

FORM 2

TOPIC 1: MANAGEMENT OF COMPUTER

- Computer is made up of separate parts which are assembled together to form a working unit.

Connecting hardware correctly.

- Before connecting computer, the following precautions must be observed:
 1. Disconnect all devices from power sources
 2. Do not work on any peripheral device without guidance from a teacher
 3. Discharge any static electricity that might have built up on the hands by touching an earthed metallic object and then wearing an antistatic wrist member. This is because your body can hold some (200) volts of static charge that can damage sensitive components on the motherboard

Tools and other requirements

- Tools and other requirements needed to assemble a computer are:
 - Screw driver
 - Antistatic wrist member
 - Pliers
 - Device software (drivers)

Mounting internal devices

- External devices are connected to the motherboard through ports while internal devices are connected to the motherboard through slots and sockets
- The following are internal components of a computer and their functions:
 1. **Power supply:** It receives AC power from the wall socket and convert it to 12V DC
 2. **Power cables:** Provide power to computer components
 3. **Optical disk drive:** Read/write from/to optical disk
 4. **Hard drive:** Stores data for long period
 5. **Data cables:** Enable exchange of data between components
 6. **Motherboard:** Interconnects all devices, chips and components
 7. **Expansion slot:** Enable additional options to be added to the computer for upgrade e.g. TV, network card
 8. **Interface ports:** Enable connection of peripheral devices e.g. mouse, keyboard
 9. **Memory slots:** Enable installation of RAM chips on the motherboard
 10. **Chips:** Have processing logic and firmware needed for correct functioning of the computer

Mounting hard drive and optical drives

- Internal devices are connected to the motherboard using cables
- Hard disks and optical drives are connected to the motherboard through interface connector referred to as *controllers*
- There are three types of controllers namely:
 1. Enhanced Integrated Drive Electronic (EIDE)
 2. Serial Advanced Technology Attachment (SATA)
 3. Small Computer System Interface (SCSI)
- EIDE and SATA are commonly used in Personal Computers while SCSI is used on servers
- SATA is the new version that has replaced Parallel ATA (PATA) and EIDE because it is more efficient and support *Hot-swapping*.
- **Hot-swapping** means that a device can be removed or added/inserted while the computer is still on
- Each EIDE controller support up to two drives on a single ribbon cable called **master/slave configuration** setup. It is called master/slave setup because one controller directs the activities of both drives
- *To mount an EIDE drive, proceed as follows*
 1. Wear antistatic wrist member to discharge any static charge on the body
 2. Determine which drive will be master and which one will be slave
 3. Check that a free drive bay is available, slide the disk into that bay and screw it.
 4. Ensure that there is free power connector from the power supply unit to connect to the drive
 5. Identify pin 1 as labelled on the drive socket and match it with the red or brown continuous line of the ribbon
 6. Connect the interface cable to the drive, then into the controller slot on the motherboard
 7. If the installation is complete, replace the casing

Installing floppy drives

- Floppy drives are installed the same way as EIDE drive only that there is not master/slave configuration.
- However, you can attach two floppy drives on the same ribbon cable

Connecting external devices

1. Gently and carefully connect the interface cable of each device to the correct port
2. Connect the computer to the power source and switch it on
3. Observe boot up information on the screen to see whether POST displays some errors
4. A successful boot means the computer was properly set up

Checking system information

- System information refers to the software and hardware configuration of a computer
- System information include the following:
 1. The hardware device present on the computer plus their drives if are working properly

2. The type of processor on the computer and its speed
3. The Random Access Memory (RAM) and its size
4. The width of the system bus
5. The size of the hard disk on the computer including used space and empty space
6. The type of operating system installed

All these can be checked on the computer when the computer is on by

1. Right click 'This PC' or 'My Computer'
2. Click properties

Checking the hard disk size

1. Double click the My Computer or This PC
2. Check your hard disk(s) or right click and click Properties

Importance of checking system properties

- Before purchasing a computer or loading any software, it is important to check the system information
- The system information has implication on
 - The cost of the computer
 - Performance of the computer
 - The type of software that it can run

The following properties are true

1. The larger the RAM, the better the performance of the computer and the higher the cost
2. The larger the hard disk of the computer, the larger the data the computer can store and the larger the software it can be installed and better performance and higher cost
3. The higher the processor speed of the computer, the higher the processing power of the higher the cost
4. The higher the cache memory of the computer, the faster the response time of the computer

NB: There is need to balance in these properties for good functioning and better performance of the computer

TOPIC 2: WORD PROCESSING

- Traditionally, documents like letters, memos and minutes were handwritten or created mechanically using typewriter
- These traditional methods had shortfalls such as cumbersome and caused a lot of redundancy
- Nowadays, documents are processed using computer-based application called word processing

Describing electronic word processing

- Electronic word processing is an art of creating, saving, editing, formatting and printing text and graphic-rich documents using an electronic word processor software

- An electronic word processor software is an application software that enable the user to create, edit, format and print text-rich documents
- Examples of common word processor are:
 1. Microsoft word
 2. Corel wordPerfect
 3. Lotus Word Pro
 4. Apple Works
 5. OpenOffice Writer
- These softwares have graphical user interface that enable functionalities such as graphics, email, mail merge and web development which are not fond in traditional word processing

Advantages of electronic word processors

- Mostly, word processors are used for writing reports, letters, project reports, books, essays, memos and CV
- Some of the advantages of electronic word processor over traditional word processing methods are:
 1. A document can be stored for future use unlike in typewriting where the same document requires retying
 2. Typing using word processor is easier and more efficient due o automated features such as wordwrap, autotext and autocompletes
 3. Most word processors have superior editing tools such as thesaurus, autocorrect, spelling and grammar checkers
 4. Electronic word processor provides predefined features for generating headers, footers, index, footnote and reference
 5. Word processors have superior document formatting features such as underlining, bolding etc.
 6. Most word processor have ability to create and import text and graphics from other programs
 7. With electronic word processor, it is possible to print, multiple copies at once
 8. Word processor provide templates that can be used to quickly create good documents. Templates are preformatted blueprints on which documents are based

Common features of a word processor

- Regardless of the type of word processor you may be using, the following features are common in almost all word processors:
 1. They allow the user to create file, save it and open it again for reuse, edit and format
 2. They have editing tools such as spelling and grammar checker, thesaurus and autocorrect features
 3. They provide predefined features for generating headers, footers, indexes, footnote and reference
 4. They can be used to import tables, text and graphical objects from other programs

Choosing word processor

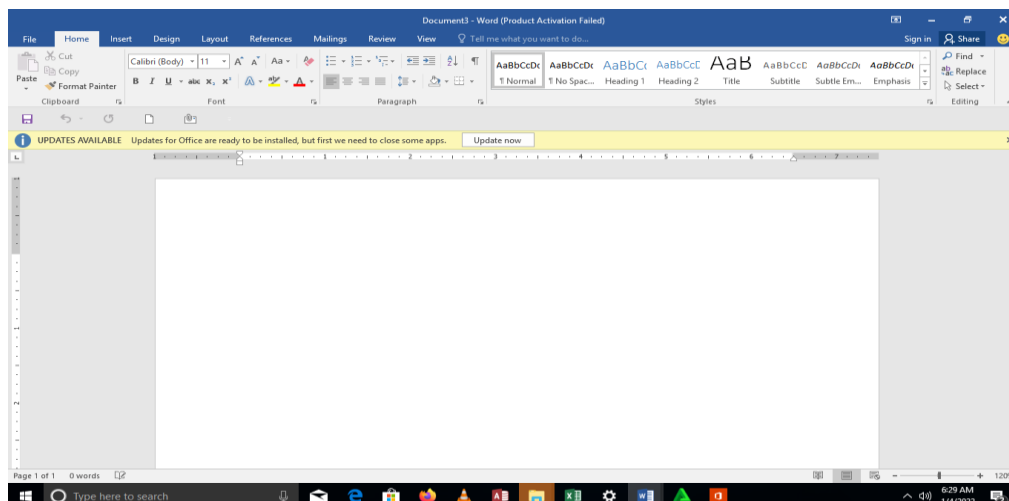
- The following are factors to consider before choosing word processor:
 1. The type of operating system
 2. Its user-friendliness i.e. ease of use
 3. The formatting and editing features. They should be good and varied

Working with word processor

- Microsoft word processing software is the most commonly used when typing
- Microsoft word is a member of Microsoft office suite that consist of the following integrated programs
 - Ms. Word for typing documents
 - Ms. Excel for making calculations
 - Ms. Access for storing information
 - Ms. Publisher for designing publications e.g. Newspaper, books
 - Ms. PowerPoint for making presentations
 - Ms. Outlook for emailing
- Currently, there are 8 Ms. Office suites and that is Office 97, Office 2000, Office, 2003, Office 2007, Office 2010, Office 2013, Office 20216 and Office 2019

Starting Microsoft Word

1. Click start
 2. Click Get Office
 3. Choose Word
 4. Click the Blank document
- After successfully opening, you get the window below:



Microsoft screen layout

1. *Office button*: Clicking it displays the office button menu which commonly used commands such as New, Save, Open and Print
2. *Main tabs*: They have labels such as Home, Insert, Layout, reference, Mailing, Review and View and under each ribbon there are commands
3. *Work area*: Is space where all the document preparation and editing is done
4. *Ruler*: Microsoft word document has vertical and horizontal ruler that has the following functions:
 - Helps the user to set tabs and indent
 - Position text and objects
5. *Status bar*: Is an interactive part at the bottom of the screen that act as communication link between user and the program.
6. *Scroll bars and buttons*: Are horizontal and vertical bars that the user drags to scroll up, downwards to the right or to the left

Creating a word document

- There are two options when creating word document:
 1. Using blank document
 2. Using template
- Once you create a document, you can start typing your text at insertion pointer
- Insertion pointer is a character at the top left corner of the work area
- Notice that when the when the cursor reaches the end of the current line, it is automatically wrapped at the beginning of a new line. This is referred to as *word wrap*

Saving a document

- As you create a document, you need to save it. You use Save As button or Save button to save the document
- **Save As** button allow you to save a new document, give it a name and specify the storage location while **Save** button is used to save changes made to the documents
- To save the document, proceed as follows:
 1. Click Microsoft Office button and click Save As
 2. Click Browse to select location
 3. Select the location or drive where the file will be saved

4. Type the name of the file
5. Click Save button

Protecting a document with a password

- A password is a combination of characters that prevents others from opening and changing a document without permission
- To create a password
 1. Create or open the document you want to protect
 2. On the Office button menu, choose Save As
 3. Click the down arrow on the Tool button
 4. Click General Options
 5. Type in the password to open
 6. To protect against modification, type in a password in the password to modify
 7. Click Ok
- You can also put a password by
 1. Click Office Button
 2. Select Info
 3. Click Protect document
 4. Select Encrypt with Password
 5. Type the password and then click Ok

Closing document

- Click Office button
- Click Close

Exiting from Word

- Click the X at the corner of the window or press Alt + f4

Editing a document

- Editing refers to making necessary changes to an existing document
- Microsoft has inbuilt tools for editing such as
 1. Spelling and grammar checker
 2. Undo and redo
 3. Find and replace etc.

Highlighting a block of text

- The purpose of selecting or highlighting text is to enable the user to manipulate the block of text
- You can select using a mouse or keyboard

Selecting with a mouse

1. To select a word, double click the word
2. To select a sentence, position the mouse pointer at the left margin and click once
3. To select a paragraph, place the pointer at the beginning or end of the paragraph until it turns I-beam and drag down and up

Selecting with a keyboard

1. To select a word, put the pointer at the beginning or end then press Shift + Right or Left arrow
2. To select one line, press Shift + Up or Shift + Down arrow keys
3. To select an entire page, Press Shift + Page Down or Shift + Page Up
4. To select entire document, press Ctrl + A

Editing modes

- There are **two** editing modes in word processor and these are

1. Insert mode

- In this mode the text inserted between words or characters pushes the existing text away without replacing it

2. Typeover/overtyping mode

- In this mode, new text that is inserted between existing words or character automatically replaces the existing text by deleting it.

Deleting text

- To delete character from right to Left, press the insertion pointer on the right and press Backspace key
- To delete character from left to right, press the insertion pointer on the left and press Delete key

Restoring deleted text

- Press undo command to restore what has just been deleted.

Copying and moving text and objects

- Copying means creating a duplicate of text or an object while moving means changing the position of text or an object in a document
 - Highlight the text
 - On the Home tab click Copy or Cut
 - Position the pointer where you want to copy the text
 - Click Paste

You can use keyboard shortcut to copy by pressing **Ctrl + C** and to cut press **Ctrl + X** and to Paste Press **Ctrl + V**

Find and replace

- When you want to search for a word, click Home tab then click replace command
- Type the word in Find What box
- Type the word to replace with in the Replace with box

- Click Replace All

Advanced search option

The search options include

1. Match case: This identifies the text that matches in case with the find what box. It matches the case
2. Find whole words only: searches for a word or phrase that is whole. If it is part of another word, it will not find
3. Use wildcards: Wildcards are specialized symbols such as * and ? that are used to replace a set of words with certain character in common e.g. j*
4. Sound like: Searches for a word which are similar in pronunciation like fair and fare

Proofreading

- Proofreading refers to checking whether the document has type error or grammar error.
- The two tools for proofreading are:

a. Spelling and grammar checker

- Is an inbuilt tool that helps the user to correct spelling errors and incorrect grammar structures.
- To use spelling and grammar checker

1. Click Review tab then Spelling and Grammar
2. Use the dialog box that appears by choosing one of the following options:

- *Change*: to correct only the highlighted incorrect word
- *Change All*: to correct all occurrences of the misspelled word
- *Ignore once*: To retain the highlighted and continue
- *Ignore All*: to retain all the occurrences of the same word
- *Click Add to dictionary*: to add the word into the custom dictionary

b. AutoCorrect

- Autocorrect automatically detects the wrongly spelt or capitalized words and replace with the correct word
- To use Autocorrect feature follow the procedure below:

1. Click File
2. Select Word Option
3. Select Proofing
4. Select AutoCorrect option
5. In the autocorrect dialog box, type the word you want to autocorrect in the Replace text box and the correct word in the With box then click Ok

Using the Thesaurus

- This is editing tool that helps the user find words or phrase with similar meaning(synonyms) or opposite meaning (antonyms) to the one selected

- To use thesaurus:
 1. Select the word
 2. Right click the word and point to Synonyms
 3. Select the synonyms from the presented list

Undo and Redo

- Undo reverses the most recent executed command while Redo revert back to the cancelled action
- Click the undo or redo options on the Quick Access Toolbar or use he shortcut below: undo **Ctrl + Z** and Redo **Ctrl + Y**

FORMATTING WORD DOCUMENT

- Formatting refers to enhancing the appearance of a document.
- The main purpose of formatting document is to make the document look more appealing/attractive
- You can format text, paragraph, pages or the entire document.

Formatting text

- Formatting text refers to features such as changing font (type, size, colour), underline, bolding, italicizing and making character superscript or subscript.
- To format a text, we highlight the text and apply the formatting
- For example
 - a. **Font type and font size:** font type refers to the handwriting while font size refers to the size of the character. You can change this by selecting from the list on Home tab in the font group
 - b. **Bolding text:** Bolding makes the selected text appear darker and thicker. To make text bold, select the text and click **B** command on the **HOME** tab.
 - c. **Underline text:** this refers to placing a line at the bottom of a word or phrase. To underline, select the text and click **U** command on the **HOME** tab
 - d. **Italicising text:** itelicise means to make the text slant forward. Highlight the text and click **I** on the HOME tab.
 - e. **Changing the font colour:** This is the colour of the words. You can change by highlight the text and click font colour.

Using keyboard shortcut

- You can also use keyboard shortcut for example
 1. To bold = Ctrl + B
 2. To italicise= Ctrl + *I*
 3. To underline= Ctrl + U
 4. To select the whole document = Ctrl + A

5. To undo = Ctrl + Z
6. To redo= Ctrl + Y
7. To copy= Ctrl + C
8. To Cut= Ctrl + X
9. To Paste = Ctrl + V

Change case

- There are 5 ways you can change case:
 1. *Sentence case*: All first character in the sentence are in uppercase (capital letters)
 2. *Lowercase*: All characters appear in small letter
 3. *Uppercase*: All characters appear in capital letters
 4. *Title case*: All first characters of each word in a sentence appear in capital letter
 5. *Toggle case*: It changes upper cases to lower cases and viceversa

Superscript and subscript

- Superscript appears just above the rest of the characters while subscript appears just below the character.
- Example of superscript is 2 in cm^2 whereas example of subscript is 5 in 2_5
- To make superscript or subscript, highlight the text and click x^2 and x_2 respectively.

PARAGRAPH FORMATTING

- A paragraph is a separate block of text dealing with a single theme
- Some of the formatting features you can apply to a paragraph are: alignment, drop cap, indenting, line spacing and page breaks

Alignment

- Alignment is arrangement of text in relative to left, centre or right margin
- The five alignment options are:
 1. Left
 2. Right
 3. Center
 4. Justified
 5. Distributed (force justified)

Left alignment

- In left alignment, lines of text are lined up evenly along the left margin but unevenly at the right margin

Right alignment

- In right alignment, lines of text are lined up evenly along the right margin but unevenly along the left margin

Centre alignment

- In this, lines of text are centred unevenly both in the left and right margin.

Justified

- In justified, lines of text are lined up evenly in both the left and right margin

To align text

1. Highlight the text
2. On the Home tab, select either left, Centre, right or justify command

Drop caps.

- This is making the first character in the sentence large.
- The main purpose for adding drop cap is to attract readers' attention
- To add drop cap, follow the procedure below
 1. Highlight the paragraph
 2. Click insert
 3. Click Drop cap

Indenting paragraph

- Indentation refers to moving the text away from the margin.
- The three indenting options are:
 1. first line indent: indent the first line in the paragraph
 2. Full indent: indenting the whole paragraph
 3. Hanging indent: indenting the rest of the text except first line

Setting tabs

- Tab stops refers to constant interval stops for the insertion pointer when a tab key is pressed.
- Tab is used to create columnar data
- By default, the tab stops at 0.5 of an inch
- We can change the default by:
 1. Click page layout
 2. Click the arrow at the corner of the paragraph group. A dialog box appears
 3. Click Tab button at the bottom corner
 4. Specify the tab stop eg 1, 1.5, 2 etc
 5. Specify the tab reader option if you want
 6. Click Set tab button and click OK

We can also set tabs using a ruler

1. On the corner of the horizontal ruler is a tab alignment, click the tab button to choose the required tab type.
2. Set the tab stop by clicking where you want it to be on the ruler
3. Drag the tab stop to the position you wish on the ruler.

Table below gives explanation of each tab button

Button	Name	Purpose
	Left tab	Text is left aligned
	Centre tab	Text is centred
	Bar tab	Insert a vertical line at the tab stop and align text to the right
	Decimal tab	Text is aligned at decimal character
	Right tab	Text aligned right

Line spacing

- Line spacing refers to vertical distance between lines of text.
- The default line spacing is single spacing
- Character spacing refers to space between characters in the text
- To change line spacing, proceed as follows
 1. Highlight the text
 2. Click line spacing on the Home tab
 3. Select line spacing like 1.0, 1.5, 2.0 etc

Bullets and numbering

- Bullets and numbering are used to create ordered list
- To add bullets or numbering
 1. Highlight the text
 2. On the Home tab in the Paragraph group, click either Bullets or Numbering
 3. In the drop down list, select a bullet or Number style

Page and document formatting

- Page and document formatting refers to formatting individual pages or entire document
- It includes:
 1. Subdividing a page into columns
 2. Page setup
 3. Page numbering
 4. Inserting headers and footers
 5. Inserting footnote and endnote

Columns

- Columns subdivide a page into several sections
- To set a column,
 1. Highlight the paragraph
 2. Click Layout
 3. Click columns in the Page set u group
 4. Select number of column
- If you want to add a line between, select More columns and click Line Between

Setting columns and section breaks

- Columns and section breaks are used to force the insertion pointer to move to a new column or section in a page.
- This allows the user to apply more than one format on the same page
- To insert a column break:
 1. Highlight the paragraph
 2. Click Layout
 3. Click Breaks
 4. Select the type of breaks and then click OK

Specifying page margin

- The margins determine how far the text starts from the edge of the page

Specifying page orientations

- The term orientation refers to the positioning of the page in relation to the text.
- The two types of page orientations are:
 1. *Portrait*: in this orientation, texts and graphs are printed with the longest side placed vertically.
 2. *Landscape*: in this, text and graphics are printed with the longest side printed horizontally.

Page size

- This specifies the size of the page e.g. A1, A2, A3, A4, A5 etc.
- To specify Margin, Orientation and Page size, Click **Layout** then select Margin, Orientation or Page size.

Inserting headers and footers

- Headers are lines of texts that appears at the top margin of every page while footers appear at the bottom margin of every page.
- To insert Header or Footer
 1. Click Insert tab
 2. Select Header or footer
 3. Select the kind of the Header or Footer style.
- For one to go back to the normal working area from header or footer, either
 1. Double click inside the work area

2. Click close Header/footer

Inserting page Numbers

- Page numbers are used to organize a large document for ease of reference.
- To insert Page numbers, proceed as follows:
 1. Click Insert
 2. Click Page numbers
 3. Select a page numbering style from the drop down list

Inserting Footnotes and Endnotes

- Footnotes and Endnotes are used in large documents to explain, comment on or provide references for text in the document.
- Footnotes appear at the bottom of the page while Endnotes appear at the end of a section or document
- To insert footnote or endnote
 1. Click reference tab
 2. Select Insert footnote or Insert Endnote
 3. Type the text for footnote or endnote

Generating table of contents and indexes

- Table of contents (TOC) is a list of topics in a document and the pages where the topics appear.
- It is placed in the first pages of the document
- An index is a list of terms used in the document and the pages where the terms appear.
- To generate table of contents:
 1. Click reference tab
 2. Click table of contents
 3. The table of contents will be automatically inserted

Creating and manipulating tables

- A table is made up of rows and columns of cells.
- It is used to organize and present information

Creating table

1. Click where you want to insert the table
 2. Click Insert tab
 3. Click table command
- There are three ways of creating table
 1. Using the table boxes
 2. Using insert table
 3. Using draw table

Formatting and editing table

Inserting and delete rows or column

- To insert row or column,
 1. right-click the row/column
 2. click Insert command.
 3. Choose the command you want e.g. Insert Row above or Insert Colum to the Left
- To delete a row/column
 1. Right-click the row/column
 2. Click Delete command
 3. Select Entire Row/Column

Merging cells in a table

- Merging refers to combining more than one cell in a table.
- To merge
 1. Select the cells to be merged
 2. Right-click them and then select Merge Cells command

Splitting cells in a table

- Splitting cells refers to subdividing a cell or cell into more cells.
- To split cells
 1. Select the cells to be split
 2. Right click the cells then click Split cells command.

Table conversion

- You can convert a table into line of text and vice versa
 1. Select the text you want to convert to table
 2. Click Insert tab
 3. Click Table commands then select Convert Text to Table, specify number of rows and columns
 4. From Separate text at, specify whether the table will be defined by paragraphs. Commas, etc
 5. Click OK

Importing tables

- This lets users import tables from other applications or an existing file.

Performing arithmetic calculations in the table

- In Microsoft, it is possible to perform mathematical calculation such sum, product and count
- To perform calculations in a word table:
 1. Click in the cell the result is to be displayed
 2. On the Table menu, click Formula
 3. Type a formula such as =SUM(ABAVE0
 4. Click OK

Sorting table content

- Sorting means arranging data in ascending or descending order
- To sort contents
 1. Highlight the data
 2. Click Sort or
 3. select type of data to be used when sorting
 4. click either Ascending or descending
 5. click OK

using advanced features in word

generating merged documents

- Mail merging is the process of generating personalized letter or labels such as envelop by merging two files; a main document (e.g. letter or envelop) with a data source such as an address book.
- The processes or tasks involved in creating a merged document are as follows:
 1. Create the main document such as letter
 2. Create or get a data source i.e. the address book
 3. Connect the main document to the data source
 4. Merge the main document and the data source
 5. Produce the personalized letters

The procedure for creating merged document are as follows

1. Create the main document you want to distribute such as letter
2. Click Mailing tab
3. Click Select Recipient and then click Type New List
4. On the New list Address dialog box, type the information needed
5. Click **OK** and type the name of the data source and click SAVE
6. Click Insert Merge Fields
7. Insert all the required fields
8. Click Finish & Merge then Edit Individual letter

Inserting Graphics and special symbol

- The term graphics refers to a non-text images generated by a computer.
- This include photographs, drawings and graphs

Types of objects

- There are different types of objects that can be created in word processor and these are
 1. *Drawings*
- These are objects drawn using the tools on the insert tab.

- Examples are: circles, rectangles or arrows

2. *Pictures*

- A picture is an object that has been captured using a camera or scanner

3. *Charts*

- A chart is a pictorial representation of related data. It helps to interpret data easily. Examples of charts are Pie chart, bar chart etc

Inserting a clip art or a picture from Gallery

1. Position the pointer where you want the picture to be
2. Click Insert tab
3. Click Picture
4. Choose the Picture from the computer
5. Click the picture and then click Insert

Editing and formatting pictures

- You can edit and format picture by adjust brightness, contrast, change to black and white or crop image
- ***Cropping*** refers to hiding unwanted details so that they do not come out when printing
- To crop an image, follow the procedure below
 1. Double-click the picture
 2. On the format tab, click Crop
 3. Click crop and then drag the picture to hide unwanted parts
 4. Release the mouse when all parts you do not want are hidden

Inserting symbol

- A symbol is a special character that is not included on the standard keyboard
- For example, ®, § etc.
- To insert a symbol:
 1. Put the mouse to where you want the symbol to be
 2. Click Insert tab
 3. Click symbol
 4. Click more symbol
 5. Select the symbol and click Insert then close

Printing word document

- The main purpose of word processor is to create document for distributing
- A document can be distributed electronically or as printed hard copy.
- To print a document, the computer must be connected to either local printer or network printer.

Page setup

- Page setup prepares a document for printing setting Margin, orientation, print quality etc

- To do printer setup, proceed as follows:

1. Click File then click Print
2. In the print dialog box, select the page setup options such as page size, margin etc
3. Click Ok

Using print preview

- Print preview will help you to confirm that all details to be are within printable area.
- To check Print preview,
 1. click File then Print Preview
 2. check the document in the preview window
 3. click close Print preview

To print a document, follow the procedure below

1. click File tab, then click Print
2. in the print dialog box, specify
 - a. the type of printer
 - b. whether to print whole document or page ranges
 - c. number of copies to print
3. click OK

Troubleshooting printing related problems

- some of the printing problems you may encounter are:
 1. lack of two-way communication due to poor installation of printer software (drivers) or the printer is off or not connected
 2. paper jam due to use of poor quality paper or papers folds
 3. poor quality printout due to poor quality ink or toner used

TOPIC 3: PRESENTATION SOFTWARE

Definition of presentation software

- An electronic presentation is a collection of slides that may contain text, pictures, drawings, tables, sounds and videos.
- A slide is a work area in a presentation where information such as text, graphic or video is placed.
- To create a presentation, presentation software also called presentation graphics is used.
- Presentation software is application software used to create electronic presentation that communicates messages to a group of audience.

Types of presentation software

- There is variety of presentation software available as stand-alone or a component of a suite.
- Examples of presentation software include:
 1. Microsoft's PowerPoint
 2. Lotus's Freelance
 3. Graphics
 4. Corel Presentations
 5. Harvard Graphics
 6. OpenOffice Impress
 7. Adobe Persuasion
 8. Astound
 9. Asymetrix Compel

Purpose of using presentation software

- The main purpose of using presentation software is to support the speaker when giving a presentation to the target audience

Areas where presentation software is used

- Some of the areas where presentation software is used are:
 1. Presenting facts and figures: for example, sales people give presentation to their customers for them to see their sales and show them their latest products
 2. Teaching: Most education and business organization deliver their content using electronic presentation.
 3. Reporting research findings: Researchers and students present their project reports through electronic presentation.
 4. Conference: Presentation is often used in conference, workshops and seminars.

Benefits of using presentation software

1. It is easy to learn
2. It comes with a background templates and custom layout.
3. Multimedia effects can easily be added to the presentation
4. Presentations are easy to edit
5. Presentation can be easily output to different format such as handout
6. Excellent for summarizing facts using charts or diagrams to an audience
7. Can be used to produce a set of handout for people to write on while presentation is being given
8. Let's the speaker face the audience and make eye contact rather than facing the screen.

Common features of presentation software

1. They have predefined templates than one can easily use to create presentation
2. Most presentation provide selection of different layout used to create slides

3. Most presentation has master slides where you set content which you want to appear every slide
4. Most presentation come with different animations and transition effects which is used to add emphasis to a presentation'
5. Most presentation software lets the user run on-screen show, upload a presentation to the internet or print handout that can be distributed to the audience to help them easily follow the presentation.

Presentation design guidelines

Four p's principle

- In order to give an effective presentation, one should adhere to four p's principles below:
 1. **Plan:** You must write a plan of the presentation before coming up with the presentation
 2. **Prepare:** After planning, prepare the presentation by typing it using presentation software
 3. **Practice:** Before giving presentation to the audience, make rehearsals to practice it will be presented
 4. **Present:** Finally, present to the target audience

Factors to consider when designing presentation

- The following factors should be considered when designing a presentation:
 1. **The objective of the presentation:**
 - Determine the purpose of the presentation whether it is to inform, to persuade or to report.
 2. **The length of the presentation**
 - The presentation should be of the right length to communicate message effectively.
 - It should not be short to disappoint the audience or too long because it would be boring.
 3. **The target audience**
 - Find out who are the audience and what their interest and needs, ad values are. This will help you to determine whether the presentation should be formal or informal.
 4. **The content of the presentation:**
 - This determine the relevance of the content to the audience
 5. **The type of presentation**
 - Some presentation may be business presentation which target to sell products and some academic presentation which aim at communicating theories, concepts or principles
 6. **The organization**
 - The presentation should have opening slide, main body and conclusion.
 - Ideas should be organized in a good sequence in order to flow from known to unknown and tangible to abstract.

Creating presentation

1. Click Start then Click Program
2. Click Microsoft Office
3. Click PowerPoint

Features of the PowerPoint Application Window

- The three main features of Microsoft PowerPoint window are:
 1. File Button/Microsoft Office Button
 2. The Quick Access Toolbar
 3. Ribbon Tab

The File Button/Microsoft Office Button

- This button allows you to
 - a. Create new presentation
 - b. Open existing presentation
 - c. Save presentation
 - d. Print
 - e. Send
 - f. Close
 - g. Share

Ribbon Button

- The Ribbon has seven tabs namely: Home, Insert, Design, Animations, Slide Show, Review and View

Quick Access toolbar

- It contains commands that you may want to use frequently such as Undo, redo, Save, Print.

Work area

- This has three panes
 1. Left pane: Used to navigate through the slides when creating a presentation
 2. Right pane: Display the current slide being worked
 3. Note pane: Allows you to type additional information that apply to the current slide.

Status bar

- The status bar displays the current processing status of the application
- It displays the number of current slide you are working on

Mini toolbar

- Displays common formatting features such as Fonts, font size and font colour

Note pane

- Used to add more notes that could not fit on the slide.
- The notes here are printable but do not appear on the slide during slide show.

Choosing layout

- The layout determine how text and pictures will be arranged on the slide
- The normal arrangement has title on top and text and graphics below
- Once you create a presentation, you can choose ayou by
 1. Click Layout on the Home in the Slide group
 2. Select the layout

Slide view

- **The three main types of slide views are:**
 1. Normal view
 2. Slide Sorter View
 3. Slide show view
- However, there are other view you can get on the View ribbon such as
 - a. Note page
 - b. Slide master
 - c. Handout view

Normal view

- This is the main editing view where you write and design your presentation
- It has four working area:
 - i Outline tab: shows slide text in outline form. Used to reorganize slides and text
 - ii Slide tab: shows the thumbnails of all slides in the presentation
 - iii Slide pane: Displays large view of the current slide
 - iv Note pane: Used to type additional information that apply to the slide

Slide Sorter View

- Displays miniature version of all slides in the presentation.
- You can reorder slide, add special effects and set timings for each slide

Slide show

- Allows you to view the slides the way the audience will view it.

Adding slides to presentation

- Three options on adding new slides are
 - a. Duplicate selected slides
 - b. Reuse slides
 - c. Add new slides
- **To add a slide:**
 1. Click New Slide on the Home

2. Click the slide layout
3. Add content to the slide

Working with content

- The main types of content that can be added onto a slide include:
 - a. Text
 - b. Graphical objects e.g. pictures, charts
 - c. Video clips and sound

Adding text to a slide

- Select the slide layout that has placeholder for entering text
- Click in the box to add text and type the text

Inserting objects

- The objects that can be inserted on PowerPoint are:
 - a. Pictures
 - b. Clip art
 - c. Photos
 - d. Shapes
 - e. SmartArt's
 - f. Charts

To insert a picture, photo, clip art, shapes or smart art

1. Click Insert tab
 2. Click Picture or Shape or SmartArt etc
 3. Select the folder where the picture is located
 4. Click Picture icon then click insert
- If it is SmartArt, select the type of SmartArt, if its shapes, select the shape

To insert a chart

1. Select the slide layout that has placeholder for chart
2. Click Insert
3. Click Charts
4. Select the Chart type
5. Enter or edit the data on the Excel and then close it

Inserting tables

1. Click Insert table
2. Click Table
3. Specify number of columns and rows

Editing and formatting presentation

- Just like in Microsoft word, editing involves
 1. Deleting text
 2. Spell checking
 3. Replacing word with synonym or antonym
 4. Find and replace
 5. Reversing action (Undo)

To delete a slide;

1. Right click the slide
2. Click Delete

Copying a slide

1. Click the slide you want to copy
2. Right-click it then click Copy
3. Select where you want to put the slide then click PASTE

Hiding the slide

1. Right click the slide
2. Click Hide slide

Inserting graphic in a slide

1. Click Insert tab
2. Click Picture, ClipArt, Photo Album, Shapes, SmartArt or Chart

Editing graphical objects

- When you add the graphic to the presentation, the picture tools with the following tabs are shown:
 - Adjust: controls the picture brightness, contrast and colour
 - Picture style: Used for placing a frame, a border or other effect around the picture
 - Arrange: used for alignment and rotation of the picture
 - Size: used for cropping and resizing graphics

Formatting a presentation

- The following points will help you when formatting
 - Make the text large enough
 - Keep it simple: stick to few font colour
 - Use bullets points
 - Pictures: Should be large enough
 - Colour: use appropriate colour
 - Background: Use appropriate background

Applying theme

- A theme is a formatting choices that include set of colours, fonts and effects

Using slide master

- A slide master is a template for entire presentation.
- To use slide master
 1. Click View
 2. Click Slide master
 3. Click Slide master on the left
 4. Apply the new format
 5. Click close

Adding transition

- Transition refers to progressive change-over from one side to another during a presentation

Adding animations

- Animations add motion to text or graphics in a presentation.

Setting up and preparing for a presentation

- The following points will help you to make best presentation:
 1. Rehearse and time delivery of the presentation
 2. Test the slide show using a projector
 3. Decide whether the presentation will run continuously on a screen
 4. Decide whether the handouts are to be given to the audience
 5. Ask whether it is a data projector or overhead projector that will be available
 6. Package your presentation and burn them on CDs

Printing presentation

There are four options for printing presentation:

1. **Slides:** lets you print one slide per page
2. **Handout:** lets you print more slides per page eg 2,3,4,5,6,8 etc
3. **Note page:** print slides that include speaker notes
4. **Outline view:** used to print the outline of the presentation

TOPIC 3: TROUBLESHOOTING COMPUTERS

- A computer needs careful handling to avoid breakdown.
- It sometimes requires repairing in case of failure of hardware or software

Basic computer setup follows the following steps

- Select a suitable system unit for the computer

- Mount the motherboard, and disk drive (such as CD-ROM, hard disk and floppy disk) in casing. Earth the hand before touching the motherboard and wear ant static wrist member to avoid electrostatic electricity that may spoil chips
- Connect disk drive to the motherboard using data cables and connect memory chips to their slots
- Close the system unit casing
- Connect the mouse, keyboard, monitor and printer to their respective ports

Causes of hardware problems

- Most hardware problems are caused by
 1. Loose cable connections or improper fitting in the motherboard slots
 2. Damaged hardware device
 3. Lack of appropriate hardware drivers or corrupted software drivers for specific hardware
- Problem 1 can be solved by fixing loose point, problem 2 can be solved by replacing the damaged hardware and problem 3 can be solved by installing appropriate drivers.

TOPIC 4: COMPUTER AND THE SOCIETY

USES OF COMPUTER IN VARIOUS FIELDS

- Computers are used in the development of the following systems
 1. Financial system
 2. Retail system
 3. Reservation system
 4. Education systems
 5. Communication systems
 6. Industrial systems
 7. Entertainment systems
 8. Scientific and research systems
 9. Library systems
 10. Transport systems
 11. Home use
 12. Office expert system
 13. Marketing system
 14. Virtual reality systems

Financial systems

- In financial system, computers enable organizations manage their finances. They include:
 - i. Human resource system
 - ii. Accounting system
 - iii. Banking system

a. Human resource system

- In Human Resource Information system, computers are used in processing all aspects of human resource management that include:

- Recruitment
- Placement
- Monitoring and appraisal
- Leave management
- Payment processing

b. Accounting system

- In accounting systems, computers are used to manage the following business accounting activities:
 - **Customer order entry and billing:** This records incoming customer orders, authorizes delivery of items of services and produce invoice for customers who do not pay in advance
 - **Inventory management:** Is used to keep records of items in stock and help management determine which items need reorder. This will help management to have enough stock of all items to meet needs of customers
 - **General ledger accounting:** Is used to keep track of how much a business makes and its worthiness by summarizing the financial transaction. It produces report on income, expenses and profit or loss made. This report is called balanced sheet
 - **Account receivable:** This keeps records of the amount owed by each customer. This helps management to make follow-ups and bill customers for overdue payments.
 - **Accounts payable:** This keeps records of the amount the business owes others. This helps the management produce cheques for payments of these amounts
 - **Cash book:** Is used to record daily cash transactions. It has two accounts:

The cash account

The bank account

c. Banking system

- The banking systems use ICT in the following ways:
 - **Processing customer transactions**
 - Computers are used in banks to carry out financial transactions such as recording deposits, withdrawals and calculating interests on savings and loans.
 - They are also in Automated Teller Machine (ATM) to withdraw money
 - **Cheque clearing and processing**
 - Cheques are cleared and processed at the bank using special character that is printed on the cheque using ink containing magnetic particles.
 - The character has details such as bank name, account number, cheque number and amount of the cheque.

- Using magnetic ink character reader, these details are automatically entered into the computer for processing.
- Manual cheque processing used to take a long time but with computers, millions of Cheques are processed every day hence improving efficiency in service delivery to the customers.
 - **Electronic fund transfer (ETF)**
- Electronic fund transfer is the movement of money between two different accounts using ICT.
- Using ETF, people also pay for goods and services using credit card where money is transferred electronically from customer account to another account.
 - **Mobile banking**
- This allow account holder to perform banking transactions using mobile phones
 - **Internet banking**
- Internet banking enables users access their bank accounts through internet

RETAIL SYSTEMS

- Computers are used in retail markets such as supermarkets to perform the following
 1. Stock control
 2. Transaction handled at the electronic point of sale (EPOS)
- **Stock control**
- This system enable users manages their stock more efficiently
- This system is used to track what is in stock and what needs reordering to reduce the risk of understocking and overstocking.
- **Transaction handling at the point of sale (EPOS)**
- EPOS is a computer terminal used in retail stores to input and output data at the point where sales are transacted e.g. at supermarket checkout counter.
- An EPOS terminal has cash registers and data capture devices such as bar code reader, a monitor and receipt printer.
- In such stores, goods are identified using bar codes. The bar code has information about the product such as item number, item name, quantity in stock and the price

How transaction at the point of sale work?

1. The bar code reader (wand) is passed over the items bar code. The bar code is automatically converted to a number which is read by the computer
2. Using the number, the computer searches for the item with corresponding number in the product database
3. Once the record is found, its description and price is used for processing sales

Advantages of electronic point of sale

1. Correct prices are used at the checkout counter
2. Faster since the attendance does not have to enter details manually

RESERVATION SYSTEMS

- Reservation systems have networked system that are used mainly to make bookings such as airlines, hotels, car-rentals etc.

EDUCATION SYSTEM

- Computers are used in education for administration work such as compiling exams, reports, writing memos etc
- Computers used in the education institution in the following ways
 - **Computer aided instruction (CAI)**
 - Computer aided Instruction refers to the use of computer to learn, drill and practice particular principle e.g. games
 - **Computer aided Learning (CAL)**
 - Computer Aided Learning presents educational materials the way a teacher does it in a classroom.
 - **Electronic learning (E-learning)**
 - In E-learning, the lessons and lectures are presented from a central site and displayed on TV screens
 - The learner can also access these learning materials on the internet, sit for online exams and receive results online. Learners therefore, do not go to college physically.
 - **Computer based simulation**
 - Computer based simulation refers to the science of representing the behaviour of a real-life situation by using computerized models
 - Simulations are used in educational areas like training drivers, pilots, engineers

COMMUNICATION SYSTEMS

- Communication refers to the distribution of information or data from one location to another.
- **Examples of communication systems are**
 - Facsimile (Fax)
 - Radio
 - Television set
 - Video conferencing
 - Telecommuting
 - Internet

Facsimile

- A facsimile (Fax) is a telecommunication device used to send document via telephone lines.
- A document is passed in a machine, scanned and converted into analog form then transmitted over telephone line. The receiving fax machine converts the analog data into original softcopy and prints a hardcopy.

Radio communication

- Computers are used at radio broadcasting stations to do the following:
 1. Record and manage radio programs meant for broadcasting
 2. Manage radio transmission and track performance
 3. Automatic running the selected programs
 4. Create slides, simulated objects and sound effects when preparing electronic and printed media advertisement
 5. Download information from the internet that can be used in preparing programs such as international news

Television sets

- In television, data is transmitted via channels the same way channels are used to broadcast conventional TV programs.
- The types of data transmitted on TV include: teletext (Ceefax) and videotext (view data)
 - **Teletext:** Teletext refers to a computerized service whereby news and other information are provided on television screen to subscribers. Teletext is a one-way communication (simplex) which means a user cannot communicate back to the service provider
 - **Videotext (view data):** This is a two-way communication (half duplex) which means a feedback is given. The subscriber can interact with the service provider and information is displayed on home TV screen. An example is reservation bookings, ordering for goods and services as well as sending electron mails

Video conferencing

- Video conferencing refers to use of computers, a digital video camera, audio capturing equipment and communication networks to enable people in different locations to see and talk to one another. Each participant's computer is attached with a video camera. It is popular in TV broadcasting stations where a field reporter interacts with newscasters and also in organization where top managers hold meetings via internet.

Telecommuting

- This refers to a situation where an employee works usually at home using a computer connected to the workplace network.
- Telecommuting reduces travel expenses and less stress

The internet

- Some services available on the internet are:
 - a. World wide Web (www): Collection of web pages made up of text, images, animations and videos held on a web server.
 - b. Electronic mail (E-mail): This allows sending and receiving messages and data

INDUSTRIAL SYSTEM

- Computers are used in a number of ways in industry such as

1. Computer aided design and manufacturing:

- Computer aided design/ Computer aided Manufacturing (CAD/CAM) is a system that allow products that have been designed using design application software to be transmitted into an automated manufacturing system for product to be manufactured as per the computer model. For example, design of motor of brake pads
- One application of this is use of robots to carry out assembly line operations.
- A robot is a computer controlled device that emulate a human being in carrying out operations that would otherwise be hazardous, repetitive and boring to human being

2. Industrial simulation

- Simulation allows some activities that would otherwise be expensive and dangerous in real life situations to be put under test.
- For example, a car or plane crash test simulation is done by use of virtual model on the computer screen that attempts to represent the real situation or objects.
- This enables the manufacturer to identify and correct the weaknesses of the design, hence they are not carried out to the real design.

3. Process control

- Computerized process control refers to the use of computer system to control an ongoing process especially in manufacturing.
- Such process control may include: temperature, pressure, fluid flow etc
- Process control is mostly used in petroleum refineries, chemical plants etc.

SCIENTIFIC AND RESEARCH SYSTEM

- Computers are widely used in applications in science, research and technology such as
 - a. **Weather forecasting**

- This is use of computer to make predictions of weather. It uses data collected on from rainfall, humidity, temperature etc to analyse, process and predicts weather pattern.
- Another application of this is use of Geographical Information System (GIS)

b. Medical research

- In health, health professionals use computer technology for diagnosis, keeping patients records and inventory control.
- Computers are also used to control device that help care for the handicapped such as deaf, blind etc.
- Computers are also used as expert system to help medical doctors diagnose illness

c. Military and space exploration science

- Computers are used in military for research, design, development and control of unmanned spaceships, aero planes and missiles.
- GPS is also used in military to perform surveillance, enemy position plotting and directing of missiles to target in precise manner.

LIBRARY SYSTEM

- In library, computers are used in the following ways

a. Lending system:

- It manages issuance and return of borrowed reading materials
- The books, journals, magazine etc. are given unique identification number or code. Once a member borrows book, his/her details are recorded and on return, the record is updated.

b. Inventory control

- This involve use of computer to manage stock, which involves checking books currently in shelves and those on high demand

c. Cataloguing

- A catalogue is a collection of cards with information about each book or reference materials found in the library.
- These cards are kept in a drawer sorted in alphabetical order by title or author. Computers have replaced these manual.

ENTERTAINMENT SYSTEM

- Some applications of computers in entertainment system are

- Games:** These are games that are installed in the computer and some games simulates sport, driving, war combat etc.

- Music and videos:**

- In music industry, computers are used in recording, synthesizing, editing and adding special effects to music.
- In video industry, computers are used in generating scene and actors

TRANSPORTATION SYSTEMS

- Computers are used in transporting system in the following ways:

a. Automated traffic control

- Computers are used in busy town to control movement of motor vehicles and humans.
- It uses control lights which has three colours: green, red and amber. These lights are controlled using clock or computer
- Computerized traffic light system has sensor pads laid underneath the road which detect the pattern of the traffic flow.

b. Air traffic control

- Computers are used to monitor traffic movement, take-off and landing of crafts
- This helps minimize error result from human mistake.
- Computers also direct the aircraft to follow shortest paths between two locations and is known as GPS

- c. Computers are used to control and guide the paths taken by the spaceships and water vessels as they travel to distant lands.

HOME USE

- Computers are used at home to prepare domestic budget, entertainment, research and teaching children some educational concepts

OFFICE EXPERT SYSTEM

- This is a system developed and installed in a computer to make decisions in place of human expert.
- It also has set of rules that will help to make conclusions when some parameters are entered.

MARKETING

- Computers are used in marketing in the following ways:

a. Electronic commerce or e-business

- This allows buying and selling of goods and services online.
- This helps to save travel cost to the customers and to the business owner, it helps the products to be advertised worldwide.

b. Electronic presentation

- Using computers, people create presentations concerning their products of business and present them to the audience using presentation software.

c. **Advertisement**

- Computers are used to design advert of products being sold and then be displayed on billboards or broadcasted on television or on internet as video.

LAW ENFORCEMENT SYSTEMS

- Computers are used to identify people using human body features such as fingerprints.
- It uses biometric analysis.
- Biometric analysis refers to the study, measurement and analysis of human biological characteristics
- Its uses human features such as fingerprint, facial features like iris, voice, lips.

COMPUTERS IN MEDICINE

- Computers are used in health for:
 1. **Administration:** Keeping patients' records, processing payments
 2. **Diagnosis:** Computers enable scanning devices, X-ray rays, MRI machine to diagnose patients
 3. **Patients Support:** Computers are used to support the life of critically ill patients in ICU (Intensive Care Unit). Mobile phones also enable people to be for medical checkup or take drugs
 4. **Medical research:** Computers enable health personnel to make research of particular diseases
 5. **Online/mobile Medicare:** Computers enable people to access medical services online

COMPUTERS IN AGRICULTURE

- Computers are used in Agriculture in the following ways:
 1. **Agriculture research:** Computers are used by Scientists to perform research to improve resistance of crops and animals to pests and diseases.
 2. **Agribusiness:** Computers are used keeps records of inputs and outputs used in agriculture as well as marketing the agricultural products online.
 3. **Agricultural administration:** Computers are used for records keep, planning what to plant etc. this increase good organization in the farm.

IMPLICATIONS OF USING COMPUTERS

- Use of ICT has both benefits and challenges in the society. Some of these are:
 1. Legal issues
 2. Economic issues
 3. Environmental issues
 4. Effects on employment
 5. Effects on automated production
 6. Issues of workers' health
 7. Ethical issues

8. Cultural issues

Legal issues

- ICT allows people sending each other electronic messages which do not have legal identity to verify the owner.
- So government have to pass new legislation to communication to support electronic communication i.e. emails and sms have to be recognized as legal documents

Economic issues

- The use of computers provides both benefits and challenges to economy

Benefits

1. More efficiency means better utilization of resources
2. Accountability and transparency in economic planning is there which enhance development
3. Individuals can transfer money and do e-commerce hence enhancing economic development

Challenges

1. Electronic fraud ie. Scam money or laundering
2. The need to enforce security
3. ICT's are expensive to purchase, install and maintain

Environmental issues

- The use of ICT has the following environmental impacts

1. Electromagnetic emission and emission of heat into the environment:

- These are electrical and magnetic energy that are emitted by current carrying conductor.
- Therefore, computer users are advised to use low emission devices in order to avoid exposing themselves to excess emission

2. Energy consumption and radiation

- Initially, computers consumed a lot of energy and generating a lot of heat and emitting electromagnetic radiation.
- Environmental Protection Agency (EPA) launched star policy to encourage minimal use of power by electronic devices.

3. Environmental pollution

- This result from disposing of dead computers parts, printer, ink, monitors etc into the land
 - Again, cadmium oxide found in mobile phones and laptop batteries could leak into underground water table causing pollution, if not disposed well
4. Emission of greenhouse gases during manufacturer of ICT components

Effects of ICT on Employment

- The introduction of computers at the work place has resulted in

1. Job creation

- ICT has introduced new employment opportunities that never existed before.
- Examples of such job titles are ICT officer, Programmer, network administrator etc.

2. Job replacement

- Since introduction of computers, some tasks which were done by many people is being done by computers with few people. This make some people lose jobs.
- Again introduction of computer, those who are computer literate replaces those who are computer illiterate

3. Job displacement

- Unlike in displacement where an employee may lose job, in displacement and employee who doesn't know computer is moved to another position or department where computer skills are not required.
- These employees do not lose job but just change position.

Automated production

- Computers are used in manufacturing industries to automate their process with an aim to increase productivity. They use robots and assembly lines

Advantages of automated production

1. Increased efficiency due to balancing of workload and production capacity
2. Improved customer service. Adequate and high quality goods are produced on time
3. Efficiency utilization of resources such as raw materials, personnel and equipment hence less expenses

Disadvantages of automated production

1. High initial cost of setting up an automated system. For example, buying a robot is expensive
2. Automated production may lead to unemployment. For example, what would have been done by 30 people is done by one person using machine.

Effects of computers of Health

- The following are effects of computers to human health:
- 1. Repetitive strain injuries (RSI)
 - These are injuries resulting from wrist, hand, arm muscle strain due to forced repetitive movement when entering data using keyboard.
 - To cure for this, rest, sit in relaxed position and change typing technique
- 2. Eye strain and headaches

- Since users face the monitor all the time, they develop what is called Computer Vision Syndrome (CVS)
- CVS is characterized by eyestrain, headache, and double vision.
- The solution to this is to use monitor with good resolution

Ethical issues

- The following are ethical issues:
 1. Corruption and fraud
 - Corrupt workers can use computer to transfer money from business/government account to their own accounts since the transaction are electronic.
 - Fraudsters can also obtain electronic financial information like credit card details and use it to hack bank accounts and transfer funds.
 2. Spread of pornography and pedophilia: Some people use internet and social media to spread pornographic materials v via website, email, etc.
 3. Spread of terrorism and drug trafficking
 4. Forgery: Paper documents such as certificates are forged using computers leading to falsification of facts

Cultural effects

- ICT has changed the way we talk, affected our privacy, human right and integrity.
- For example, internet users are exposed to a form of communication called flaming
- Flaming is writing online messages that use derogatory, obscene or dirty language.
- Again, on internet, one can view pornographic materials that affect moral values negatively
- There are also computer crimes like hacking, eavesdropping and piracy
- People also use computers as a tool to accomplish their vices e.g. forging certificates

MANAGEMENT OF COMPUTER WASTES

- Computer waste is defined as all the hardware and consumables that need to be disposed at the end of their lifecycle.
- Examples of such wastes are old computers, keyboards, phones, laptops, batteries etc
- Before disposing computer wastes, a legislation must be passed to National Environmental Management Authority (NEMA)
- This authority enforces proper disposal procedures through training of the public on proper disposal procedures, recycling options and the need to reduce negative impact of technology on the environment.

SAFEGUARDING COMPUTER RESOURCES

- Computer resources are delicate and expensive. They need to be safeguarded from theft, breakage, virus infection and unauthorized access.

1. Protect against theft

Hardware resources

1. Fix grills in windows and doors
2. Install alarm system on the computer room
3. Employ a guard

Software resources

1. Protect with passwords
 2. Installing firewalls
 3. Installing antivirus software
- 2. Content filtering**
- This is the act of perusing through the volume of data and information, programs and other electronic files to identify those that are dangerous.
 - This technique is used by antivirus to clean viruses and as well firewalls