. For e.g. Sheet 1 (default name)





- The spreadsheet grids are made of columns and rows.
- The columns are identified by letters and run up and down the page.
- The rows are identified by number and they run across the page.

Book1

File Home Insert Page Layout Formulas Data Review View Developer Nate's tab

Clipboard Font Alignment Number Styles Cells Editing

D8  $\text{fx}$  =SUM(D2:D5) Formula Bar

1	Check number	Date	Description	Amount
2	100	2/23/2015	Water bill	\$45.00
3	101	3/24/2015	Power bill	\$67.00
4	102	4/20/2015	Internet Bill	\$50.00
5				
6				
7				
8			Total:	\$162.00
9			Check Balance:	\$523.00
10			Available:	\$361.00
11				
12				
13				
14				
15				
16				
17				
18				

Sheet tabs: Sheet1 Sheet2 Sheet3

Ready ComputerHope.com 100%

- Cell - This is the intersection where a row and column meets.
- Cell reference – this is cell name or cell address.
- Cell Range- two or more adjoining cells.

CELL ADDRESS

CELL

formula bar.xlsx - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View

F6  $\text{fx}$  =VLOOKUP(F5,B6:C10,2,0) COLON MEANS 'TO' - B6 TO C10

Basic VLOOKUP

Item	Cost
Pizza	\$3.25
Hot Dog	\$1.75
Chicken	\$3.50
Sushi	\$5.00
Hamburger	\$3.25

Formula Bar

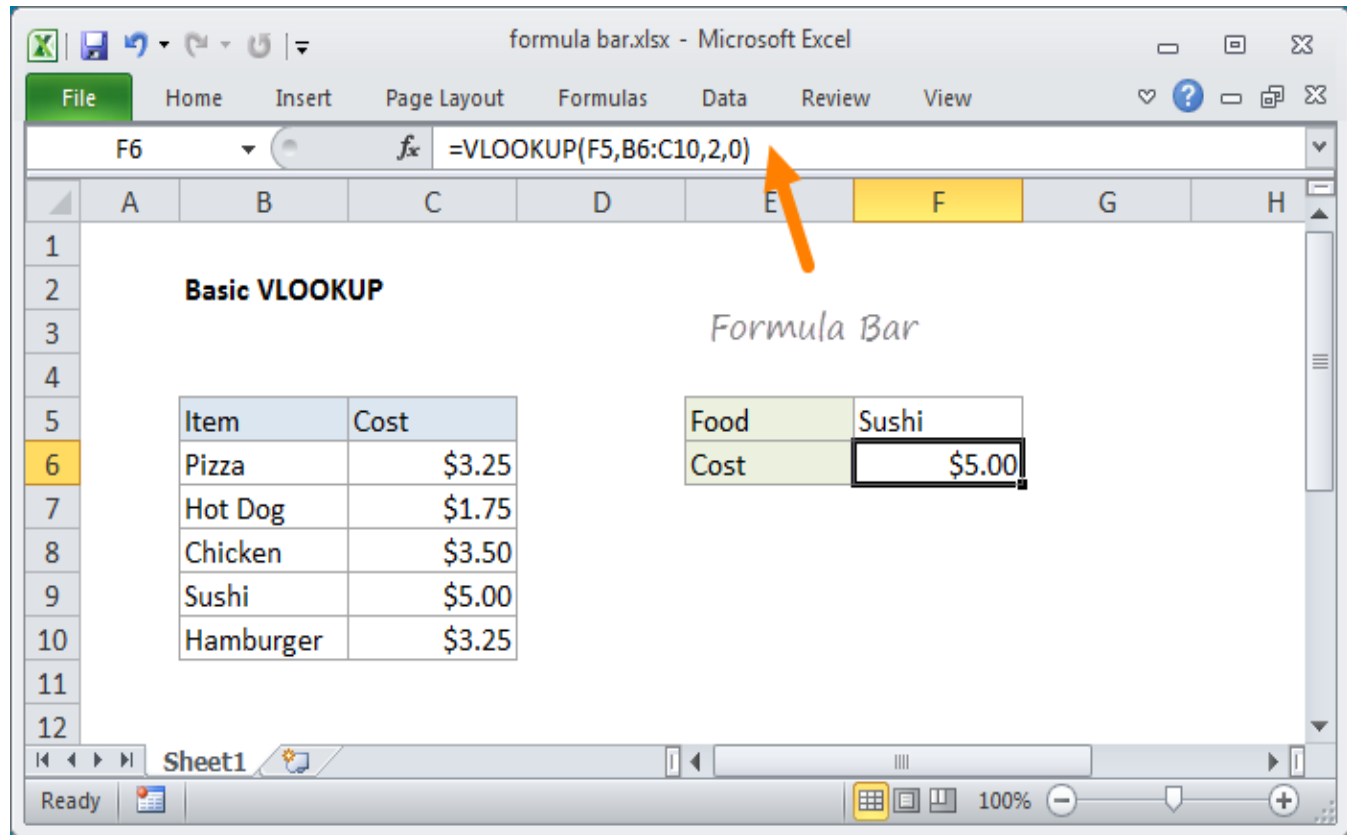
Food	Sushi
Cost	\$5.00

Sheet1

Ready 100%

# CREATING FORMULA

- Formula – This is a mathematical equation which the spreadsheet application use to bring a result of formula.



The screenshot shows the Microsoft Excel interface with the following details:

- Formula Bar:** Contains the formula `=VLOOKUP(F5,B6:C10,2,0)`. An orange arrow points to the formula bar.
- Worksheet:** Cell F6 is selected. The worksheet contains a table of food items and their costs.
- Table 1 (Basic VLOOKUP):**

Item	Cost
Pizza	\$3.25
Hot Dog	\$1.75
Chicken	\$3.50
Sushi	\$5.00
Hamburger	\$3.25
- Table 2 (Lookup Table):**

Food	Sushi
Cost	\$5.00

# CREATING FORMULA

In order to get a result you will need to:

- Create a formula or
- Select one from the function menu box

The screenshot shows the 'Insert Function' dialog box in Microsoft Excel. The background spreadsheet has columns A through F and rows 1 through 19. The formula bar shows '='. The dialog box is titled 'Insert Function' and has a search bar with the text 'Type a brief description of what you want to do and then click Go'. Below the search bar is a dropdown menu for 'Or select a category:' set to 'Most Recently Used'. A list of functions is shown, with 'COUNTIF' selected. Below the list, the function signature 'COUNTIF(range,criteria)' and its description 'Counts the number of cells within a range that meet the given condition.' are displayed. At the bottom of the dialog are 'OK' and 'Cancel' buttons, and a link for 'Help on this function'.

Insert Function

Search for a function:

Type a brief description of what you want to do and then click Go

Go

Or select a category: Most Recently Used

Select a function:

- COUNTIF
- SUMIF
- SUM
- AVERAGE
- IF
- HYPERLINK
- COUNT

**COUNTIF(range,criteria)**  
Counts the number of cells within a range that meet the given condition.

[Help on this function](#)

OK Cancel

Sheet1 Sheet2 Sheet3

Edit Average: 14 Count: 4 Sum: 28 100%

# How to enter a formula?

- The **equal sign (=)** must be present in all formulas.
- The formula must have the cell address of the cells you will work with and not the **NOT** the number.
- Select the cell where you want the result to appear.
- Write the formula.

E.g. of a formula is =sum(A1:E5)

OR =SUM(A5-E5)

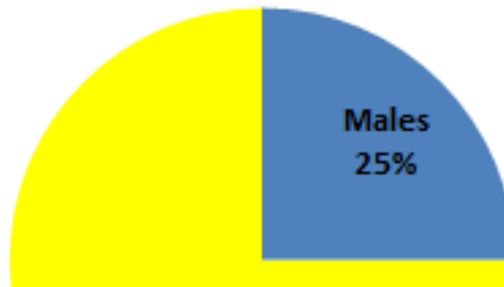
# SIGNS USED IN MICROSOFT EXCEL FORMULA:

SIGNS	MEANING
*	MULTIPLICATION
/	DIVISION
-	SUBTRACTION
+	ADDITION
:	FROM-TO

# CREATING CHARTS/GRAPHS

Comparison of males and females in the class		20
Males	1	
Females	3	

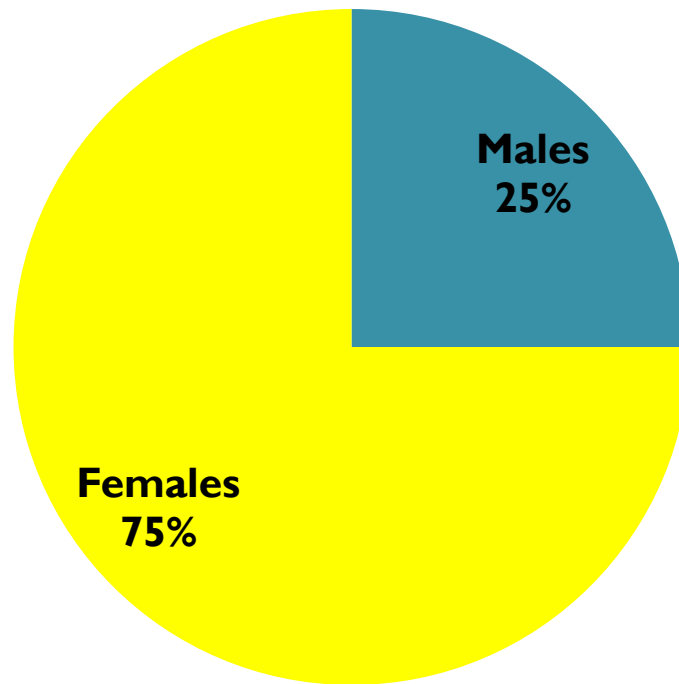
**Comparison of Students by Gender**





# PIE CHART

## Comparison of Students by Gender





**Let's  
Practice!**