Computer Ethics JSS 2

Definition of Computer Ethics

Ethics is a set of moral principles that govern the behavior of a group or individual. Computer ethics can be defined as the set of moral principles that regulate the use of computers.

Responsible use of Computer and Internet

The following are the basic security measures taken to prevent damage to computer system.

1. There must be adequate ventilation.
2. Adequate space must be allowed between each system unit.
3. Avoid dust by using cover.
4. Avoid moisture.
5. Provision of air conditioners and fans or other cooling machines.
6. Provision of UPS (Uninterruptible Power Supply) and other electrical appliances to avoid loss of information and electrical damage to the system.
7. Adequate care must be taken to storage devices like diskettes, flash drive, CD/DVD writer drive, etc.
8. Disallow an unauthorized user from having access to your computer.
9. Ensure maximum security to files and information on the computer.
10. Provide computer with anti-virus program to avoid viruses.
11. Avoiding food particles dropping into the system.

12. Unplug the system when not in use for long.

13. Check your email regularly.

14. Give prompt and polite response to mails.

Reasons for Taking Care of the Computer

a. To avoid damage to files

b. To protect the system

c. To prolong the life of the system

d. To make the user comfortable for maximum efficiency.

Areas of Misusing the Computer

The following are areas in which computer can be misused.

1. **Invasion of privacy (hacking**): through the internet, a lot of information can be passed to several places and among people. To this end, the privacy of information cannot be guaranteed; hence someone can have access to another person's information. People who gain unauthorized access to a computer system or data belonging to somebody else are called a hacker. They invade computer database to steal the identities of other people by obtaining private information about them
2. **Computer virus**: This can affect the computer through the internet where unsolicited information is sent to destroy files in other computers. Computer virus can also occur where diskette, CDs, DVDs, flash drives that are have been corrupted are used in another computer. It is therefore necessary to that anti-virus programs are installed in our computers to detect and clean any virus that may want to attack our computers.

3. **Fraud**: Through the internet and computer networks a lot of deception and scam can be perpetrated by dubious people
4. **Stealing**: people can steal very important documents, information and money through the misuse of computer and the internet.
5. **Pornography**: Children and adults misuse the computer by watching pornographic films and pictures on the internet. These are pictures of nude people and obscene sexual acts on the internet.
6. **Cyber war**: this is the use of computer and the internet in conducting warfare in cyberspace. The type of attacks include web vandalism, propaganda, where political messages can be spread through or to anyone with access to the internet, equipment destruction, where military activities that use computers and satellites for coordination are at risk and their communications and orders intercepted or replaced thereby putting soldier at risk.
7. **Software piracy**: This is the situation where programs written by people are used without their permission.
8. **Plagiarism:** This is the situation where the original works of people especially books and other works are copied verbatim (word for word). Without due acknowledgement of the owner. All this can happen on the internet.

Safety Measures

Definition of safety Measures: Safety measures are precautions users of computers need to take in order to enjoy the use of computers.

They include:

(i) Good Sitting Posture

The sitting posture of the user of computer should be comfortable so that backache, neck pains, wrist injuries and eye strain will be reduced to the barest level. The sitting posture should allow one to sit with both feet on the floor, thighs at right angles to the body. The chair should be adjustable to support the lower back while the fore arms should be kept parallel to the floor. The eye level should be straight to the screen while keeping the wrist and hands relaxed as one type on the keyboard.

(ii) Use of Anti-glare Protector

The use of anti-glare protector helps protect the eyes against radioactive rays coming from the computer monitor. It is important to keep a distance of two feet between the eyes and the monitor when working on the computer. It is

also very important to blink the eyes regularly if one is working on a colour monitor.

(iii) Proper Positioning of Monitor Base

The monitor should be well positioned for it to stand very well and also to give room for it to be adjusted sideways, up or down while it is being used.

(iv) Illuminating the Computer Room

The computer room should be well lit with fluorescent light. This is to enable one to see very well the things that are been done on the computer. It will also remove eye strains from the user on the computer monitor.

(v) Maintaining a Dust-free Environment

Computers are very sensitive electronic machines. They can easily get damage by dust, moisture and temperature, hence the need to ensure that the environment is where computer are kept and used are dust-free. Computer laboratory floors should be made with floor tiles and not rug. The window should be air tight and air-conditioned.

(vi) Keep Liquid away from Computers

Liquids of any type and food droplets can cause a lot of physical damage to the computer hardware. This is why it is important to keep all liquids away from the computer.

Graphic Packages

Definition of Graphic Package
Graphics packages are application software that can be used to create and manipulate images on a computer.

Examples of Graphic Packages
Examples of graphic packages include: Ms Paint, Adobe Photoshop, Instant artist, Harvard graphic and CorelDraw.

Features of Graphic Packages
Most of the graphic packages posses the following features and tools.
1. Menu bar:
The menu bar can be used to activate commands of graphic packages and operations. Depending on the graphic package you are using, some packages contain the following. File, edit, view, text, tools, window, help, etc.

2. Toolbar:
The tool bar is a bar that contains short cuts to menu and other command. For example you can use the "open" icon o open an existing document by clicking on it. Others are save, print, cut, copy, paste, alignment, bold italics, underline etc

3. Toolbox:
A toolbox is a bar with tools for creating, filling and modifying objects in the drawing

4. Printable area:
Printable area can be referred to as the work space inside the drawing window, which you can plan your work on.

5. Colour palette:
It is a bar that allows you to fill desired objects or texts with any colour you want.

Features of the Paint Environment
Paint is a software from Microsoft Inc. It allows one to create, customize and paint graphics or images.

Starting Paint Program
To start a paint program the following steps are to be followed:
1. Click on Start Menu
2. Navigate to all program and click on it
3. Navigate to accessories or window accessories and click on it
4. move to paint program and Click on it

Tools in the Toolbar

The paint toolbox has sixteen tools. The names of the different tools are shown in the diagram below:

Functions of Toolbox Tools

1. Free-form select: The free-select tool is a tool used to select objects that have been drawn in the drawing area

2. Rectangle Select tool: The Rectangle select tool is also used to select objects in the drawing area.

3. The eraser tool: It is used to remove mistakes that have been made in a drawing. The size of the eraser can be adjusted to remove either big or small areas of a drawing

4. Fill colour tool: This is a also known as paint bucket tool. It is used to fill objects that have drawn with any colour of your choice.

5. Pick colour tool: The pick colour is used to pick or select colour from pictures.

6. Magnifier tool: The magnifier tool is used to make objects in the drawing area appear bigger.

7. Pencil tool: The pencil tool is known as the default tool in the paint program. You can use the pencil for drawing just like a real life pencil. You must click and drag the mouse pointer to use the pencil tool.

8. Brush tool: The brush tool works like a real life brush. You have different brush options to choose from in the tool box.

9. Air brush tool: The air brush tool is used to spray colour over an objects. The airbrush tool works like a spray can. The amount of colour spray over a particular area depends on how long you hold down the mouse button and keep it in the same area.

10. Text tool: the text tool is used for inserting text into the drawing.

11. Line tool: The line tool is used to draw horizontal, vertical and diagonal lines.

12. Rectangular tool: The rectangular tool is used to draw rectangles and squares of different sizes.

13. Curve tool: The curve tool is used for drawing curves from a line. To draw curve line, you must first draw a line with the tool, and then click on any part of the line and drag the mouse pointer to create a curve on the line.

14. Polygon tool: The polygon tool is used to draw straight line objects with different shapes and sizes. You can use the polygon tool to draw a triangle, star, rhombus and many other polygon.

15. Ellipse tool: The ellipse tool is used to for drawing ovals and circles of different sizes.

16. Rounded rectangle tool: It is used for drawing rectangles and squares of different sizes with rounded edges.

Computer software jss two

Definition of Software

Software is a set of instructions and procedures passed to the computer to perform certain activities or task. It can also be defined as a set of instructions that direct the activities of the computer system in order to undertake a specific task. Unlike the hardware, software cannot be seen or touched.

Types of Software

Software is divided into two broad groups, these are:
1. System Software
2. Application software

1. System Software
These are software that control the way the different computer components communicate with one another. It can also be defined as programs that help run the computer hardware and software. The system software consists of programs, written by manufacturers, which contributes to the proper control and good performance of the computer system. System software generally comprises three groups. These are:
a. Operating system
b. Utility software
c. Translators

a. Operating system: Operating (OS) is software program that manages the hardware and software resources of the computer. Examples Disk Operating System (DOS), Microsoft windows, UNIX, LINUX, MAC etc

Utility software: utility software (service programs) are used for general housekeeping of the computer such as repairing the computer, backing up files, copying, sorting and printing. Examples of utility programs include: window explorer, Anti-virus, Network manager, Registry cleaner, data compression utilities, etc

Translators: Translators are programs for converting programs in other languages into machine language instruction so that the computer can execute them. Examples include assembler, compiler and interpreter.

2. Application Software
These are software that allows humans to accomplish one or more specific (non-computer) task.
There are different types of application software, they include:

a. Word processing software: These are software used for creating, editing and printing document. Example include: Microsoft Word, Notepad, Corel WordPerfect, WordPad, etc.

b. Spreadsheet software: These are software for performing accounting and statistical calculations. Examples are: Microsoft Excel, Lotus 1-2-3, etc.

c. Graphics software: These are software that are used for drawing and designing purposes, examples CorelDraw, Paint, Photoshop, Instant Artist, etc.

d. Database Application: Database software allows you to enter, retrieve and update data in an organized and efficient manner. Commonly used database programs include Microsoft Access and Lotus 1-2-3

e. Presentation: A presentation program is a computer software package used to display information, normally in the form of a slide show. Examples are MS power point Corel Presentations, OpenOffice.org Impress, SlideSlider, SlideRocket SlideWiki, Audience (software), Ease, Emaze, WPS presentation, etc

Operating System

Definition of an Operating System

i. An operating system (OS) is system software that manages the hardware and software resources of the computer.

ii. An operating system is the software that controls the overall activity of a computer.

iii. The term operating system (OS) denotes the collection of program that act as an interface between the user's program and the computer hardware.

The main purpose of the operating system is to effectively and judiciously manage the computer system resources, such as processors, main memory, secondary storage, input and output devices and files.

Examples of Operating System

Examples of commonly used operating system include:

a. DOS (Disk Operating System)

b. Windows (95, 98, 2000, NT, ME, XP, 7, 8, 10)

c. Unix

d. Linux

e. Mac

f. IOS

g. Android

Types of operating System

i. **Real-time operating system (RTOS**) - A Real Time Operating System, is an operating system that rapidly switches between tasks. Real-time operating systems are used to control machinery, scientific instruments and industrial systems.

ii. **Single-user, single task** - As the name implies, this operating system is designed to manage the computer so that one user can effectively do one thing at a time.

iii. **Single-user, multi-tasking** - - As the name implies, this operating system is designed to manage the computer so that one user can effectively do more than one thing at a time.

iv. **Multi-user** - A multi-user operating system allows many different users to take advantage of the computer's resources simultaneously.

v. **Distributed** - A distributed operating system manages a group of independent computers and makes them appear to be a single computer.

Functions of Operating System

Functions of the operating system include:

1. Starting of the computer:

   When we switch on a computer, the necessary files of the operating system get loaded to make it ready to accept command. This process of loading files is called booting. The operating system boots up the operating system

2. Resource allocation:

   The operating system allocates or assigns resources.

3. Monitoring of system activities:

   Another function of the operating system is to monitor the system activities such as system performance and security.

4. Disk and file management:

   The operating system contains program that performs functions related to disk or file management. Some of these functions are: disk formatting, deleting files, creating files and folders, renaming of files and copying files or folders.

5. User interface:

   The operating system creates an interface between the user and other application program. A user interface controls how the user interacts with the computer. An example of user interface is the Graphical User Interface (GUI) and Text User Interface (TUI) also known as command line interface

ICT as a Transformation Tool

Meaning of ICT

ICT is an acronym that stands for Information and Communication Technology.
Information: Information is refers to knowledge obtained from reading, investigating, study and research.
Communication: Communication is an act of transmitting messages.
Technology: Technology is the application of scientific knowledge for practical purpose especially in industry.
ICT can therefore be defined as technologies that provide access to information through telecommunication. It also defined as the use of diverse set of technological tool and resources to communicate, create, disseminate, store and manage information. It is the combination of compatible hardware and computer-based information systems together with improved communication technologies.
Information can be transmitted from one place to the other with the use of ICT. For example, sending and receiving e-mail messages, making phone calls, audio and video conferencing, sending and receiving fax messages, chatting and instant messaging etc.
Examples of ICT gadgets are computers, cellular network, satellites communication, television, telephone, etc

ICT Components

The major components of ICT are:
1. Computer: It is needed to process data and information.
2. Input/output devices: These sends or receive data
3. Communication channels: These are links by which voice or data are transmitted. These links used various media such as telephone line, fiber optic cable, coaxial cable and wireless transmission which could be radio or satellite link.
4. Communication processors: These are processors which provide support function of data transmission and reception. Examples are modem, router and multiplexer.
5. Communication software: This control input and out activities and also manage other functions of the communication network.

Benefits of ICT

i. It is timely, better and cheaper access to knowledge and information
ii. It speeds up transactions and processes
iii. It causes human beings interact with each other in new ways.
iv. Distances becomes irrelevant in business transaction and dealing

Disadvantages of ICT

i. It leads to job loses
ii.Threatens other areas/fields of human endeavour. E.g. criminals view it as an avenue to commit crime of all kinds.

iii. ICT tools may not be easily affordable.
iv. Maintenance of some ICT tools or gadgets are expensive

ICT Gadgets

A gadget is a small technological device or an appliance that has a particular function. Examples of ICT gadgets include Computer, Automated teller machine (ATM), Dispensing machine, Radio sets, Television set, Fax machine, Telephone, GSM, etc.

Fax Machine (Facsimile Machine)
This transmits texts and graphics messages from one location to the other; it might be within the country or outside a country with the use of series of number called Fax number. It is a combination of a telephone and a photocopier.

Telephone
A telephone, or phone, is a telecommunications device that permits two or more users to conduct a conversation when they are too far apart to be heard directly. A telephone converts sound, typically and most efficiently the human voice, into electronic signals suitable for transmission via cables or other transmission media over long distances, and replays such signals simultaneously in audible form to its user.

Cell Phone (GSM)
Cellular or cell phone generally referred to as GSM (Global System for Mobile Communications, originally Groupe Spécial Mobile) can be used as normal telephone to make or receive calls and also send and receive text messages. The latest cell phone technology allows one to send and receive e-mail and digital photograph.

Computer
A computer is a programmable machine that inputs, processes and outputs data. A computer system refers to the computer and all its equipment.

Automated Teller Machine (ATM).
Automated Teller Machine is also known as automated banking machine (ABM) or cash machine is a computerized telecommunication device that provides the client of financial institution with access to financial transactions in public space without the need for a cashier, human clerk or a bank teller.

Dispensing machine
A dispensing machine is a machine that gives items to customers automatically, after the customer inserts currency or credit into the machine.

Radio Set
A radio receiver (commonly also called a radio) is an electronic device that receives radio waves and converts the information carried by them to a useable form. It is used with an antenna. The antenna intercepts radio waves

(electromagnetic waves) and converts them to tiny alternating currents which are applied to the receiver, and the receiver extracts the desired information.

Television

Television or TV is a telecommunication medium used for transmitting sound with moving images in monochrome (black-and-white), or in color, and in two or three dimensions

Creating messages with Cell phone (GSM)

To create a message with mobile phone, follow the steps below:
i. Select the message menu
ii. Select the create message submenu
iii.Type the message
iv. Enter the recipient's number
v. Press ok/Send/Yes key

Retrieving Message with a Cell phone (GSM)

To retrieve a message with mobile phone, follow the steps below:
i. Send the message menu
ii. Select the inbox submenu.
iii. Scroll to the message you want from the list of displayed messages.
iv. Press OK/YES to read the message.

Sending fax using Fax machine

To send a fax with your fax machine:
i. Place the document you want to send in the document feeder.
ii. Enter the fax number you want to send to.
iii. Press Send or Go (depending on your fax machine model)
iv. Wait for the fax to finish scanning and sending your document

Internet J 2

Definition of Internet

Internet is a worldwide network of computers that share information. The Internet is a global network connecting millions of computers. It is also defined as a global system of interconnected computer networks that use the Internet protocol suite to link devices worldwide.

Internet Terms

1. Cyber café: An internet café or cyber café is a place which provides internet access to the public, usually for a fee.
2. Download: To transfer a file from remote computer to a local computer. In other words, it means to transfer a file from a web server to a web client.
3. Upload: To transfer a file from a local computer to a remote computer. In other words, it means to transfer a file from a web client to a web server.
4. E-mail: An email is a mail that is electronically transmitted by your computer.
5. Email Address: An email address is the name for an electronic postbox that can receive and send email messages on a network. An email address consists of two parts, which are the username and the domain name. In steve@example.com, steve is the username and example.com is the domain-part. The domain name part of an email address is case insensitive. The local mailbox part, however, is case sensitive. Examples of email addresses are: okolojoe90@yahoo.com, uvajoy@gmail.com, ugbainnocentugbajbr@hotmail.com etc.
6. Homepage or Home page: It is the first page that appears when you visit any website. It is also the page of a Web site that provides the introduction or content with links.
7. HTTP: HTTP is an abbreviation for Hypertext Transfer Protocol. It is the set of rules by which Web pages are transferred across the Internet.
8. URL: URL Stands for "Uniform Resource Locator." A URL is the address of a specific webpage or file on the Internet.
9. World Wide Web (WWW): It is defined as part of the internet that contains linked text, image sound, and video documents.
10. Website: A Website is a collection of World Wide Web pages or files. Examples of website address include: www.uniqueschoolsmakurdi.com.ng, www.nairaland.com, www.waeconline.org, www.uniquesecschmkd.blogspot.com.ng etc
11. Webpage: A Web page is a single hypertext file or a page that is part of a Web site
12. Web server: A server is a computer that delivers web content to web browser.
13. HTML (Hypertext Markup Language). It is the language of the web.
14. ISP (Internet Service Provider): ISP is an organisation that provides access to the internet and web hosting.
15. Browse: The term to describe a user's movement across the web
16. Web Browser (Internet Browser): A software program used to display

WebPages. It is also defined as is a software application for retrieving, presenting, and traversing (moving through) information resources on the World Wide Web.

Types of Internet Browser
a. Mozilla fire fox
b. Opera browser
c. Microsoft Internet explorer (Microsoft edge)
d. Google Chrome
e. Apple Safari, etc

Features of Internet Browser
An internet browser has many different parts. They include:
1. Title bar: Displays the title of the open web page
2. Menu bar: The menu bar can be used to activate commands. Depending on the browser you are using, some contain the following: File, edit, view, tools, Bookmark, help, etc
3. Address Bar: An address bar is a component of an Internet browser which is used to input and show the address of a website. The web address is generally given in lowercase letters and is case insensitive. There are no spaces in a webpage or website address.
4. Status Bar: Status bar displays the status of the current page
5. Scroll Bar: This provides vertical or horizontal scrolling through the web pages.
6. Standard tool bar: Standard tool bar has many different buttons. They are explained below.
a. Back: To go back to previously viewed page
b. Forward: To move forward to a page which was viewed
c. Stop: To halt loading of webpage.
d. Refresh/Reload: To refresh the contents of the currently displayed webpage from the start
e. Home: To go to the homepage of the currently viewed website.
f. History: It displays a list of previously viewed website
g. Print: Prints the webpage with the default printer settings.

Uses of the Internet1. The Internet is used for communication to any part of the world
2. The internet is used to search for information on the web through search engines
3. It is used in sending and receiving messages.
4. It is used for chatting
5. It can be used in planning of trip. E,g. GPS.
6. It can be used for advertisement and marketing. Etc
Benefits of the internet
a. It enables us to share resources globally.
b. Internet allows access to information in a very fast manner.

c. It is cost effective.
d. It allows online banking transactions.
e. E-education
f. E-friends
g. E-entertainment

Abuse of the Internet

1. It is used by impostors to defraud people
2. Piracy of software
3. Pornography
4. Hacking
5. Plagiarism
6. Computer virus

Definition of Electronic Mail Electronic mail, commonly called email or e-mail, is a method of exchanging digital messages from an author to one or more recipients. It can also be defined as a system for sending and receiving messages electronically over a computer network.

Steps to Create Email Account Follow the steps below to create email account

1. Click On a web browser
2. Visit a website that offers an email service e.g. www.gmail.com
3. Click on the Free Sign Up Button
4. Enter all mandatory fields (First Name, Last Name, Gender, etc.)
5. Click the "Accept" - Button underneath

Procedure for sending an Email1. Log in to your email account
2. Click Compose.
3. A new blank email window will open up. In the 'To' box, type in the email address of the recipient.
4. You might want to include someone else in your email to 'keep them in the loop'. You can do this by clicking **Cc** or **Bcc**, which will open another field. 'Cc' means 'carbon copy' and 'Bcc' means 'blind carbon copy'
5. Type in the subject of the email. The subject field allows you to give the recipient an idea of the topic of your email, like a heading.
6. Type your message in the main body field of your email.
7. Email text can be formatted in a similar way to text in a word document.
8. Click the Send button at the bottom of the compose window.

Computer Problem Solving Skills

Concept of Computer Program and Programming Language

If you want a computer to solve a given problem, you need a computer program. A computer program is a sequence of related instruction (command) that tell the computer how to accomplish a specific task. A program can also be defined as a set of instruction that is executed by the CPU.

Programming

Programming is the act of writing computer program. A computer program are written by trained and qualify people called programmer.

Computer Programming Language

A computer programming language is the language used to write instructions (commands) for the computer. Programming language is a means through which programmer communicate with the computer in solving different categories of problems. It consists of a set of rules governing how the words in the language should be written (syntax) and the meaning associated with each word (semantic).

Types of Programming Language

Computer language fall into three broad categories

1. Machine Language
2. Low Level Language (Assembly language)
3. High Level Language (HLL}

Machine Language

This was the first generation programming language. A computer will only understand one language, which is the machine language. There are two symbols in machine language; these are 1 and 0 generally called binary digits or bits. Machine language has many disadvantages since it requires the programmer to remember the numeric code of each instruction and location of each data in binary form. Also machine language is machine dependent, different machines have different language format.

Assembly Language

Assembly language is closest to machine language and as a result, is called a low level language. Assembly is made of abbreviated commands we can assemble into machine code. Acronyms with words such add (addition), sub (subtraction) and load (loading) are commonly used.

The major problems associated with assembly language are:

1. It is machine dependent
2. The programmer has to know the numeric code for each machine

High Level Language

These are programming languages that allow for program to be written in forms that are readable to human beings. High level languages are developed to overcome the limitations of machine and assembly languages. In high level structure, a program is written in forms that resemble the statement of the given

problem in English. High level language can run on different machine provided appropriate translators are installed.
Examples of popular high level language are:
BASIC: Beginners All-purpose Symbolic Instruction Code
COBOL: COmmon Business Oriented Language
FORTRAN: FORmula TRANslation
ADA: Named after Ada Augusta
APL: A programming Language
RPG: Report Program Generator
PL1: Programming Language 1
dBASE: Data Base
LISP: List Processor
PASCAL
JAVA
C++

Programming tools and Technique

There are many tools and techniques that aid writing good computer programs, two of which are algorithm and flowchart.

Algorithm

This is an outline steps needed to solve a problem. Thus an algorithm should be clear, effective, and unambiguous. In addition, an algorithm should have input should produce output.
Example 1
Compute the area and circumference of a cycle given the diameter d. Use the formular and
Solution
Step 1: Start
Step 2: Get the diameter d
Step 3: Compute
Step 4: Compute
Step 5: Compute
Step 6: Displays the result
Step 7: Stop

BASIC PROGRAMMING J2

Origin of and Features of BASIC

BASIC stands for Beginner's All-purposed Symbolic Instruction Code. It was developed in 1960 by John Kemeny and Thomas Kurtz to teach students at Dartmouth College. It has undergone series of historical development, which has resulted in several forms of the language.

BASIC is now in form of VB.NET (Visual Basic.Net). The majority of BASIC languages use program translators called interpreters to allow the computer understand and obey the BASIC statements in the computer program. Examples of such interpreters are:

1. BASICA
2. GwBASIC
3. Turbo BASIC
4. Quick BASIC

BASIC Character Set

1. Alphabetic Characters – A to Z
2. Numeric Character – 0 to 9
3. Special Characters – 0 + % ^ # = ( ) etc

BASIC Arithmetic Expressions

BASIC symbols used to perform arithmetic operations are:

Operation	BASIC Symbol
Addition	+
Subtraction	-
Multiplication	*
Division	/
Exponentiation	^

Every arithmetic expression must appear on a single line. There is no superscript in BASIC as we find in algebra.

Key Statement of BASIC

Assignment Statement (LET, INPUT and READ-DATA)

1. **LET Statement**

The let statement is used to assign a numeric or string value to a variable. The assignment statement must consist a variable, an equal to sign and an expression.

Example

LET X = 12

LET B$ = “Deborah”

LET AREA = L*B

2. INPUT Statement

The INPUT statement is uses to enter data into the computer during program execution.

Example

INPUT A, B, C

INPUT N$, M$, Factor

3. READ-DATA statement

READ and Data are two statement concerned with each other which are used to put data in a line of the program and to read the data when it is needed.

Example

READ A, B, C

DATA 5, 6, 7

LET SUM = A+B+C

PRINT SUM

END

4. REM (Remark) Statement

The REM statement is used to insert comments or remarks into a BASIC program. The use of remark statements improves the readability of the program. It has no effect on the program execution.

Example

REM program to add six numbers

5. PRINT statement

This statement is used to transmit data from the computer memory to the output device.

Examples

PRINT A, B, C

PRINT “I Like Writing Program”

Program Terminator (END and STOP)

6. STOP and END statement

The STOP statement is used to terminate the execution of a program at any point in the program. The END statement indicates the actual end of a program. The STOP statement may appear many times and anywhere, whereas an END statement can only appear at the end of a program and only once.

Example

```
REM END statement
PRINT “Good morning”
END
```

7. GO TO statement

This statement transfers program control from the line number that contains the statement to the specific number after GOTO statement.

Example

```
REM GO TO statement
GOTO 40
PRINT “Good morning”
END
```

In the case above the program’s control is transferred from line 20 to line 40. This means that the program would end when the execution gets to line 20.

Simple Program

Example 1: Program to find the average of six numbers

```
10 REM Programs to find the average of six numbers
20 REM Numbers given
30 INPUT "Type in the first number";A
40 INPUT "Type in the Second number"; B
50 INPUT "Type in the third number"; C
60 INPUT "Type in the forth number"; D
70 INPUT "Type in the fifth number"; E
80 INPUT "Type in the sixth number"; F
40 LET SUM = A+B+C+D+E+F
50 LET AVERAGE = SUM/6
60 PRINT AVERAGE
70 END
```

Example 2 Program to calculate the perimeter and Area of a Rectangle

```
REM program to calculate the perimeter and Area of a Rectangle
INPUT “Input the length” L
INPUT “Input the breath” B
LET PERIMETER = 2 * (L + B)
LET AREA = L*B
PRINT “the perimeter is” PERIMETER
PRINT “the area is” AREA
END
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Units of Storsge in Computer

Data can be stored in the computer through several methods using varying electronic components. Some these components include: Hard disk, Compact disk, Flash drive, Floppy disk, Random Access Memory (RAM), etc.
Some units of storage in computer include:
Bit: The Smallest Unit of data on a binary computer. A single bit consist of 0 (zero) or 1 (one).
Nibble: A nibble is a collection of four bits.
Bytes: A byte consists of eight bits. It is the smallest item that can be individually accessed by a program.
Word: A word is a group of 16 bits
Others are;

Name	Symbol	size	Approximate size
Kilobyte	KB	1024 B	1000 B
Megabyte	MB	1024 KB	1000 KB
Gigabyte	GB	1024 MB	1000 MB
Terabyte	TB	1024 GB	1000 GB
Petabyte	PB	1024 TB	1000 TB
Exabyte	EB	1024 PB	1000 PB
Zettabyte	ZB	1024 EB	1000 EB
Yottabyte	YB	1024 ZB	1000 ZB

Conversion from one Unit to another
The conversion process from one unit to another can be done using the following standard table.
1 bit = 0 or 1
1 nibble = 4 bits
1 bytes = 8 bits
1 word = 16 bits
1 kilobyte = 1024 bytes
1 MB = 1024 KB
1 GB = 1024 MB
1 TB = 1024 GB
1 PB = 1024 TB
1 EB = 1024 PB
1 ZB = 1024 EB
1 YB = 1024 ZB

Examples

Convert the following

a. 12 bits to byte
b. 50 bits to word
c. 1420 Bytes to Kilobytes
d. 2 Gigabytes to Megabyte

Difference between Kilometer, Kilogram and Kilobyte

Kilometre, Kilogramme and kilobytes are different units of measurement used for different purposes.

1. To measure distance travelled from one place to another, unit of distance must be used, which is the metre, and one of its multiples is the kilometer. i.e. 1km = 1000m = 10^3m
2. To measure quantity or weight of an object, a unit of weight must be used, which is the gramme, and one of it multiple is the kilogramme. i.e. 1kg = 1000g = 10^3g
3. To measure the amount of space that is required for a document or data to be held temporary or permanently in a storage medium, a unit of storage must be used which is the byte, and one of its multiple is the kilobyte. i.e 1 KB = 1024 B

From the above, it follow that Kilometre (Km), Kilogramme (Kg) and Kilobyte (KB) are units of different parameters.

Parameter	**Unit**	**Symbol**	**Multiple**
Distance	metre	m	Km
Weight	gramme	g	Kg
Storage	byte	B	KB