

MICROSOFT EXCEL (MS EXCEL)

It's an electronic spread sheet that allows you to enter data perform calculations make decisions, organize data in charts and develop professional reports. Ms Excel turns the computer into a very large worksheets similar to a financial ledger sheet in that it is ruled into rows and columns.

ADVANTAGES OF SPREADSHEETS

1. It is faster compared to manual method
2. It is easier to use after learning the commands
3. It makes arithmetic calculation to become easier
4. It saves time compared to manual methods.

DISADVANTAGES OF SPREADSHEETS

1. A wrong formula will give a wrong answer
2. In case an error occurs then the whole worksheet will be wrong
3. If the spreadsheet is too large, then it cannot be viewed all at once.

AREAS WHERE SPREADSHEETS ARE APPLICABLE

1. Budgeting
2. Financial analysis
3. Database management
4. Charting and Graphing

WORKSHEETS

- Is made of rows and columns which intersect to make cells
- Columns run vertically and are labeled using alphabet numbers
- Rows are numbered progressively
- Every individual cell has a unique address comprising of column letter and cell number respectively e.g. A1, A2, C3 etc.
- A range is made up of more than one cell.

NB: Data can be entered in an active cell only.

GENERAL FORMATTING OF A WORKSHEET

To change the data colour, font size or underline.

Procedure

- a) Highlight (block) the text or the range of cells containing the data
- b) Click format menu
- c) Choose cells
- d) Select font
- e) Specify the changes appropriately.

To date

Procedure

- a) Select the range of cells containing date
- b) Click format menu
- c) Choose cells
- d) In the windows that appears click on number
- e) Choose date
- f) Select the desired date.

g) **To format the heading**

Procedure 1

- a) Highlight the cells running on top of the cells you are going to use to enter your data.
- b) Click on format
- c) Choose cells
- d) In the window that appears choose alignment
- e) Choose merge cells
- f) Add the text.

Procedure 2

You can use a text box to create a box for the heading.

- a) Click on the text box in the drawing toolbar
- b) Draw the text box across the cells to contain the heading
- c) Enter the text.

Changing the appearance of numbers

The format of numbers can be changed to:

- a) Increase the number of decimal places
- b) Decrease the number of decimal places
- c) Add a currency sign
- d) Add a thousand separators.

Adding decimal places to numbers

Procedure

- a) Select the range of numbers
- b) Click format
- c) Click cells
- d) Select numbers from the dialog box
- e) Select the desired number of decimal places
- f) Click o.k.

Adding currency sign

Procedure 1

- a) Select the range of numbers
- b) Click format
- c) Click cells
- d) Click currency form dialog box
- e) Under symbol select the desired format
- f) Click o.k.

Procedure 2

If the currency you want is not there you can customize your sign in the same window.

- a) Click on custom
- b) Click on general
- c) Type the desired currency sign in quotation marks presided with the numbers e.g. "Kshs" #

Data sort

This is used to sort data in ascending or descending order

Procedure

- a) Move any column within the data to be sorted
- b) Click data
- c) Click sort
- d) Select either ascending or descending
- e) Click o.k.

Spell checking

Ms Excel checks your worksheet for spelling using standard dictionary.

Procedure

- a) Type the worksheet
- b) Click tools
- c) Click spelling
- d) Click ignore or change
- e) Click ok. If the spell check is complete

Changing the style text

This is used to change the appearance of data.

Procedure

- a) Select the data to be formatted
- b) Click format
- c) Click cells
- d) Select one of the following

Alignment – Changes alignment of the range and also orientation

Font – Changes the font and style range

Border – Sets the border for the cells

Patterns – Select the background colour for the cells.

Moving data

This moves information from one part of the worksheet to another

There are two basic method of moving data:

- i) Cut and paste and
- ii) Drag and drop

i) Cut and paste***Procedure 1***

- a) Select the data to be moved
- b) Click edit
- c) Click cut
- d) Move the cursor to the area where you want to move to
- e) Click edit
- f) Click paste.

Procedure 2

- a) Select the data to be moved
- b) Click on the button from the menu bar
- c) Move the cursor to the area you want to move to
- d) Click the paste button from the tools bar.

ii) Drag and drop method

Procedure

- a) Select the range of cells to be moved
- b) Place the mouse pointer at the edge of the selection until the pointer changes into an arrow.
- c) Click and drag the selected range to the required position.
- d) Release the mouse button to complete the move to the new location.

Copy data

This copies data from one place to another but it still remains in the original position. It is like a duplicate. There are two basic ways in which you can copy data:

- i) Copy and paste and
- ii) Drag and drop

Copy and paste

Procedure

- a) Select the data to be copied
- b) Click edit
- c) Click copy
- d) Move the cursor to where the data is to be copied
- e) Click edit, click paste

ii) Drag and drop

Procedure

- a) Select the range of cells to be copied
- b) Press and hold down the control key
- c) Click on the outer edge of the selected range. The mouse will turn into an arrow with a plus sign above it indicating as opposed to moving.
- d) While pressing the left mouse button down, drag the range to the new location
- e) Release the mouse button.

NB: The copy command can also be used to copy a formula instead of creating a new one for each column. Using cells relative references enables formulas to be copied and automatically adjusted to perform properly in their new location.

To increase the column width

This increases or decreases the width of the selected column or columns. When numbers do not fit in a column, they are displayed as power or as

Procedure.

- a) Highlight the cell
- b) Click on format menu
- c) Click column
- d) Move the width required
- e) Click ok.

Alternatively, you can wrap the text in cells, especially column headings by clicking on format menu, choose cells, click on alignment and choose wrap text.

Or you can either increase the column width by highlighting the borders of the column heading and dragging to increase when the cursor changes to a cross.

To insert column between columns.

Procedure

- a) Select the column after which or before which you want to insert
- b) Click on insert menu
- c) Choose the appropriate direction

To delete a column

Procedure

- a) Select the column to be deleted
- b) Click edit.
- c) Click delete
- d) Click entire row
- e) Click o.k.

FORMULAS IN EXCEL

Using functions

Functions are special routines (calculating tools) built into the worksheet that allows you to perform complex tasks quickly and easily. They are shortcuts that simplify computations that would be very difficult and tedious to perform with formulas.

Worksheet functions have two elements the function name and the arguments. Function names are descriptive terms that identify the operation you want to perform. The argument tells excel which cells you want the function to act on.

Ms Excel is equipped with a huge variety of built in function over 200 in all. These fall into a number of categories.

Example

Function

e.g.

Statistical 1

Mathematical

Financial

Logical

Categories

Function that perform statistical analysis on data

SUM, AVG, MAX, MINI etc.

Function that perform simple and complex
Mathematical calculations e.g. ABS, SIGN, SQRT

Function used to perform common business
Calculations without building long and complex
Formulas e.g. PV, NPV, PMT etc.

Functions that perform logical and conditional tests
E.g. IF AND OR etc.

Every function must have four parts

An equal sign (=)

Function name

Parenthesis (brackets)

Arguments

Example of statistical functions

- a) = SUM – returns the total of the range
- b) = Average – returns the mean value of the range
- c) = Max – returns the largest value in the range
- d) = Min – returns the smallest value in a range

GETTING THE SUM, MIN, MAX AVG. etc.

1. SUMMING OF DIGITS

Position the cursor either after the numbers to be summed or below the numbers. Click on auto sum wizard the computer automatically selects the range of cells it intends to sum.

Confirm the range and click on ok. Or press enter key.

Click in the cell to contain the answer.

Click on formula wizard

Select the sum among the formula list

Click on ok and then type the range of cells containing the digits to be added.

Alternatively you can type the formula directly e.g. click in cell B8 and type
= SUM(B3:b7) and then press enter key.

2. FINDING THE AVERAGE

- Position the cursor in the cell to contain the answer. Click on the formula wizard. Choose average in the formula list that appears and click on ok. Type in the range of cells that contain the fields whose average is to be calculated then press the enter key.

- Position the cursor in the cell to contain the answer and type the formula directly e.g. Click in cell F3 and type = AVERAGE(B3:D3) and press the enter key.

3. FINDING THE MAXIMUM

- Position the cursor in the cell to contain the answer. Click on the formula wizard. Choose MAX in the list of formulas that appear. Click o.k. Type in the range of cells containing the numbers whose minimum is desired and press the enter key.

- Position the cursor in the to contain the answer and type the formula directly e.g. Click in cell B9 and type = MAX (B3:B7) and press the enter key.

4. FINDING THE MINIMUM

- Position the cursor in the cell to contain the answer. Click on the formula wizard. Choose MIN in the list of formulas that appear. Click o.k. Type in the range of cells containing the numbers whose minimum is desired and press the enter key.

- Position the cursor in the to contain the answer and type the formula directly e.g. Click in cell B9 and type = MIN (B3:B7) and press the enter key.

5. HOW TO USE THE IF FORMULA

This is a decisive formula and can be used to do calculations or to issue comments.

Position the cursor in the cell to contain the results. Click on the formula wizard and choose if in the list of formulas. Then click on ok. Type the cell address in which you are basing your argument then the result if the argument is true or the result if the argument is false.

NB: Only two conditions can be tested for

Position the cursor in the cell to contain the result then type the formula directly e.g. Click cell F3 and type this = IF (E3>=90 "A" IF (F3>=80, "B" IF (E3>=70, "C", IF (E3>=60, "D"),

You must close the brackets as many times as you have opened. Note also that it's not necessary to open the brackets for the last condition since the computer will test to the given condition but will resort to use the last value if all the other are found to be false.

NB: If typed directly the IF function can be used to test for up to seven conditions.

DUBLICATING OF A FORMULA

In excel there is no need of retyping of a similar formula in neighboring cells, all you have to do is position the cursor at the right bottom cell with the correct syntax hold down the left button of the mouse when the cursor turns into a cross and scroll down or across the cells in which you want to copy the formula.

HOW TO FILTER DATA

To filter is to retrieve data that fulfills a specified criteria in you worksheet.

AUTO FILTER

Procedure

- a) Select the worksheet range
- b) Click data menu
- c) Choose filter
- d) Click on auto filter, down facing arrows appear after every column title
- e) Click to select preferred fields and the rest of the fields will be hidden
- f) To clear the auto filter click on data menu
- g) Choose filter deselect the auto filter option.

CHARTS/GRAPHS

This is a graphical representation of numeric data in a worksheet. They include.

- Column charts
- Bar charts
- Pie charts
- Doughnut charts
- Lime charts
- Area charts
- 3-D surface charts
- Radar charts
- XY (scatter) chars
- Combination charts

Procedure of creating a chart/graph in Excel

- a) Select the data to graph. If the data is at different location on the worksheet, highlight the first section then hold down the ctrl key while selecting the rest. Do not select empty cells.
- b) Click the chart wizard from the standard tool bar or click insert then click chart.
- c) Select the shape of the chart desired.
- d) Follow the steps as guided by the dialog boxes, by clicking the next button to move to the next step.
- e) Type the chart title, x-axis.
- f) Specify the placement of your chart and click finish.

Moving the graph

Move the pointer into any of the point and drag to increase or decrease.

NB: You can only drag when the pointer changes into double arrow.