

PRODUCTIVITY TOOLS**WORD PROCESSING.**

An electronic Word processor is application software that enables the user to create, edit, format and print more professional text-rich documents. A word processor (more formally known as document grounding/preparation system) is a computer application used for the production (including composition, editing, formatting, and possibly printing) of any sort of printable material. In a typical office where documents are typeset, formatting and editing of such documents becomes a nightmare where manual modes of document production, filling and transmission are used.

ELECTRONIC WORDPROCESSORS

Word has got a number of versions and these include the following

- a) Ms Office 97,
- b) Ms Office 2000,
- c) Ms Office 2003,
- d) Ms Office 2007
- e) Ms Office 2010.
- f) Ms Office 2013 and 2016

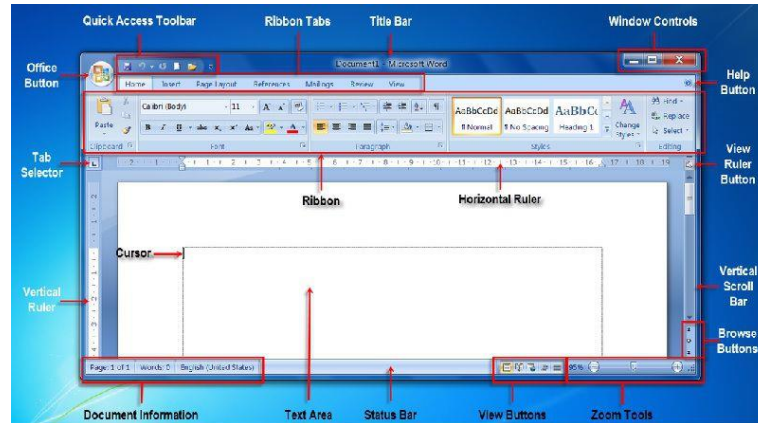
Examples of word processing software/applications include

- i. Ms Office word processor.
- ii. Word pad.
- iii. Lotus 1, 2 and 3.
- iv. Corel Word Perfect
- v. Apple Works.
- vi. Professional writer.
- vii. Word Pro
- viii. Microsoft Office

ADVANTAGES OF WORD PROCESSOR PROGRAMS

- Easier to use due to automated features such as Word-wrap, autocorrect and auto complete, find and replace feature etc.
- They have superior editing tools such as spelling checker, the Thesaurus, etc., hence making editing easier.
- Can store documents for future retrieval.
- They have superior formatting features that make a document more appealing to the reader.
- The user can produce multiple copies more easily.
- Copy and move (cut) operation make it easier to manipulate a document.

FEATURES OF A WORD PROCESSOR WINDOW:



Picture accredited to Groove post

Most word processors have common features. Each task appears in a rectangular area called an **application window**.

1) Title bar.

A title bar indicates the task currently running. On its right are the minimize, maximize and close button.

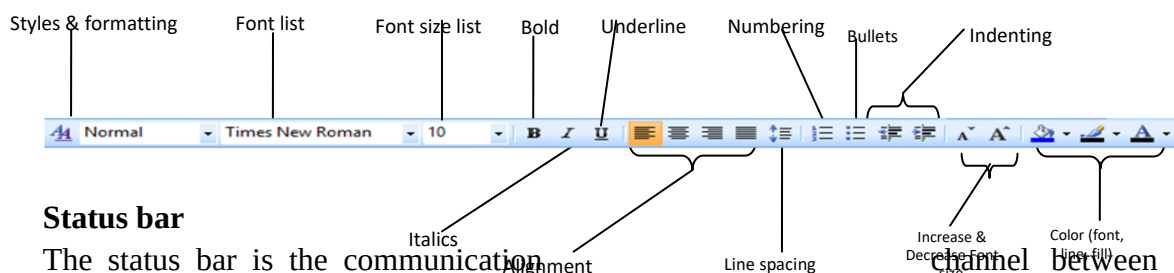
2) Menu bar.

The menu bar provides the user with a group of commands. Each command has a drop down list, when click used to create and manipulate a document.

3) Toolbars/formatting tool bar

Toolbars consist of buttons of commands (icons) that provide shortcuts to commands available in the menu bar. The two default toolbars are the standard and formatting toolbars.

The formatting tool bar



Status bar

The status bar is the communication channel between the user and the application program. It displays the current page, section line and activities such as file saving progress.

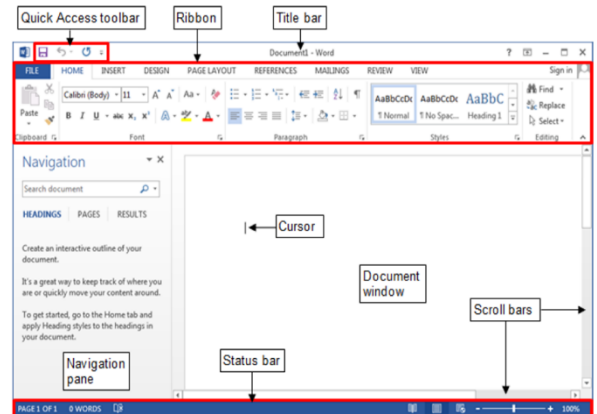
CREATING A DOCUMENT USING MICROSOFT WORD.

While Word 97-2003 look alike and are compatible, Word 2007/10 radically deviates from these versions in the look and menu layout. There is no File menu and once text is highlighted/blocked, **a floating formatting toolbar** is displayed above the selected text.

Moreover, documents saved in 2007/10 format cannot be opened in the previous version unless you save the file in compatibility mode.

The appearance a Microsoft word processor window

This is the work area where you create your document. It resembles an ordinary piece of paper.



1) Document Typesetting/Typing Text.

When typing, once the cursor reaches the end of the current line, it automatically jumps to the next line. If a word does not fit in the current line, it automatically wraps at the beginning of the next line. This is referred to as **word wrap**.

2) Saving a document

- On the office button/, File menu click the **Save As** command.
- Select the storage location from the Save in list box.

Type the name of the file in the **File name** box then click OK/save.

3) Editing a document

Making changes or modifying an existing document is called editing. Some editing operations include:

4) Deleting text, files and folders.

To delete a character, a word or a block of text:

- Highlight the text to be deleted.
- Press the delete key or the backspace key.

Note:

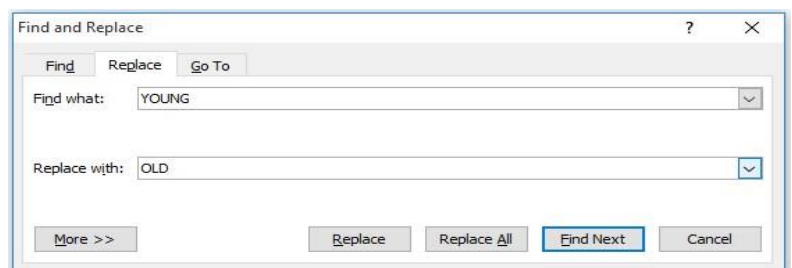
- Delete key erases a character to the right of the cursor while the backspace deletes characters to the left.
- Use the type over mode to write characters to the right of the cursor or insert mode to insert a character(s)

5) Find and replace

Find and replace is used to locate a word or a phrase and replaces it with another.

To find and replace a word or phrase:

- On the **Edit** menu, click **Find** or **Replace**.
- In the **Find what** box, type the word or phrase to find.
- Click the Replace tab. In the **Replace with** box, type the word or phrase to replace the target word or phrase.



6) Spelling and grammar check.

Spelling and grammar checker automatically locates wrongly spelt and misspelled words and grammatical mistakes.

To spell check a document:

- On Tools menu click **Spelling and Grammar** or press **F7**.

- In the Spelling and Grammar dialog box, misspelled words are shown in red while grammatically incorrect phrases are in green.
- From the suggestion list, select the correct spelling or grammar.
- Click **Change (All)** button. To ignore, click the **Ignore (All)** button.

7) Thesaurus.

The thesaurus allows the user to automatically find words or phrases with similar meaning (synonyms) or opposite meaning (antonyms) to the one selected.

To use the thesaurus:

- Highlight text.
- On Tools menu, point to Language then click Thesaurus.
- Select a synonym or an antonym.

8) Autocorrect and auto Text.

Autocorrect and Auto Text are used to automatically correct a commonly misspelled word and insert a predefined text when creating a document.

To create an autocorrect or auto text:

- On the **Insert** tab menu, point to **Auto text**, and then click **Auto text** command.
- Click the **Auto text** or **Autocorrect** tab and type the autocorrect or auto text.

Click OK to apply and close the dialog box.

9) Undo and redo.

Undo reverses the most recently executed command while redo reverts back to the cancelled action.

10) Superscript and Subscript.

A superscript appears just above the rest of the characters as in cm^2 while a subscript appears just below other characters as in H_2O .

11) To make text superscript or subscript:

- Highlight character(s):
- On the Formatting tool bar, you can directly select it i.e. X_2 or X^2 , or click Font
- On the **Font** dialog box check **superscript** or **subscript**.

12) Paragraph formatting.

A paragraph is a special block of text dealing with a single theme and starting on a new line or indent. Some of the formatting features you can apply onto a paragraph include: alignment, setting tabs and indents, drop cap, bullets and numbering, line spacing, inserting columns and page breaks.

13) Alignment.

Alignment is the arrangement of text relative to the left margin, center of page or the right margin. The five major alignment options available are the left, center, right, justified and force justified.

To align text:

- Highlight the text.
- On the Formatting tool bar, click **Paragraph**.
- In the dialog box, select the **Alignment option** then click OK.

14) Line spacing.

Line spacing is setting space between lines, paragraphs or blocks of text.

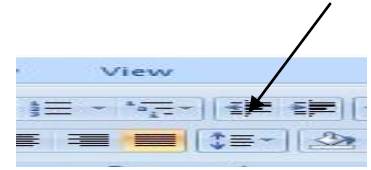
15) To space lines:

- Highlight the lines of text.
- On the Format menu, click Paragraph.
- In the Paragraph dialog box, select the line spacing option from the line spacing list box then click the OK button.

16) Setting tabs and Indents.

Tabs refer to definite cursor stops when the tab key is pressed.

Indenting is moving a sentence or a block of text away from the margin using the tab key.



17) To set tabs and indents:

- On the **Formatting tool bar** menu, click **Tabs**.
- In the **Tab** dialog box, set the tab stop, alignment and leading then OK.
- Press the **Tab** key to increase or the spacebar to decrease the indent, alternatively, click the **Increase/Decrease** indent buttons on the formatting toolbar.

18) Drop cap.

A drop cap is a large character in a paragraph that occupies more than one line down.

19) To create a dropped cap:

- Highlight the paragraph you want to begin with drop cap.
- On **Format** menu, click **Drop cap**.
- Click **Dropped** or **In Margin**.
- Specify the number of lines and other options then click OK.

20) Mail Merge.

A mail merge is a tool that aids the users create one document and be able to send it merge it to a multiple of recipients.

- To Start a Mail Merge: Select mailings —> Mailings, start mail merge —> you can select from the dialog box an option i.e. —start a step by step mail merge or you can use a mail merge wizard.
- To Select a Data Source: In the Mail Merge task pane, select the appropriate option under Create recipient list and click next. Perform the necessary tasks and click next when you're finished.
- To Insert a Merge Field: In the Mail Merge task pane, click and drag the appropriate merge field to the desired location in the publication. Use the options listed under more items as necessary. Click Next.
- To Complete the Merge: Select the desired option under Create merged publications and performs the necessary tasks.

21) Text bolding, Underlining and italicizing.

22) How to Bold

Press **Ctrl + B**

Click the **B** icon on the **Home** tab at the top of Word

23) How to Underline

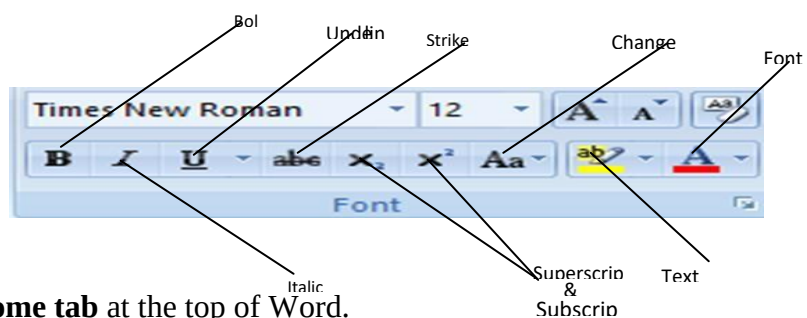
Press **Ctrl+U**

Click the **U** icon on the **Home** tab at the top of Word.

24) How to Italicize

Press **Ctrl + I**

Click the **I** icon on the **Home** tab at the top of Word



25) Saving in Ms-Word.

- If saving for the very first time...
- Click: Office button+ Save Type File Name+ Choose Location+ Save

26) Keyboard Shortcut.

- Ctrl+S+Type File Name + Choose Location+ Save.

27) Saving after Editing.

- If you want to change the File Name of the edited document from the one you started with but maintain the original document.
- Click: Office button+ Save As+ choose format +File Name+ Location

Saving while Editing

- Press Ctrl +S

OR

- Click the save icon on the top left corner of the word window.

29) Word offers five views of your document:

1. **Print Layout View**—this is the view Word users generally stay in during most of the editing session.
The Print Layout view displays your document exactly as it will appear on the printed page when you print the document.
By editing in the Print Layout view, you can more accurately see how those changes will affect the final printed document.
2. **Outline View**—the Outline view button enables you to manage outlines you create in Word.
3. **Draft View**—the Draft view hides all margins, pictures, headers, and footers from your document so that you can see and edit strictly the text inside.

Press the **Delete key** (which is labeled **Del** on some keyboards) or **Backspace** Key to delete characters where the insertion point appears.

Every time you press **Delete**, Word removes one character to the right of the text cursor (including a space, number, or even a blank line if that's where the insertion point is positioned).

When you press **Back space** key, Word removes one character to the left of the text cursor.

F5 - Displays the Go to dialog box.

Shift + Enter-Moves the text cursor to the next line but does not start a new paragraph or insert a Paragraph mark.

EDITING COMMANDS AND KEYBOARD SHORTCUTS.

Ctrl+ left -arrow Moves the text cursor to the beginning of the word.

Ctrl+Shift+left - arrow Moves the text cursor to the left and selects text as it moves by highlighting the text.

Ctrl+Right- arrow Moves the text cursor to the end of the word.

Ctrl+Shift+right-arrow Moves the text cursor to the right and. select text as it moves by highlighting the text.

Up arrow -Moves the text cursor up one line at a time.

To print.

Select printing options like printer & number of copies

Click: Office button + Print + Print

Quick Print (sends the document directly to the default printer without making changes)

Click: Office button + Print + Quick Print

Print preview (preview & make changes before printing)

Click: Office button + Print + Print preview

Close Preview when through

Determine What to Print

Click to select either All or Pages to designate that you want to print the Entire document or only a portion of it. If you click **Pages, type the page** Number or arrangement of page numbers (such as 2-5 or 1-10, 15-25) that you want to print.

How to Copy

Press Ctrl + C to copy the selection to your document. The original text remains unchanged in the document. The selected content is copied and held into the clipboard.

OR Right click on the highlighted text & choose copy from the menu

How to Cut

- Press **Ctrl + X**. This moves the selected text from its original location to the clipboard. This option leaves no copy behind.

- **OR** Right click selected text & choose Cut option

How to paste

- Choose location Press

- Press **Ctrl + V**

- **OR** Right click on the location & choose paste option.

Note: The ribbon bar's **Clipboard section contains the typical Cut, Copy, and Paste** options in case you don't want to use the keyboard shortcuts.

Creating a multicolumn news letter

- Type your document.

- Format your headline

- Select the text you want to appear in your columns

- Request a section Change

- Click your ribbon's **Page Layout tab** and click the **Breaks button** to display the available section breaks you can insert.

- Select **Continuous** to convert your selected txt to a new section and make it reside on the same page as your headline Word adds.

When we add a new story, we want it to begin on a new page. To do this, you can add breaks.

There are two types of breaks, page breaks and section breaks.

Section breaks allow you to format things like headers and footers differently. For example, we don't want headers on pages with a title, but we do want them on other pages. Section breaks are ideal for this. If you didn't have them, each page would have the same header.

Steps for section Break

- Scroll to the end of your first story, and _left click on a new line

- Click on the Page Layout tab at the top of Word. Locate the Page Set up panel and the Breaks item:

- Click on Breaks to see the following menu

- Select Section Breaks > Next Page.

- This adds a new page to your document, and a new section.

Page breaks and section break

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Steps for section breaks.

Scroll to the end of the first story and left click on the new line.

- Click on the page layout tab at the top of the word. Locate the page set up panel and the break item.
- Click on breaks to see the following menu.
- Select section breaks > next page.
- This adds a new page to your document and a new section.

RESOURCE QUESTIONS FOR WORD PROCESSOR**ASSIGNMENT 1.**

Use Microsoft word processor to write ten letters to ten students of Hodge road Elementary School for the field trip as below. Note these students have different; Home addresses, address 1, City, State, Postal Code, and first Name.

Hodge road elementary school
123 Mingo Bluff Road
Knightdale, NC 23456
Wednesday May 1, 1999

<<Home Contact>>

<<Address 1>>

<<City>>, <<State>><<Postal Code>> Dear<<Home Contact>>:

This is to let you know that on June 3rd we plan to take <<FIRSTNAME>>'s class on a day long Field Trip to the Edison Home in North Fort Myers. The trip will be the culminating activity after week science unit where the work of Thomas Edison has been especially a focus of interest for the class.

<<FIRSTNAME>> will leave and return within the normal time for the school day, so there will be no disruption to your own schedule.

Please prepare <<FIRSTNAME>> a pack lunch for the trip. The restaurant facilities at the Edison home are somehow expensive and we have been unable to negotiate an acceptable reduced charge for school children.

Please feel free to call me at 0776-22235 should you have need to discuss this matter further. Thank you for your help and support in this endeavor and throughout the year.

Yours very sincerely, Donna
Hendry.

1st Grade teacher

ASSIGNMENT 2.

(a) Using Microsoft word, type the passage below as it is and answers the questions that follow.

—UNESCO hails Uganda”

The Director General of the United Nations Educational, scientific and cultural Organization (UNESCO), KIOCHIRO Matsuura, has commended Uganda's efforts in emphasizing science Education. Matsuura, who is here for a two-day visit, said on his arrival at Entebbe Airport yesterday that the UN agency was —enjoying a strong bilateral relationship with Uganda.

—We appreciate Uganda's efforts in embracing science and cultural education as part of national development. This being my first official visit here, I hope strengthen the ties between Uganda and UNESCO, Matsuura said.

He emphasized that Uganda's cultural and scientific education statistics which stand as shown in the table below were encouraging by world standards. These statistics were carried out in the year 2000, 2001, 2002, 2004 for both cultural and science education.

Cultural education:

Males (%) 70, 50,

28, 40, and 80

Females (%)

60,30,96,48 and 78

Science education:

Males (%) 30,78,90,20 and 60

Females (%) 56,89,76,59 and 90

	Males		Females	
	Year	%	Year	%
Cultural education				
Science Education	Year	%	Year	%

- (i) Set the font size to 13 and double space the document.
- (ii) Copy the document and paste it on the next page.
- (iii) Set the title —UNESCOI hails Uganda to font size 14 and bolded.
- (iv) Set the margins to(1.5) and (1.3 right) then bottom and top (1.2)
- (v) Set the document body text to‘ Arial Narrowl
- (vi) Insert the header as —Diplomal and in italics
- (vii) Set the whole document to justified and font color, red
- (viii) Number pages in uppercase alphabet.
- (ix) Save your work.

ASSIGNMENT 3.

- (i) Using the suitable word processing software, type this document as it is.

HUMAN BEINGS

Most infants are guided through life by a parent or guardian and taught how to talk, walk, eat and generally behave. The socialization process begins as soon as we are born when we being to imitate people around us, copying the shapes and noises in our environment. Many other people and circumstances affect our appearance, attitude and behavior, such as work, lifestyle, ethnicity, family, environment, peer group (friends), gender, media etc.

Human beings are very different throughout the world and opinions of what constitutes a natural or nurtured human being differ enormously. Without socialization, an individual would bear little resemblance to any human being defined as —normall by the standards of his or her society.

There have been some instances where a person has been deprived of the assistance of a parent or any other social and human presence. These beings are often referred to as feral people meaning —wildl.

An example of feral people was the Wolf-infants of Midnapore who were reportedly found in a wolf den in a Bengal forest in 1920. The infants, age two and eight, walked on all fours, preferred a diet of raw meat, howled like wolves and lacked any form of speech.

(Adapted from: McKenzie and Bryden (2004:50), Introducing Word 2000 for Windows)

Further Required

- (ii). Copy and paste the document to page 2
- (iii). Using the copy on page 2, center, bold and underline the heading and make it font size 24.
- (iv). Center aligns the second paragraph and make it all italics.

- (v). Italicize the source of the document and make it font size 8.
 (vi). Spell checks your document.
 (vii). Insert your name and index number as footer.
 (viii). Save your work as My Work.

QUESTION 5

(a) (i) Type the following information as it is: (use font size 14). The time table below will be out by the beginning of next academic year. It should be copied and filled with relevant subjects.

Senior Four Time table 2010									
	8: 0 9: 0 ^	1 9: 0: 0 0 ^	B R E A	1 1 1: 0: 3 3	1 1 2: 1: 3 3	L U N C	2: 0 3: 0 ^	3: 0 4: 0 ^	
Mon									
Tues									
Wed							FREE		
Thur									
Fri									
Sat									

Note: The outer boarder 4point

- Put footer as your name and index number.
- Color —senior four Time table 2010—BREAKI, —LUNCHI, and —FREEI green.
- Save your work as your name and personal number.
- Print your work.

POWER POINT (ELECTRONIC PRESENTATION)

A **presentation program** is computer program/application software that is used to display information normally in form of a slide show e.g PowerPoint. PowerPoint is simply a presentation program.

It is important to note that communicating effectively to bigger audiences is a challenge to many people. However, the versatility of ICTs has played a big role in enhancing the ease and impact of the presentation process.

Therefore, presentation program helps the presenter with a wide range of tools to clearly structure his ideas and offer the participants with multimodal information that is so engaging.

There are many areas where power point can be used, these include;

- a. Professional education. (work-related)
- b. Entertainment.
- c. General communication.

Presentation programs can either supplement or replace the use of older visual aid technology, such as pamphlets, handouts, chalkboards, flip charts, posters, slides and overhead transparencies.

A presentation program (power point) typically includes three major functions i.e.

- i. An Editor that allows texts to be inserted and formatted.
- ii. A Method majorly for inserting and manipulating graphic images.
- iii. A Slide show that is a system to display the content.

Examples of presentation packages/software include the following;

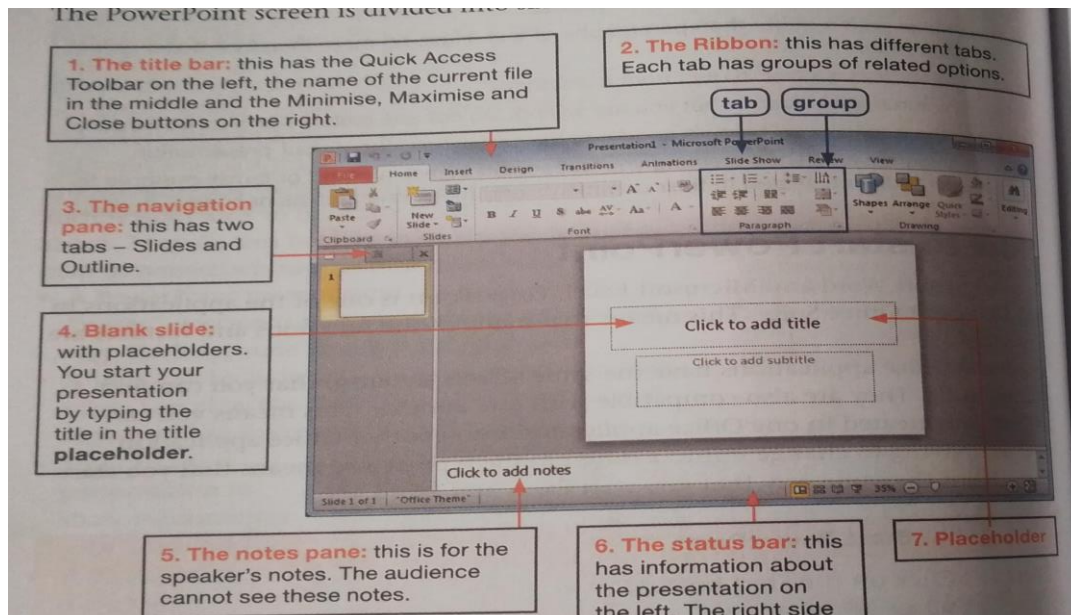
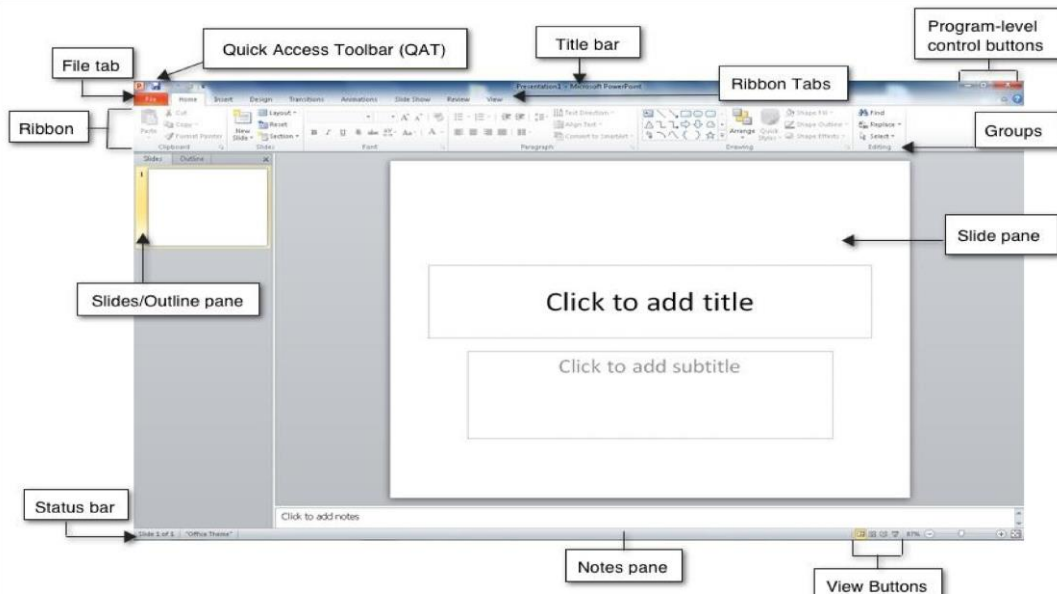
- Microsoft powerpoint
- Harvard graphics.
- Open office presentation
- Coral presentation
- Lotus freelance graphics
- Keynote.

With presentation, texts, audios, graphics, movies and other objects are positioned on individual pages or slides in a given presentation.

Golden rules for PowerPoint

- No paragraphs
- Use slides to emphasize the spoken message.
- Keep it short and simple (KISS)
- Use a 1. Keep the presentation simple
- Information should be logical
- Use bullets
- Use appropriate font
- Use pictures to illustrate the concept.
- Use appropriate background colour.
- When you finish show other people for comments

Features of presentation packages/software



0-1 Summarized Explanation of Features

1 The title

bar:

- this has a quick access tool bar on the left, name of the current file in the middle and the minimise, maximise and close button on the right.

2 The Ribbon

It has different tabs. Each tab has group of related options.

- It has a Quick Access Toolbar, which contains options that are used often. • The Home Tab

3 Navigation Panel

Can be used to:

- Add A new slide
- Change the layout of a selected slide
- Reset a slide's layout to the default layout
- Divide a set of slides into sections
- This has two tabs

1. Slides

4 THE NOTES PANE

- It is for the speaker's notes.
- The audience cannot see these notes.

5 THE STATUS BAR

- This has the information about the presentation on the left.
- The right side has tools.

6 PLACEHOLDER

- It is a dotted box on a slide into which text and images can be added.

Slide views.

1. **Slide Sorter:** a window that arranges all slides in one screen in horizontal rows. This kind of view is useful to make changes to several slides at a time. Slides can also be rearranged in any order. Changes may include;
 - Rearranging,
 - Deleting, moving,
 - Copying among others. All these are important in a slide sorter view.
2. **Normal View:** it can also be called a slide view. A single slide and can add text, delete or modify the slide contents. It is the main working window in the presentation. The slide is shown full size on the screen.
- 3 **Notes Page View:** Allows one to view the Notes Pane better add and modify additional notes to a selected slide. Our text placed on the slide.

Other terminologies used in PowerPoint presentation.

4. **Design temperate:** This is a co-ordinate packaged deal. It is created so that even though different slide types can have different layouts and graphics, the whole presentation goes together as an attractive package.
5. **Transition:** Slide transmissions are visual movements as one slide changes another.
6. **Animation and animation schemes:** these are visual effects applied to individual items on the slide such as graphics, tittles or even bullet point.
7. **Slide master:** this is a default design temperate/parent slide template which other child slides by default take it's formatting. All slides in a presentation are designed using the font colors and styles and graphics in a slide master.
8. **Ribbon:** This is a strip of buttons across the top of the main window.

Multimedia in PowerPoint.

This is both audio/sound, video and pictures but in motion/movement state.

9. **Video/movies clips:** Video clips are added to enhance your presentation. This can show authentication, movement or simulated movement, which makes the presentation more interesting. Movement is either by click of the mouse or automatic.

10. Hyperlinks.

A hyperlink is an element in an electronic document that links/leads you to another place in the same document or to an entirely different document. Typically, you click on the hyperlink to follow the link. Hyperlinks are the most essential ingredients of all hypertext systems, including the World Wide Web.

11. Sound.

Sound as with video or movie clips, is added to enhance your presentation. If for example your presentation is about weather, as sound clip of thunder can be added. Clicking on the sound clip will activate the sound.

Starting Microsoft PowerPoint.

To start Microsoft PowerPoint,

- Point on the taskbar,
- Click Start and then
- Point to All Programs
- Click Microsoft office, then you can select Microsoft office PowerPoint, a Microsoft power point window will appear.

To create a slide/Title Slide

Write in the boxes as displayed in the default slide layout. OR Change to blank slide layout and use text boxes and have greater flexibility in where you want working in different view modes:

PRACTICAL ASSIGNMENTS FOR POWERPOINT (PRESENTATION SOFTWARE).

ASSIGNMENT 1

Create a suitable 6 - slide show presentation for the advert of your favorite artist who is going to stage a, show at national theatre with the following items:

(Remember it's a television advert)

The slides should have the following:

- (i) Appropriate animation schemes to view the presentation.
 - (ii) Appropriate transition for the show
 - (iii) Clips and word art where applicable
 - (iv) Appropriate design templates and back ground color
 - (v) Apply sound where possible to enhance your presentation
 - (vi) Footer bearing your name and, index number
- (a) A suitable title for the show
 - (b) The date and time the show will feature Location of the theatre
 - (c) Other artists to feature in the show.
 - (d) Save your work and make a printout

ASSIGNMENT 1

Create a suitable 6 - slide show presentation for the wild life & Environment club of the parish with the following items:

The slides should have the following:

- (i) Appropriate animation schemes to view the presentation.
 - (ii) Appropriate transition for the show.
 - (iii) Clips and word art where applicable.
 - (iv) Appropriate design templates and back ground color.
 - (v) Footer bearing tour name and index number.
- (a) A text slide with the name of the club.
 - (b) A text slide with the departments of the club.
 - (c) A text slide with the activities in the club.
 - (d) A two column text slide with the names of the workers in the club.
 - (e) A text slide with other related activities in the club.
 - (f) A tabular slide with fifteen imaginary volunteers with their imaginary annual subscription payments.
 - (g) A column chart for analyzing the highest payments per individual member.
 - (h) Save your work as your name and index number.

- (i) Print your slides.

ELECTRONIC SPREADSHEETS (MS EXCELL).

An electronic spreadsheet: is application software used to calculate, organize and analyze numerical data. It is an electronic file made up of rows and columns. This intersections of rows and columns is known a cell. One can also say that it is a piece

Examples of spreadsheets applications include;

- (i) Microsoft Excel,
- (ii) Lotus 1-2-3
- (iii) Corel Quattro Pro.
- (iv) VisiCalc
- (v) Ms -DOS
- (vi) Open Office.Org Calc

Components of an electronic spreadsheet.

- **Worksheet** - A rectangular grid made u of rows and columns:
- **Database** - Enable the •user to perform functions such as sort, filter, subtotaling and consolidation on worksheet data. A spreadsheet file can also be saved with a .dbf extension to make it accessible from other applications using a db engine
- **Graphs** - Visual representation of data on a chart.

Advantages of Electronic spreadsheets.

- They have **large worksheets** compared to manual spreadsheets.
- They automatically adjust the result whenever a value is changed in a cell(s) that is referenced by a formula.
- They have **superior editing and formatting** features hence producing neat work.
- **Easier entry of data** due to typing aids such as **auto complete, autocorrect, copy and move**.
- It is possible to **forecast or predict** the outcome of changing values in one or more cells.
- **Analytical graphs or charts** lets one provide visual representation of data from a worksheet.
- Easy **management of large** amount of data using data management features such as **sorting, filtering, data validation and subtotaling**.

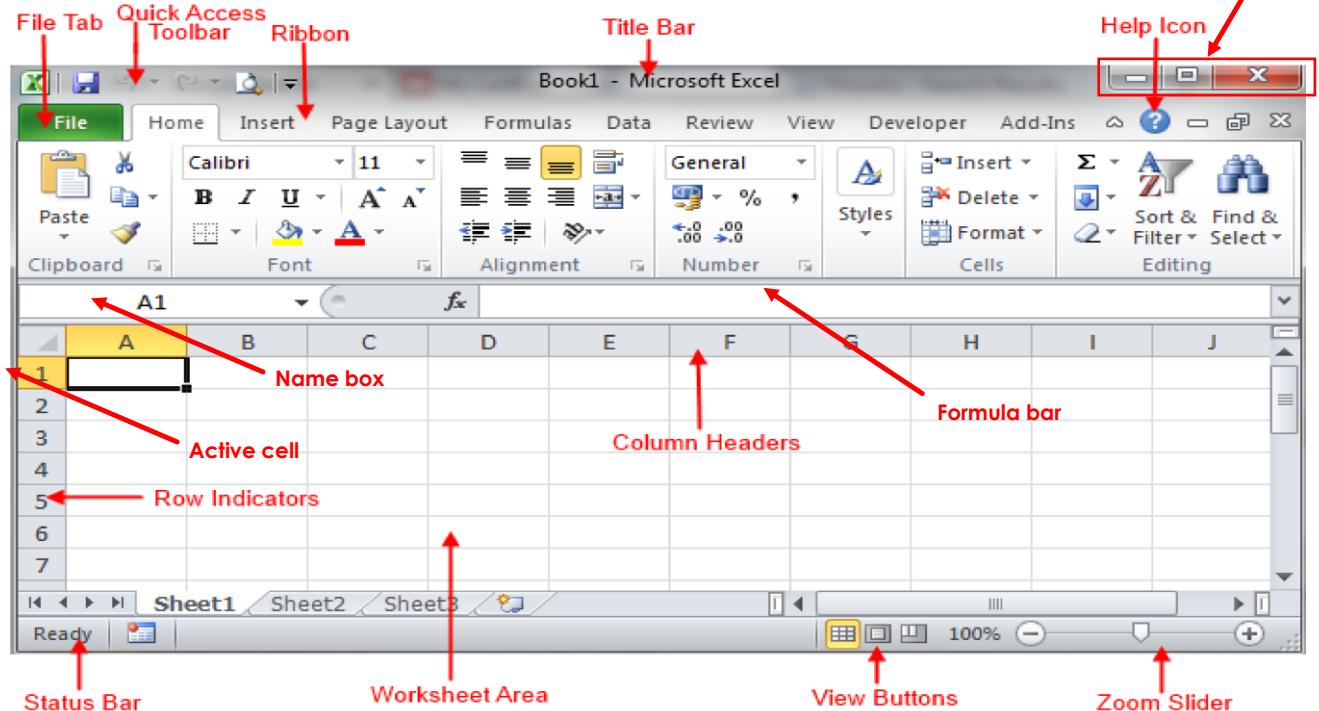
Applications (Uses) of Electronic Spreadsheets

- **Statistical analysis** such as mean, standard deviation, variance etc.
- **Accounting** such as balance sheet preparation, loan repayment, and mortgage and investments analysis.
- **Forecasting** — What if analysis, solver, goal seek and scenario in most spreadsheets evaluate the effect of changing a value to achieve a certain goal for managerial purpose.
- **Mathematical and scientific** solution such as arithmetic, trigonometric, rounding off and multiplication.

COMMON FEATURES OF A SPREADSHEET/WORK SHEET

Apart from the title bar, Menu bar, Standard toolbar and Status bar: found in Word processing, Spreadsheets have the following additional features.

1. **Formula bar.** Is an area where a cell entry or a formula is displayed before being



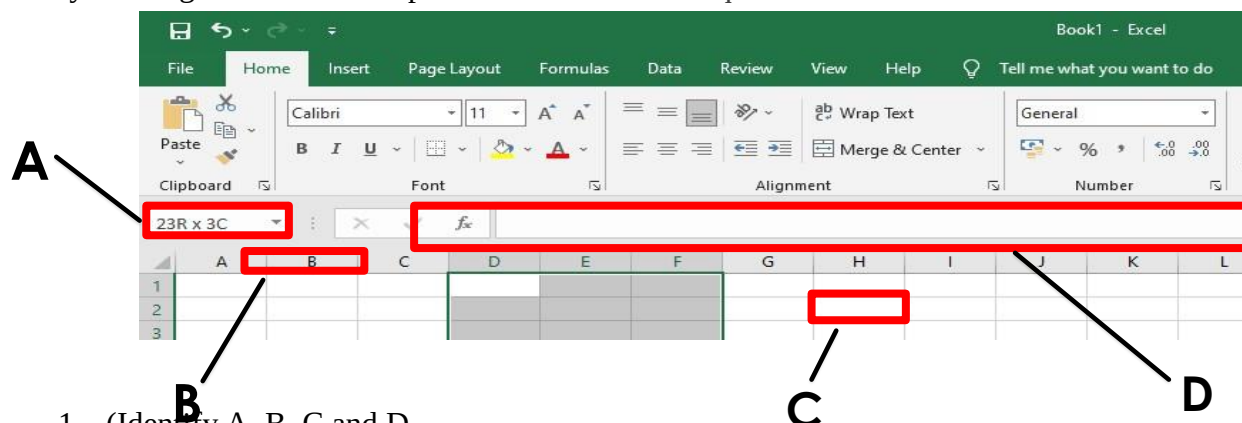
entered into the selected cell

2. **Worksheets.** A worksheet is the area made up of rows and columns where data is entered. In Excel, a spreadsheet file is referred to as a workbook which consists of one or more related worksheets.
3. **Cells.** A cell is an intersection between a row and a column. A column is a vertical arrangement of cells labeled A, B, C while a row is the horizontal arrangement labeled 1, 2, 3.
4. **Worksheet tabs.** These are located at the bottom of a spreadsheet. They show the number of worksheets in the workbook. Note that one worksheet may have several pages.
5. **Searching and sorting:** this gives the user ability to search the worksheet for any phrase, number or even other texts. It even makes the user scroll between the search results.
6. **Import and export:** spreadsheets can be transferred onto and off the mobile phone using a window explorer on the d. Spreadsheets can also be e-mailed as attachments, from within the spreadsheet application.
7. **Quick Access Toolbar:** it has shortcuts to most frequently used feature.
8. **Title Bar:** it contains the name of the open document.
9. **The name box:** it displays the name of a cell. e.g. A1.
10. **The Formular Bar:** it is used to view information in a cell. ▪
11. **The column Headers:** they are labeled A, B, C,.....
12. **The Row Headers:** they are on the left side of the main window labeled with numbers.
13. **The vertical scroll bar:** it allows to scroll up and down.
14. **Horizontal Scroll Bar:** it allows to scroll left and right.

15. **Sheet Tabs:** they are on the left side of the horizontal scroll bar. They are used to switch the sheets.

Exercise

Study the diagram below of a spreadsheet. Answer the questions that follow



1. (Identify A, B, C and D.
2. What is use of part D.
3. Define row header.

WORKING WITH WORK SHEETS.

1. Entering Data into a Worksheet.

When entering data item into the work sheet, the entry is displayed in the formula bar before you move to another cell. To place the content to the selected cell, press Enter key or an arrow key or click into another cell. Below are the three main cell entries:

- **Labels** - alphanumeric characters or text that describes the content of a row or column e.g. names.
- **Values** - numeric characters 0-9 and dates that can be manipulated mathematically.
- **Formula and Functions** - while a formula refers to a mathematical expression, a function is

2. Saving a workbook:

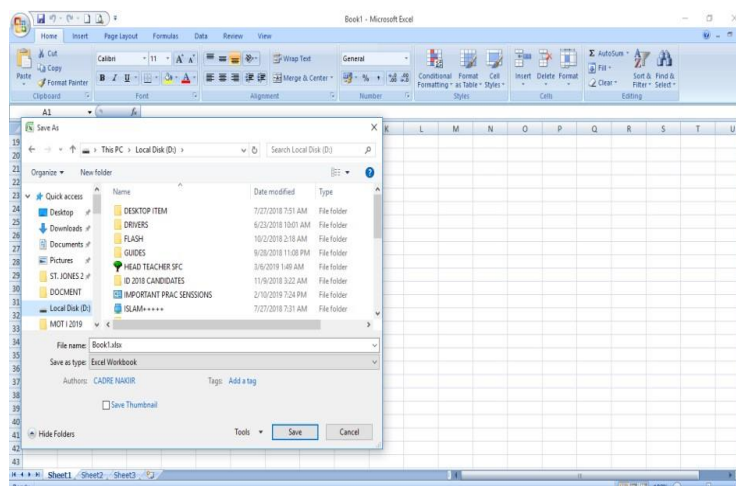
To save a workbook:

- On the office button (**File** menu), click **Save As**. Alternatively click the **Save** button on the standard toolbar.
- Select the storage location.
- Type the name of the workbook then click the **Save** button **Saving window for a work book**.

3. Protecting a workbook

To protect a worksheet or workbook from unauthorized access or modification:

- On the Tools menu, point to Protection, and then select Sheet or Workbook.
- Click check boxes for protection options.
- Type a password, and then



click OK.

4. Editing a Worksheet

Editing a worksheet involves deleting, copying, moving, finding and replacing as well as spells checking.

Editing cell Entries

There are two methods of editing a cell entry:

- Using the Formula bar — click the cell to display 1 6ntrf on the formula bar.
Delete or insert required word or text.
- Double click the cell to place the insertion pointer in the cell and then type or modify the entry.

5. Deleting worksheet content

To delete worksheet data:

- Select the cell or range of cells.
- Press the delete or backspace key. Alternatively select Clear on the Edit menu.

6. Copying and moving cell contents.

To copy cell(s) content,

- Select the range of cells.
- On the **Edit** menu or standard toolbar select **Copy**.
- Click the cell where you want the content to be copied.
- On the **Edit** menu click **Paste**.

7. to move cell s content,

- Select the range of cells.
- On the **Edit** menu or standard toolbar select **Cut**.
- Click the cell from where you want the content to be moved.
- On the **Edit** menu click **Paste**.

8. Inserting and deleting rows and columns.

To insert a new column or row.

- Position the pointer where the new row or column will appear.
- On the Insert menu, click Rows or Columns.

9. To delete a column or row.

- Select the column or row to be deleted.
- On the Edit menu click Delete.

10. Inserting and deleting worksheets

- On the Insert—menu, click Worksheet A new worksheet is—added into your workbook.

To delete a worksheet.

- Click the Worksheet tab.
- On the Edit menu, click Delete Sheet.

11. Find and Replace.

To search and replace a specified range:

- On **Edit** menu, click **Find**, type the text to search for.
- To replace, choose Replace from the dialog box.
- In the Find what box, type the word or phrase to find.

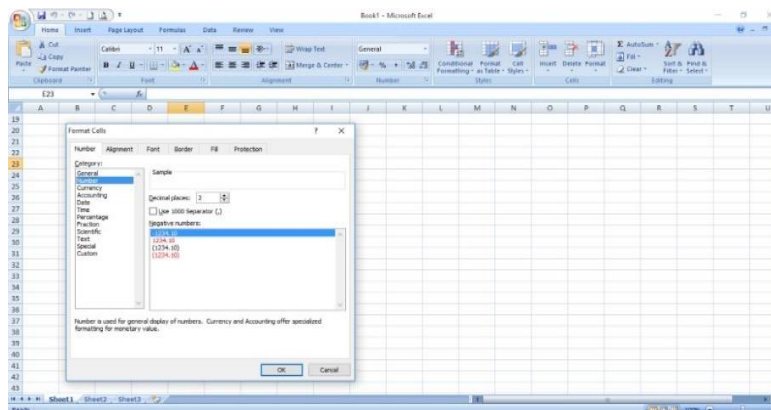
- Click the Replace tab and in the Replace With type the word or phrase to replace the found word or phrase.

12. Correcting spelling mistakes

- Specify the worksheet range you want to spell check.
- On the Tools menu, click Spelling or press F7.
- On spelling dialog box replace or ignore the misspelled words

13. Formatting a Worksheet.

- Formatting makes a worksheet more visually appealing. In most cases we apply formatting features to numbers, alignment, font, borders and patterns or shadings.
- To apply these formats:
- Select the range to be formatted.
- On the Format cell menu, click format Cells. The Format cells dialog box is displayed.



14. Formatting a Worksheet. Click any of the following tabs:

- Number to apply number formats such as general, currency, percentage and custom.
- Alignment to align and rotate cell entries, merge and centre cells across columns.
- Font to apply font type, style, size and color.
- Border to apply cell borders and outline.
- Pattern to apply background shading.
- Protection to lock cells and hide formulas.
- Click the OK button to apply.

15. Adjusting Column and Row size.

To resize a column width or row height

- Position the mouse pointer on the border of the column or row header.
- Drag to increase or to decrease the column width or row height. Alternatively, select a cell on the row or column you want to change then on the Format menu, point to Row or Column. Specify the row height or column width.

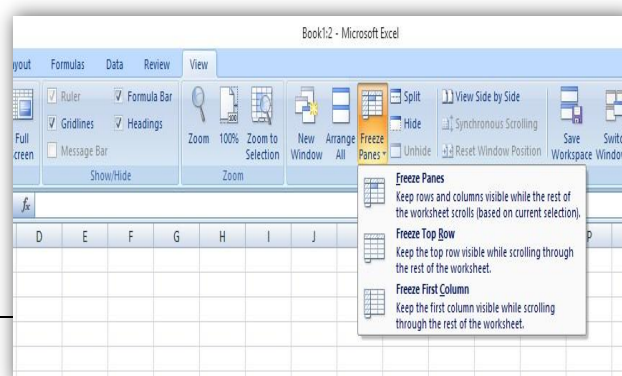
16. Freezing panes

Freezing panes makes selected data to remain visible when scrolling in the rest parts of a wide worksheet. To freeze panes:

- For the top horizontal pane, select the row below where you want the split to appear.
- Press **Ctrl** key to select a column to the right of the pane.
- From **Window** menu, click **Freeze Panes**.

17. Hiding rows and columns

If your worksheet is too large to fit in the screen, you may decide to hide some part and



leave only what you want to see at that particular moment.

To hide rows or columns:

- Highlight the rows or _columns to hide.
- On **Format** menu, point to **Row** or **Column**, then click **Hide**.

To unhide rows or columns:

- Highlight a row or column on each side of the hidden rows or columns while pressing the shift key.
- On Format menu, point to Row or Column, and then click Unhide.

PERFORMING CALCULATIONS IN A WORKSHEET

1. Using basic formulae.

A formula is a mathematical expression used to solve mathematical problems. A formula must start with an equal sign (=) while cell addresses are used as operands instead of values.

a. Arithmetic operators.

- These mostly follow the rule similar to mathematical concept of BODMAS. I.e. whatever is in parenthesis is evaluated first. Multiplication and division are evaluated from left to right while addition and subtraction are evaluated last.

Summary of operators used to create formulae.

Symbol	Description	Example
/	Division	= A2/B2
*	Multiplication	=A2*B2
+	Addition	=A2+B2
-	Subtraction	=B2-A2

b. Relational operators

A relational operator returns either true or false depending on the magnitude of the value being evaluated. Summary of relational operators

Symbol	Description	Example
=	Equal to	=A2=B2
>	Greater than	=A2>B2
<	Less than	=A2<B2
<>	No equal to	=B2<>B2
<=	Less than or equal to	=A2<=B2
>=	Greater than or equal to	

2. Cell Referencing

There are three types of cell referencing used when creating formulae and manipulating cell(s), content:

- a. Relative referencing.** When you copy a formula that contains cell references, say A3, the references adjust to their new location. E.g. If C1 containing a formula =A1+B1 is copied to C2, the reference changes to A2+B2.

b. Absolute referencing. The reference is fixed to a specific address and does not change even if the formula is copied to another cell. In Excel an absolute cell reference is made by placing a dollar sign before the referencing. \$A\$2, i.e. if the result in C1 is 170 if absolute reference is used, 170 will be copied to C2.

c. Mixed cell referencing. This is a combination of relative and absolute reference, e.g. \$A3 or A\$3. In the first case the column reference is absolute while the row is relative; in the second case the column reference is relative while the row reference is absolute.

3. Using in-built functions

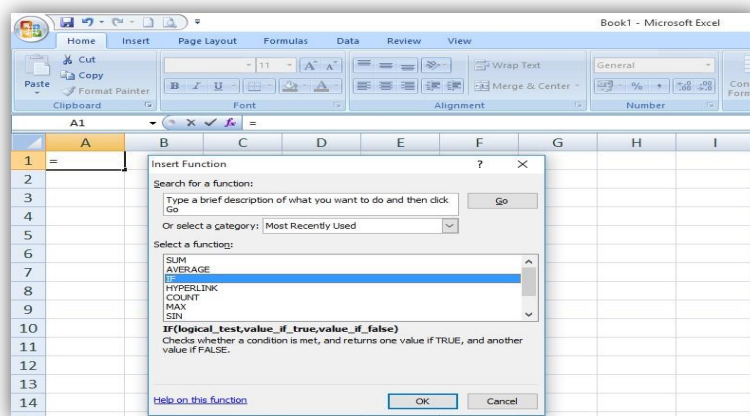
A function is a predefined formula used to perform calculations. A function must also start with an (=) sign followed by the function name and arguments. Arguments are numeric, logical values or text enclosed in parenthesis. E.g., in =SUM (A3:F3), SUM is the function that adds the range A3 to F3 which is the argument.

Functions are categorized according to the nature of problems they work on. These include:

- Mathematical
- Statistical
- Logical
- Date and time.

To use a function from any category:

- On the Formula menu, click Function. Alternatively, click the fx button on the standard toolbar.
- Select insert
- In the function dialog box displayed select the category.
- In the function list box, select a function.
- Specify the function argument then click OK.



3.1. Mathematical Functions.

- Commonly used mathematical functions are:
- **SUM ()** - Adds all the value in the selected range of cells. For example, if A3, B3 and C3 contains 20, 50, and 80 respectively, =SUM (A3:C3) returns 150.
- **ROUND ()** Rounds a number to a specified number of decimal places. Zero rounds off the number to the nearest integer. E.g., =ROUND (49.769,1) returns 49.8, while =ROUND (49.69, 0) returns 50 and 70 respectively.
- **SUMIF ()** — conditionally adds the specified cells according to the set criteria. =SUMIF (A3:A10, >= 1000), returns a value if, and only if, the sum is greater than or equal to 1000.
- **PRODUCT ()**- Multiplies all the values in the argument. Eg, =PRODUCT (40, 3, 2) returns 240.

3.2. Statistical functions.

- The commonly used statistical functions are:

- **AVERAGE ()** — Returns the arithmetic mean of its arguments. E.g., if A3, B3 and C3 contains 20, 50 and 80 respectively, =AVERAGE (A3:C3) returns 75.
- **COUNT ()** - Counts the number of cells that contain numbers within a range. E.g., =COUNT (A3:C3) returns 3.
- **COUNTIF** - Conditionally counts the number of cells within a range that meets a given condition. E.g., if A3, B3, C3, D3 and E3 contains 20,50,80,60 and 45 respectively then =COUNTIF (A3:E3, >50) returns 2.
- **MAX ()** - Returns the largest value in a set of values or within a range. E.g., =MAX (A3:E3) for the set values above returns 80.
- **MIN ()** - Returns the least value in a set of values or within a range. E.g., =MIN (A3:E3) returns 20.

3.3. Logical Functions

The commonly used statistical functions are:

- **IF ()** - Returns a value or label if a condition you specify evaluates to TRUE and another if it evaluates to FALSE. Eg, if; A3,B3,C3,D3, and E3 contains a set of marks 35,50,80,60 and 45 and grades are to be awarded as follows:

80 - 100 A

60 - 79 B

40 - 59 C

Below 40 Fail,

To assign a grade, use;

=IF (A3>=80, —A, IF (A3>=60, —B, IF (A3>=40, —C, —Fail)))

- **AND ()** - Returns true if all its arguments are true or false if any argument is false. E.g., =AND (3+2=5, 2+2=4) returns true.
- **OR ()** — Returns true if any of its arguments is true or false if both arguments are false. E.g., =OR (3+2=7, 2+2=4) returns true.
- **NOT ()** — Negates the unary operand. E.g., =NOT (.3+2=5) returns false.

3.4. The VLOOKUP functions.

VLOOKUP: This is a function that looks for a value in the left most column of the table and then returns a value in the same row from a column you specify. By default the table must be sorted in ascending order

The V in VLOOKUP stands for vertical. Use VLOOKUP instead of HLOOKUP when your comparison values are located in a column to the left of the data that you want to find.

COMPONENTS OF THE VLOOKUP FUNCTION

VLOOKUP (Lookup_value, table_array,col_index_num ,[range_lookup])

- Lookup value** - The value to search in the first column of the table array. Lookup value can be a value or a reference. If lookup_value is smaller than the smallest value-in the first column of table_array, VLOOKUP returns the #N/A error value.
- Table_array**- Two or more columns of data. Use a reference to a range or a range name. The values in the first column of table_array are the values searched by

lookup_value. These values can be text, numbers, or logical values. Uppercase and lowercase texts are equivalent.

- iii. **Col_index_num**- The column number in table_array from which the matching value must be returned. A col_index_num of 1 returns the value in the first column in table_array; a col_index_num of 2 returns the value in the second column in table_array, and so on. If col_index_num is:
 - ✓ Less than 1, VLOOKUP returns the #VALUE! Error value.
 - ✓ Greater than the number of columns in table_array, VLOOKUP returns the #REF! Error value.
- iv. **Range_lookup**- A logical value that specifies whether you want VLOOKUP to find an exact match or an approximate match:
 - a) If TRUE or omitted, an exact or approximate match is returned. If an exact match is not found, the next largest value that is less than lookup_value is returned. The values in the first column of table_array must be placed in ascending sort order; otherwise, VLOOKUP may not give the correct value. For more information, see Sort data.
 - b) If FALSE, VLOOKUP will only find an exact match. In this case, the values in the first column of table_array do not need to be sorted. If there are two or more values in the first column of table_array that match the lookup_value, the first value found is used. If an exact match is not found, the error value #N/A is returned.

Remarks

- i. When searching text values in the first column of table_array, ensure that the data in the first column of table_array does not have leading spaces, trailing spaces, inconsistent use of straight (_ or _) and curly (_ or —) quotation marks, or nonprinting characters. In these cases, VLOOKUP may give an incorrect or unexpected value. For more information
- ii. When searching number or date values, ensure that the data in the first column of table_array is not stored as text values. In this case, VLOOKUP may give an incorrect or unexpected value. For more information, see Convert
- iii. numbers stored as text to numbers.
- iv. If range_lookup is **FALSE** and lookup_value is text, then you can use the wildcard characters, question mark (?) and asterisk (*), in lookup_value. A question mark matches any single character; an asterisk matches any sequence of characters. If you want to find an actual question mark or asterisk, type a tilde (~) preceding the character.

7. The Date and Time Functions

Some date and time functions include:

- **TODAY ()** - Returns a number that represents today's date. The function takes no arguments. E.g., =TODAY () returned 09/01/2008.
- **NOW ()** - Returns the current date and time formatted as date and time. It takes no arguments. E.g., =NOW () returned 19/02/2007 00:02.
- **DATE ()** — Function Returns a serial number that represents a particular date. Ms Excel uses year 1900 serial number1. E.g., =DATE (107, 1, 4) returns January 4, 2007. Year = (1900+ 107), month=1, day =4.

- **HOUR () ,MINUTE() or SECOND ()**- Functions returns the current hour as number 0 to 23, minute from 0 to 59 and seconds from 0 to 59 respectively.

4. Worksheet Database Management.

Some database operations that can be performed on a worksheet database include data entry using data forms, sorting, filtering, subtotaling and input validation.

4.1. Data entry using forms

Data form allows the user to easily display and enter records into a worksheet database. To display a form:

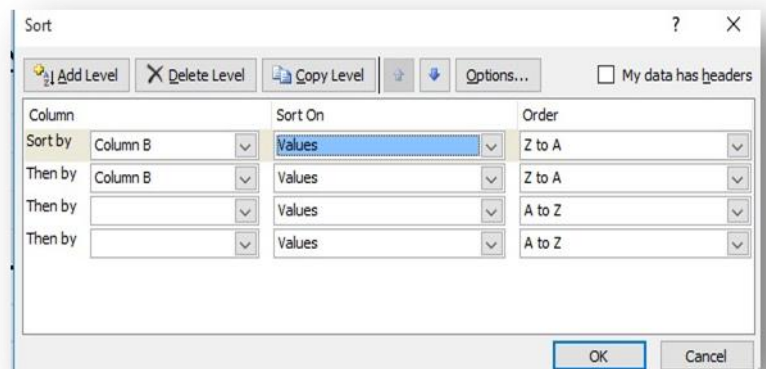
- Position the cell pointer in any cell containing data.
- On the Data menu, click Form. .

(You can navigate the records, add a new record delete or find a record.)

4.2. Sorting

To sort a list:

- Select the range or click a cell in the list you want to sort.
- On the **Data** menu, click **Sort**.
- In the Sort by and Then by boxes, select the columns you want to use as the sort fields.
- Select sort order either ascending or descending then click OK.



4.3. Filtering

To filter is to display records that meet certain criteria.

To filter a list:

- Select a cell in the list to be filtered.
- On the **Data** menu, points to filter then choose **Auto Filter** or **Advanced Filter**.
- Click the Arrow displayed in the column header.
- Select a filter criterion.

4.4. Subtotaling

A subtotal is used to summarize a worksheet list to display grouped subtotals and a grand total. The list is grouped using preferred field. To create subtotals:

- Sort the data in ascending or descending order.
- Click a cell in the list then from **Data** menu click **Subtotals**.
- In **At each change in** box, select the field to use for grouping.
- In the **Use function** box, select a function you want to use.
- In the **Add subtotal to** box, check the columns that contain values you want to subtotal.
- Click OK.

4.5. Input Validation

To ensure that a user does not enter invalid data, set the validation criteria.

An error message is displayed when data that violates this rule is entered.

To set data validation:

- Highlight the range of cells to validate.
- On the Data menu, click Validation.
- Click the Settings tab and select a validation criterion
- To display an input message when the cell is selected, click the Input Message tab, type the message to be displayed and check —Show input message when cell is selected.
- Set the Error alert then click OK.

5. Creating charts and printing

A chart is a component of a spreadsheet program used to present data from a worksheet in a way that provides instant visual impact. E.g. Column and bar charts, pie chart, line graph, scatter diagram and area graph. To create a chart:

- Highlight the range.
- On the Insert menu, click Charts. Alternatively, click the Chart button on the standard toolbar.
- The chart wizard will guide you through the process.

Editing and formatting a chart.

- Click the chart to select it.
- On the Chart menu, click:
 - ✓ Chart type to change the selected chart to a different type.
 - ✓ Chart options to set chart properties such as title and legend.
- Location to place the chart in a separate sheet or on a worksheet.

6. Printing Workbook Content

You may print an entire workbook, worksheet, chart or a selected range. To print workbook content:

- On the File menu, click Print.
- Specify the print options in the dialog box, and then click OK.

7. Errors Alerts In Formulae & Functions And How They Can Be Corrected

Table 10

Error Message	Description	Solution
#####	The column is not wide enough to accommodate the value or a negative date or time is used e.g. = (2/4/2007)	Increase the column width or shrink the contents to fit the column. Avoid using negative time or date value.
#DIV/0!	Division by zero or using a blank or cell e.g. = 45/0	Change the cell reference one that contains a value nonzero in the cell.
#N/A	The formula or function uses a name that Excel does not recognize	Make use of a valid argument or the correct type of value

#NAME?	The formula or function uses a name that Excel does not recognize	Correct the spelling of the name.
#NUL!	The formula references an invalid intersection of cells	To refer to two areas that don't intersect, use a comma (,) e.g. = (SUM(A1:A10,C1:C10))
#NUM!	Due to use of invalid numeric values	Use numeric arguments in a formula or function e.g. S Enter 1000 not Ush 1000
#VALUE	The formula or function uses incorrect argument or operator	Make sure that referenced cells by the formula contain values.
#REF!	Due to invalid cell referencing as a result of deleting referenced cells.	Change the reference in the formulae, or restore the deleted cells.

PRACTICAL ASSIGNMENTS ON SPREADSHEET ASSIGNMENT 2

ROMA GIRLS' SECONDARY SCHOOL													
SN	FULL NAMES	SEX	DOE	BASIC PAY	HOU ALL.	MED ALL	EDU. ALL	GROSS PAY	ADVANCE	NAPSA	PAYE	TOTAL DED.	NET PAY
1	KAPONGO MULENGA	M	01.01.01	15,000.00					5,000.00				
2	MWANGA JELITA	M	01.01.10	20,000.00					5,000.00				
3	KAZALA CHIBINDE	M	20.03.05	50,000.00					5,000.00				
4	MINGOCHI WILLIAM	F	02.02.06	10,000.00					5,000.00				
5	AGREY NYAMBE	M	02.03.07	12,000.00					5,000.00				

1. Calculate housing allowance at 10% of basic pay
2. Calculate medical allowance at 5% of basic pay
3. Calculate education allowance at 15% of basic pay
4. Calculate of the gross pay
5. Advance 5,000 for each employee
6. Calculate the NAPSA at 10 % of gross pay
7. Calculate payee at 2% of gross pay
8. Calculate the total deductions
9. Calculate the net pay
10. Find the totals
11. Find the maximum figures for gross pay, total deductions and net pay
12. Find the average for gross pay, total deductions and net pay
13. Find the minimum figure for gross pay, total deductions and net pay
14. Add all borders and thick box border to the data
15. Add a comma and 2 decimal places
16. Merge and centre the title
17. Bold and centre the column headings
18. Adjust the column widths accordingly
19. Add fill color to the data accordingly
20. Centre column headings
21. Insert any graph

ASSIGNMENT 2

The table below shows examination results of senior six students of Roma Girls Secondary School. Study it and answer the questions that follow.

	A	B	C	D	E	F	G	H	I
1	MUGO Secondary School Six Science Class, 2013								
2	SUBJECTS								
3	FI N R A S M T _	L N A A S M _	BI O L O G	C H E M I S	M A T	P H Y S I C	IC T	A V E R A _	G R A D _
4	BANDA	DAVID	80	90	80	90	70		
5	LUNGU	LILIAN	72	85	63	47	90		
6	APUNU	JOSEPH	78		86	82	52		
7	ODYEK	TONNY	78	87	86	82	52		
8	WAISWA	MAX	30	25	58	58	67		
9	RABECCA	KARIM	86	56	47	78	82		
10	MULEYA	JENNIFER	59	85	64	55	85		
11	BWALYA	NGANDWE	98	45	25	93	69		
12									
13	HIGHEST VALUE								
14	LOWEST VALUE								
15	MEDIAN VALUE								

- Enter the students' data above in a spreadsheet application as shown.
- Using appropriate functions, determine the;
 - Average score for each student.
 - Highest score for each subject.
 - Lowest score for each subject.
 - Median score for each subject.
- Make your worksheet landscape page orientation.
- Name your worksheet as results.
- Use the relevant function to grade each student's average by indicating:
 - ✓ Very good if average is greater than 80.
 - ✓ Good if average is greater than 55.
 - ✓ Poor if average is below 55.
- Save your work as your name and personal number.
- Print your work

REFERENCES

Mario MK (2022) **Productivity Took**s, St. Clement Secondary

Nakiir, C. K. (March - 2019). **A practical guide to sub ict & computer studies (vol. Revised Edition)**. Isbat & Bae Kyu: Pgdisem - Umi, Pgdit.

www.dmu.com MS Publisher