MICROSOFT EXCEL

These are ledgers meant to manipulate and analyses numerical data. These are two types of spreadsheet: **manual spreadsheet** and **electronic spreadsheet**.
Manual involves use of book, a pencil, and a ruler and eraser etc. while electrical involve the computerized program that would handle the numerical data these programs include:

- Microsoft excel
- Lotus 1-2-3
- Visi calc
- VP planner etc.

ADVANTAGES OF ELECTRONIC OVER MANUAL SPREADSHEETS

- Large virtual storage of information within a limited space unlike in manual physical storage where is cumbersome.
- High chance of accuracy in calculation. It is very easy for humans to make errors when manually doing calculation
- Fast retrieval of stored information
- Neat production and presentation of information unlike in manual where erased work may look UN clean
- Electronic spreadsheet bears or allows formulas and functions while manual lets the user work out mentally

MICROSOFT EXCEL

Microsoft excel is an electronic spreadsheet; an application package that can be used to enter, manage and presenting numerical data in Microsoft windows environment.
Application of spreadsheet

- Entry analysis and keeping of data figures
- Manipulation of accounts records
- Statistical analysis and research
- Processing student performance data

LOAD MS EXCEL

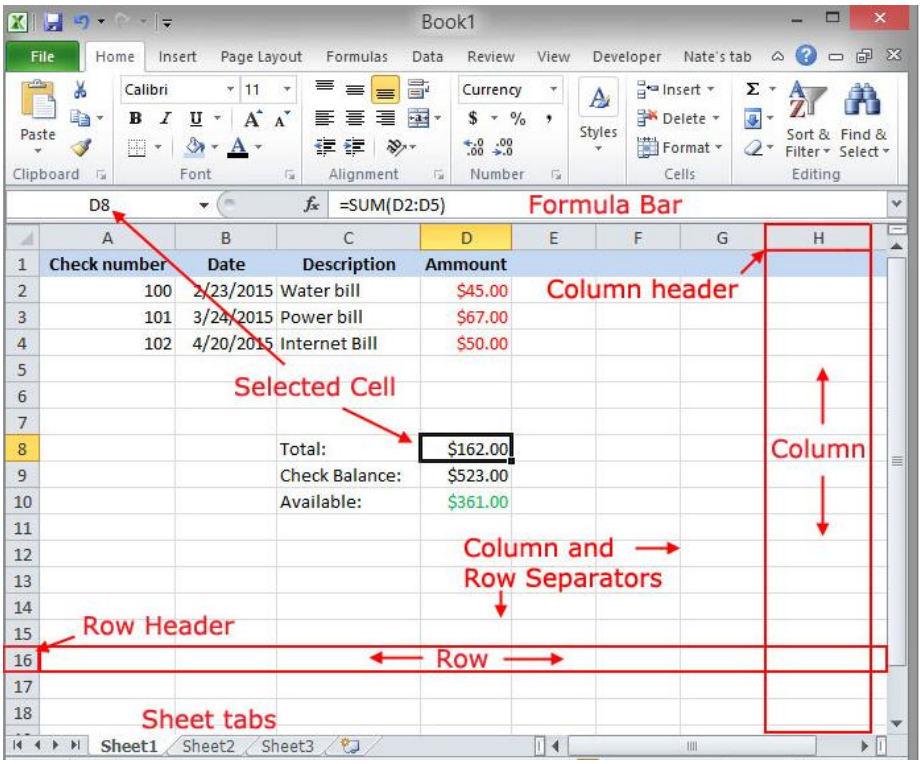
Method 1

- Click start button
- Point programs
- Click Microsoft Office

- Click Microsoft excel

Method 2

- Click start button
- Click search programs & files
- Type excel
- Press enter



CLOSE MS EXCEL

Method 1

- Click Office button
- Click exit

Method 2

- Click the X at title bar

Method 3

- Press alt+ F4 keys

FEATURES OF MS EXCEL WINDOW

Two windows

- ✓ Mother/ program window

- ✓ Document window

Work book

This is a single document in Microsoft excel. It can be created and saved individually for future retrieval. A single workbook is made up several worksheets.

Worksheet

This is the actual working area within a worksheet which is partitioned into rows and columns. A single worksheet would be composed of hundred pages.

Rows

These are horizontal subdivisions of the worksheet. There 65536 rows in a single worksheet.

Columns

These are vertical subdivision of the worksheet there 256 columns in a single worksheet i. e from column A to column IV.

Cells

They are the boxes created after rows and column intersect. It is within the cells where data is entered or typed.

Column headers

These are identifiers of individual columns within a worksheet. They are placed at the top of the worksheet and labeled A, B, C…

Row headers

These are identifiers of individual rows within a worksheet. They are placed at the left of the worksheet and labeled 1, 2, 3…

Cell reference/cell address

This is the identifier of particular cell or single range within a worksheet e. g A1, B12, F45 etc. range is selected and named group of cells. This can be noticed at the name box.

Formula bar

This is the space just above the column header whereby;

- ✓ Formulas and functions can be written direct (manually)
- ✓ Data within a cell can be edited
- ✓ Formulas functions and data within a cell can be viewed
- ✓ Function dialog box can be displayed by clicking the (FX)
- ✓ Formulas and function can be executed by clicking the green tick
- ✓ Formula and function can be cancelled by clicking red (X)

TO NAVIGATE THRO' A WORKSHEET

Navigate refers to working from one cell to the next as the user enters and manipulates data in a worksheet.

Items/ keys used to navigate a worksheet

Mouse pointer

The mouse is used to point and click a cell so as to select/ activate it. It is the active cell that accept data.

Arrow keys

Appropriately, arrow key are pressed to select7 activate a cell in any direction.

Tab key

When pressed the tab key selects/activates cells forward. It is ideal for horizontal entries

Enter key

When pressed enter key selects/ activates cells downwards. It is ideal for vertical entries.

Home key

When home key is pressed it selects/ activates the first cell in that row

Page up key

This key is pressed to scroll the worksheet upward screen after screen.

Page down key

This key is pressed to scroll the worksheet downward screen after screen.

Ctrl + arrow right

Select activate a cell in the last column

Ctrl + arrow left

Select/ activate a cell in the first column

Ctrl+ arrow down

Selects/activate a cell in the last row

Ctrl+ arrow up

Select/activate a cell in the first row

Ctrl+ home

Select/ activate the first cell in the worksheet

Ctrl+ end

Select/activate the last edited cell in a worksheet

Ctrl+ page down

Selects/ activate the next sheet at the sheet bar

Ctrl+ page up

Selects/ activate the previous sheet at the sheet bar

DATA TYPE IN SPREADSHEET

This refers to the kind of data typed or put into the cells. There are several of them:

Labels

These are alphabets such as peter, Mombasa or combination of alphabets and numerals such as p. o box 35708 Nairobi.

Values

These are the values like 0-9 entered into the cell

Formulas

Mathematical statements or expression consisting of constant and variables meant to give a certain return e. g $A=r^2h$

Functions

Functions are specially designed formulas within a spreadsheet meant to tackle specific calculation

Hyper-links

They are special addresses established in files to link them especially if the file have related information.

To add a new workbook

Method 1

- Click Office button
- Click new
- Click blank workbook

Method 2

- Press ctrl+ N

SAVE A WORKBOOK

Method 1

- Click office button
- Click save
- Type the file name

- Indicate the location to save the wb
- Click save

Method 2

- Click office button
- Click save as
- Type the Office button
- Indicate the location to save the wb
- Click save

Method 3

- Click save icon at the standard toolbar
- Type the file name
- Indicate the location to save the wb
- Click save

Method 4

- Press ctrl + s
- Type the file name
- Indicate the location to save the wb
- Click save

To open an existing workbook

- Click office button
- Click open
- Indicate the location with the workbook
- Select workbook
- Click open

To close a workbook

Method 1

- Click office button
- Click close

Method 2

- Click the x at the title bar

Method 3

- Press alt + F4

To insert a new worksheet

By default, Microsoft office excel provides three worksheets (worksheet: the primary document that you use in excel to store and work with data. Also called spreadsheet. A worksheet consists of cells that are organized into columns and rows; a worksheet is always stored in a workbook. In a workbook, but you can insert additional worksheet (and other type of sheets, such as a chart sheet, micro sheet or dialog sheet) or delete them as needed. If u have access to a worksheet template (template: a workbook that u create and use as the basis for other similar workbooks. You can create a template for workbooks and worksheets.

The default template for a work book is called book. The default template for worksheet is called sheet. That you created or one that's available on the office online, you can base a new worksheet on the template.

The name of worksheet appears on its sheet tab at the bottom of the screen. By default, the name is sheet 1, sheet 2 and so on but you can give any worksheet a more appropriate name.

Rename worksheet

Worksheet may be given different names to enable the user distinguish the data created in each of them.

Method 1

- Select the worksheet at sheet bar
- Click home tab
- Click format under cells group
- Click rename sheet
- Type the new name
- Press enter key

Method2

- Double click the WS at sheet bar
- Type the new name
- Press enter key

Method 3

- Right click the WS at sheet bar
- Click rename
- Type the new name
- Press enter key

Re- arrange worksheet

This enable the user to give some priority to the worksheet by ordering them.

Steps to re- arrange worksheets

- Click worksheet to appear as the first
- Press LMB and drag to position
- Release the mouse

To delete a worksheet

Method 1

- Select the worksheet at sheet bar
- Click home tab
- Click delete under the cells group
- Click delete sheet
- Click delete

Method 2

- Right click the worksheet at sheet bar
- Click delete
- Click delete for confirmation
- To insert a new column

Steps to insert a column

Method 1

- Select the column to be preceded
- Click home tab
- Click insert under the cells group
- Click insert sheet column

Method 2

- Right click the column to be preceded
- Click insert

Resizing columns
This is increasing or decreasing the width of the column
Steps to resize a column
Method1

- Select the column
- Click home tab
- Click format under the cells group
- Click width
- Type measurement
- Click ok

Method 2

- Double click between column headers

Method 3

- Point between column headers
- Press and drag

To delete a column
Method 1

- Select the column to delete
- Click Home tab
- Click delete under the cells group
- Click delete column

Method 2

- Right click the column to delete
- Click delete

To insert a new row
Method 1

- Select the row to be preceded
- Click Home tab
- Click insert under the cells group
- Click insert
- Click rows

Method 2

- Right click the row to be preceded click insert

Resizing rows
This is increasing or decreasing the height of the rows
Steps to resize a row
Method 1

- Select the row
- Click home tab
- Click format under the cells group
- Click width
- Type measurement
- Click ok

Method 2

- Double click between row headers

Method 3

- Point between row headers
- Press and drag appropriately

To delete a row

Method 1

- Select the row to delete
- Click Home tab
- Click delete under the cells group
- Click delete row
-

Method 2

- Right click the row to delete
- Click delete

HIGHLIGHTING DATA

This is to select a range in worksheet before editing or formatting has been done. Range is any group of cells selected for an aspect and to be treated a single block.

Steps to highlight data

Method 1

- Click the first cell in range
- Press LMB and drag to the end

Method 2

- Click on the first cell of the range
- Press down shift key
- Click the last cell in the range

Method 3

- Click the first cell in a range
- Press down the shift key
- Press arrow keys

Method 4

- Highlight first range press down the ctrl key
- Highlight the other ranges with mouse

To highlight single cell

Method 1

- Point and click the cell

Method 2

- Press the arrow keys till to the cell
- To highlight the entire worksheet

Method 1

- Press ctrl+ A

Method 2

- Click the neutral header (at the top of the left of the worksheet)

SORTING DATA

Sorting is the arrangement of entries in a worksheet either in ascending order or descending order. Label shall be arranged from the lowest to the highest and vice versa.

Sorting will enable the user tell the highest or the lowest scorer, the first or the last in the list of entries.

Steps to sorting data

- Highlight the data to sort
- Click home tab
- Click sort and filtering under the cells group
- Select the column to sort by
- Select the mode of sort
- Click ok

FILTERING DATA

Filtering is sieving a specific data if the data meets a certain criteria. It is important for only needed data can be viewed or analyzed.

Steps to filter data

- Highlight the data to filter
- Click home tab
- Click sort and filtering under the cells group
- Click filter button on desired column
- Click custom top ten or an entry
- Adjust appropriately
- Click ok

AUTO FILLING SERIES

These are entries that would follow a certain systematic order or sequence e. g

- ✓ Days of the week
- ✓ Months in a year
- ✓ Value like 1, 2, 3
- ✓ Any label plus value as the user may instruct the MS excel e. g day 1…..week 1 etc.

To remove filtering

- Click home tab
- Click sort and filtering under the cells group
- Click filter button

Steps to auto –fill series

- Make the first two entries
- Highlight the two entries
- Point the auto filing handle
- Press and hold down the left mouse button
- Drag to the desired direction

FREEZING PANES

This is anchoring the title for a particular data in order to keep the heading still while the rest of the data is scrolled, for instance in long list of items and the user does not want to lose the main headings after scrolling upwards. Also remember the screen cannot display 1000 entries at one go.

Steps to freeze panes

- Select the row or the column immediately after the row or column to freeze
- Click window menu

- Click freeze pane
- Scroll the data to confirm

Steps to remove freezing

- Click window menu
- Click unfreeze pane

COPYING/ MOVING WORKSHEETS

Worksheet can be moved from one position to another along the sheet bar within the same workbook or to different workbook. They can also be copied along the sheet bar within the same workbook or to a different workbook.

Steps to copying a worksheet

- Select the worksheet to copy
- Click Home tab
- Click move or copy sheet
- Indicate the new location or destination
- Click create copy
- Click ok

Steps to moving to moving worksheet

- Select the worksheet to move
- Click edit menu
- Click move or copy sheet
- Indicate the new location or destination
- Click ok

Using calculation operators in Excel formulas

Operators specify the type of calculation that you want to perform on the elements of a formula. There is a default order in which calculations occur (this follows general mathematical rules), but you can change this order by using parentheses.

Types of operators

There are four different types of calculation operators: arithmetic, comparison, text concatenation, and reference.

Arithmetic operators

To perform basic mathematical operations, such as addition, subtraction, multiplication, or division; combine numbers; and produce numeric results, use the following arithmetic operators.

Arithmetic operator	Meaning	Example
+ (plus sign)	Addition	3+3
– (minus sign)	Subtraction Negation	3–1 –1
* (asterisk)	Multiplication	3*3
/ (forward slash)	Division	3/3
% (percent sign)	Percent	20%
^ (caret)	Exponentiation	3^2

Comparison operators

You can compare two values with the following operators. When two values are compared by using these operators, the result is a logical value—either TRUE or FALSE.

Comparison operator	Meaning	Example
= (equal sign)	Equal to	A1=B1
> (greater than sign)	Greater than	A1>B1
< (less than sign)	Less than	A1<B1
>= (greater than or equal to sign)	Greater than or equal to	A1>=B1
<= (less than or equal to sign)	Less than or equal to	A1<=B1
<> (not equal to sign)	Not equal to	A1<>B1

Text concatenation operator

Use the ampersand (**&**) to concatenate (join) one or more text strings to produce a single piece of text.

Text operator	Meaning	Example
& (ampersand)	Connects, or concatenates, two values to produce one continuous text value	"North"&"wind" results in "Northwind"

Reference operators

Combine ranges of cells for calculations with the following operators.

Reference operator	Meaning	Example
: (colon)	Range operator, which produces one reference to all the cells between two references, including the two references.	B5:B15
, (comma)	Union operator, which combines multiple references into one reference	SUM(B5:B15,D5:D15)
(space)	Intersection operator, which produces one reference to cells common to the two references	B7:D7 C6:C8

Operator precedence in Excel formulas

If you combine several operators in a single formula, Excel performs the operations in the order shown in the following table. If a formula contains operators with the same precedence—for example, if a formula contains both a multiplication and division operator—Excel evaluates the operators from left to right.

Operator	Description
: (colon) (single space) , (comma)	Reference operators
–	Negation (as in –1)
%	Percent
^	Exponentiation

* and /	Multiplication and division
+ and –	Addition and subtraction
&	Connects two strings of text (concatenation)
= equal < > not equal <=less than or equal >= grater than than or equal	Comparison

FUNCTIONS

Function are special built-in formulas within the spreadsheet designed to work out a specific return. Function are categorized depending on their areas of application and the user chooses a function that is conversant and appropriate. For instance there are financial, logical, text, database, statistical, math and trig, date, time etc.

.

Components of function

- ✓ Equal sign
- ✓ Functional name
- ✓ Argument

=SUM (A2:A6)

Equals sign (=)

The equal sign initiates a formula. It lets MS excel prepare for calculation. Lack of the equal sign makes the formula statement remain as any other data.

Function name

This tells the user what kind of calculation the function will undergo. For instance, sum means addition of the values will take place; average means arithmetic means will be worked out etc.

Argument

This is the range or group of cells with values to be worked out. The argument could be single or multiple.

It should be enclosed in parenthesis (opening and closing brackets)

If a math function is being performed the math formula is surrounded in parentheses.(Alternatively referred to as the a **curved mark**, **open parenthesis** and **close parenthesis**. **Parenthesis** are an outward "(" or inward ")" curved line found on the "9" and "0" keys on a U.S. keyboard.)

Using the colon (:) allows you to get a range of cells for a formula. For example, A1:A10 is cells A1 through A10.

- ❖ =

= will create a cell equal to another. For example, if you were to put =A1 in B1 what ever was in A1 would automatically be put in B1. You could also create a formula that would make one cell equal to more than one value. For example, if you have a first name in cell A1 and a last name in

cell B1, you could put in cell A2 =A1&" "&B1 which would put cell A1 in with B1 with a space between. You can also use a concatenate formula to combine cell values.

- **AVERAGE**

=AVERAGE(X:X)

Display the average amount between cells. For example, if you wanted to get the average for cells A1 to A30, you would type: =AVERAGE(A1:A30).

- **COUNT**

=COUNT(X:X)

Count the number of cells in a range that contain only numbers. For example, you could find how many cells between A1 and A15 contain a numeric value by using the =COUNT(A1:A15). If cell A1 and A5 only contained numbers the value of the cell that contains this function would be equal to "2."

- **COUNTA**

=COUNTA(X:X)

Count the number of cells in a range that contain text and are not empty. For example, you could count the number of cells containing text in cells A1 through A20 by using the =COUNTA(A1:A20). If seven cells were empty the number "13" would be returned.

- **COUNTIF**

=COUNTIF(X:X,"*")

Count the cells that have a certain value. For example, if you have =COUNTIF(A1:A10,"TEST") in cell A11, then any cell between A1 through A10 that has the word test will be counted as 1. So if you have 5 cells in that range that contain the word test, A11 would say 5.

- **IF**

=IF(*)

The syntax of the IF statement are =IF(CELL="VALUE" ,"PRINT OR DO THIS","ELSE PRINT OR DO THIS"). So a good example of the syntax would be =IF(A1="","BLANK","NOT BLANK"), this would make any cell besides cell A1 say "BLANK" if a1 had nothing within it, and "NOT BLANK" if any information was within it. The if statement can, of course, become a lot more complicated but can be reduced if following the above structure.

- **INDIRECT**

=INDIRECT("A"&"2")

Returns a reference specified by a text string. In the above example, the formula would return the value of the cell contained in A2.

=INDIRECT("A"&RANDBETWEEN(1,10))

Returns the value of a random cell between A1 and A2 using the indirect and randbetween (explained below) functions.

- **MEDIAN**

=MEDIAN(A1:A7)

- **MIN AND MAX**

Find the median of the values of cells A1 through A7. For example, four is the median for 1, 2, 3, 4, 5, 6, 7.

=MIN/MAX(X:X)

Min and Max represent the minimum or maximum amount in the cells. For example, if you wanted to get the minimum value between cells A1 and A30 you would put =MIN(A1:A30) or if you wanted to get the Maximum about =MAX(A1:A30).

- **PRODUCT**

=PRODUCT(X:X

Multiples multiple cells together. For example =Product(A1:A30) would multiple all cells together, so A1 * A2 * A3, etc.

- **RAND**

=RAND( )

Generates a random number greater than zero but less than one, For example, "0.681359187" could be a randomly generated number placed into the cell of the formula.

- **RANDBETWEEN**

=RANDBETWEEN(1,100)

Generate a random number between two values. In the above example, the formula would create a random whole number between 1 and 100.

- **SUM**

=SUM(X:X)

The most commonly used function to add, subtract, multiple, or divide values in cells. Below are some examples.

=SUM(X+X)

```
=SUM(A1+A2)
```

Add the cells A1 and A2.

```
=SUM(A1:A5)
```

Add cells A1 through A5.

```
=SUM(A1,A2,A5)
```

Adds cells A1, A2, and A5.

```
=SUM(A2-A1)
```

Subtract cell A1 from A2.

```
=SUM(A1*A2)
```

Multiply cells A1 and A2.

```
=SUM(A1/A2)
```

Divide cell A1 by A2.

- **SUMIF**

=SUMIF(X:X,"*"X:X)

Perform the SUM function only if there is a specified value in the first selected cells. An example of this would be =SUMIF(A1:A6,"TEST",B1:B6) which only adds the values B1:B6 if the word "test" was put somewhere in between A1:A6. So if you put TEST (not case sensitive) in A1, but had numbers in B1 through B6, it would only add the value in B1 because TEST is in A1.

- **TODAY**

=TODAY()

Would print out the current date in the cell entered. This value will change to reflect the current date each time you open your spreadsheet. If you want to enter a date that doesn't change hold down **CTRL and ;** to enter the date.

- **TREND**

=TREND(X:X)

To find the common value of cell. For example, if cells A1 through A6 had 2,4,6,8,10,12 and you entered formula =TREND(A1:A6) in a different cell, you would get the value of 2 because each number is going up by 2.

- **VLOOKUP**

=VLOOKUP(X,X:X,X,X)

The lookup, hlookup, or vlookup formula allows you to search and find related values for returned results. See our lookup definition for a complete definition and full details on this formula.

- **RANK Function**

RANK Function Arguments. order: (optional) This argument tells **Excel** whether to **rank** the list in ascending or descending order.

RANK Function Arguments

There are 3 arguments for the RANK function:

- **number**: in the above example, the number to rank is in cell **B2**
- **ref**: We want to compare the number to the list of numbers in cells **$B$2:$B$11**. Use an absolute reference ($B$2:$B11), instead of a relative reference (B2:B11)so the referenced range will stay the same when you copy the formula down to the cells below
- **order**: (optional) This argument tells Excel whether to rank the list in ascending or descending order.
  - ✓ Use zero, or leave this argument empty, to find the rank in the list in descending order. In the example above, the order argument was left blank, to find the rank in descending order.
    =RANK(B2,$B$2:$B$11)
  - ✓ For ascending order, type a 1, or any other number except zero.
    If you were comparing golf scores, you could type a 1, to rank in ascending order.
    =RANK(B2,$B$2:$B$11,1)

- **IF FUNCTION**

This is logical function that returns one value if a condition specified evaluates to true and another value evaluates to false. It compares two value; that is if not true it is false.

Syntax

IF(logical_test, value_if_true, [value_if_false])

For example:
=IF(A2>B2,"Over Budget","OK")

Logical test

This is the value that is chosen to be evaluated to either true or false. It is the argument value.

Value if true

It is value that shall be returned if the logical test is true

Value if false

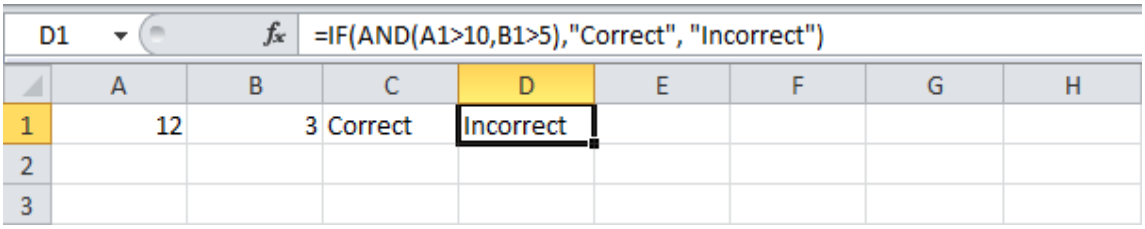
It is the value that shall be returned if the logical test is false

Here are some additional examples of formulas that you can enter in a worksheet.

- **AND FUNCTION**

The **AND Function** returns TRUE if all conditions are true and returns FALSE if any of the conditions are false.

1. Select cell D2 and enter the following formula.

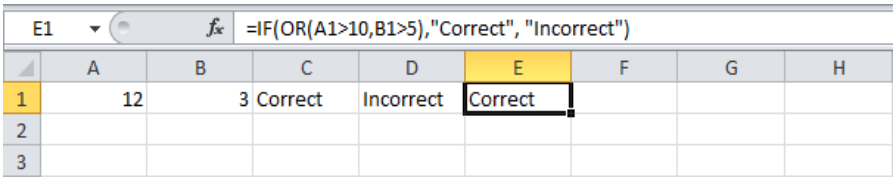


The AND function returns FALSE because the value in cell B2 is not higher than 5. As a result the IF function returns Incorrect.

- **OR FUNCTION**

The **OR function** returns TRUE if any of the conditions are TRUE and returns FALSE if all conditions are false.

1. Select cell E2 and enter the following formula.



The OR function returns TRUE because the value in cell A1 is higher than 10. As a result the IF function returns Correct.

General note: the AND and OR function can check up to 255 conditions.

- **=SQRT(A1)** Uses the SQRT function to return the square root of the value in A1.
- **=UPPER("hello")** Converts the text "hello" to "HELLO" by using the UPPER function.
- **=IF(A1>0)** Tests the cell A1 to determine if it contains a value greater than 0.

Constructing or writing a formula

Writing or constructing a formula the user may design or construct to come up with own form. This happen especially when the spreadsheet does not provide a suitable function to attain duty required

To apply a function

To apply a function the user can enter/ insert one from a list or type the function direct at the formula bar. Whether it is from a list or typing direct the cell for the returns first should be selected.

Steps to enter function

Method1

- Select the cell for return
- Click Formulas tab
- Click insert function under the function library
- Select function category
- Select function name
- Click ok
- Select the range/ argument
- You may fill other details
- Click ok
- Press enter key
- Click the green tick at the formula bar

Method 2

- Select the cell for return
- Click (fx) at the formula bar
- Select function category
- Select function name
- Click ok
- Select the range/ argument
- You may fill other details
- Click ok
- Press enter key
- Click the green tick at the formula bar

Steps to type a function direct

- Select the cell for returns
- Type equal sign
- Type the function name
- Type open bracket
- Type the range/ argument
- Type close bracket
- Press enter key
- Click the green tick at the formula bar
- To cancel a calculation

Method 1

- Select the cell of calculation
- Click the red X at the formula bar

Method 2

- Click cancel button if there is a dialog

Method 3

- Select the cell of calculation
- Press escape key

Method 4

- Select the cell of calculation
- Press delete key

To auto- fill a function or a formula

This is done after getting the 1st answer within a cell for the first entry and so as apply the same function/ formula to the rest of the entries providing respective return.

Steps to auto- fill

- Calculate the 1st return for the 1st entry
- Select the cell with return for the 1st entry
- Point the auto-filling handle
- Press and hold down the LMB
- Drag to desired direction

REFERENCING

This is a method of filling cell address into other especially when the formula has been used so as to cell to change freely.

Types of referencing

1. Relative referencing

This is whereby the 1st return/ entry is obtained and auto filling is done in order to effect the return for the other entries, here the function name doesn't change but the argument does

2. Absolute referencing

This indicate the same reference that is not meant to change during auto filling after the value within the cell has been incorporated to a function or formula

Steps to absolute referencing

Ensure there is a cell any place in the worksheet that has value to be applied for absolute ref.

Select the cell for the returns

Type the equal sign

- Click the cell with absolute value
- Press F4 to make it constant/ absolute
- Type an operator if any
- Click the argument cell
- Click press enter key
- Auto fill for the rest of the entries

DATA VALIDATION

It is a logical command that sets criteria on a particular cell or cells to control/ restrict the data entered in the cell e. g if the user want to put a limit in an intake, or if one wants to put some age limit for the retiring employees.

Steps to data validation

- Highlight cells to validate
- Click Data tab
- Click data validation under the data tools group
- Set the Settings, Input message and Error alert

- Click ok

HYPERLINK

This is an address that is established to link two or more files especially if they have related information.

Steps to hyper link

- Ensure two or more files to hyperlink exist
- Open one file
- Highlight a portion to act as a link
- Click insert tab
- Click hyperlink
- Browse for the path of the link file
- Click ok
- Click the link to connect to other file
- Repeat the above process to establish another link and so forth

COMMENTS

Comments are details hidden within a particular cell, telling more about the cell.

Steps to insert comments

- Select the cell to comment on
- Click review tab
- Click new comment
- Type the details
- Click away

Steps to read a comment

- Point the cell with the comment (this cell has a red triangle at its top right corner)

Steps to remove comments

- Click the cell with the comment
- Click review tab
- Click clear comments

FORMATTING A WORKSHEET DATA

This determine the way the worksheet data would appear as displayed on the screen and on print outs. When formatting the following may be applied

TAB	Formatting effect
Number	General, number, text, percentage, fraction, accounting, currency, date, time, scientific
Alignment	Horizontal align, vertical align, text control, text direction, orientation etc.
Font	Font colours, font style, font type, font size, underline, text effect etc.

Border	Line style, border colour, boarder presets etc.
Pattern	Cell shading, cell pattern etc.

Steps to format worksheet data

- Highlight the data to format
- Click home tab
- Click format
- Click on appropriate tab
- Apply appropriate formatting aspects
- Click ok

COPYING FORMATS

Formats here mean some editing or decorative aspects that have been applied in a particular worksheet e. g formula, comments, validation, gallery etc. therefore if ma data has some of these aspects the formats can be copied and pasted individually at time.

Steps to copy formats

- Select the data
- Click home tab
- Click copy
- Select sheet to place the copied format
- Click home tab
- Click paste special
- Select the type of format
- Click ok

CHART

Chat are objects that can be used to present a numerical data effectively in graphs. This kind of presentation is more elaborate especially when analyzing trends, development or growth of events or activities. There are several types of chart namely;

- ❖ Bar chart
- ❖ Pie chart
- ❖ XY scatter chart
- ❖ Line chart
- ❖ Column chat

Each of the chart type also has various chart subtype, for instance the bar chart has following

- ❖ Clustered column
- ❖ 100% sucked column
- ❖ Stacked column

Steps to create a chart

- Highlight the data
- Click insert tab
- Select chart type
- Select chart subtype
- Follow the wizard till the end
- Click finish

VARIOUS PARTS OF CHAT

There are several parts that make a chart. These include the following:

Chart tittle
This tells one what the chart is all about
Chart area
The space occupied by all the components of the chart.
Plot area
The space in the chart area that holds the graph. Graph represents the data series.
Legend
The key or description of the grouped items represented by different colours
Axes
The outer lines that define or mark the graph

Series
The individual items either in labels or values containing data. They are usually in the cells.
Gridlines
The partitions of the chart walls. These are minor and major gridlines on both category axis and value axis
Chart wall
The vertical space where the graph leans on

To format parts in a chart
Method 1

- Select the part to format
- Click format menu
- Click select (name of the part)
- Format accordingly
- Click ok

Method 2

- Select the part to format
- Right click the selected part
- Click format (the name of selected part)
- Format accordingly
- Click ok

MICROSOFT ACCESS

Microsoft access is a database tool or package which is used to prepare, organize and maintain, usually very huge and complex amount of information

Benefits of access

- Large virtual storage for the data
- Easy maintenance
- Accurate updating
- Fast retrieval of well-organized information

Application of access

- Organization of customer addresses and their details in postal and telephone agencies
- Organization of plight information
- Organization and maintenance of employee records in the place of work
- Preparation and organization of books details in the library
- Preparation of basic programming

Example of other databases

- ❖ Fox pro
- ❖ Dbase
- ❖ Paradox
- ❖ Fox base
- ❖ Oracle etc.

LOADING MS ACCESS

Method 1

- Click start
- Point all program
- Point Microsoft office
- Click Microsoft access

Common terms used in MS access