

Definition of a Computer

- A device which reads incoming data as **input**
- **Processes** the incoming data in a Central Processing Unit(CPU) in accordance with instructions contained in applications software(programmes)
- **Outputs** the processed information to an output device
- **Stores** the output in some type of permanent or secondary storage for later retrieval as required (attach OH 1)

.....And of a Personal Computer

Personal Computers have made this Input-Process-Output-Storage available to the individual user, where only the larger mainframe or mid-sized systems had been available heretofore. Think of it in much the same way that the private motor car has offered personal transport to the individual, as an alternative to mass transport systems. The Personal Computer will serve the requirements of the individual in a completely independent “stand-alone” way, or through connection to networks or larger units. The individual may use the PC to access data contained in larger or more complex systems or may operate independently. PCs are sometimes described as **Microcomputers**, and cost from £500 at the bottom of the range to £2500 plus at the top end, depending on the software, peripherals and CPU being purchased.

The Four Essential Elements Of Computing

1. **HARDWARE**
2. **SOFTWARE**
3. **CONNECTIVITY**
4. **PEOPLE**

Hardware And Software Overview

- **Hardware and software, when combined effectively, constitute a computer system.**
- **The purpose of a computer system is to process information into meaningful data:**
 - *In a timely manner*
 - *Which is:*
 - *Accurate,*
 - *Complete*
 - *Relevant*
 - *In an economical way*

Hardware -What Is It?

Hardware is the set of physical devices which perform the information processing function.

- Any physical piece of computer equipment that you can:
- See
- Touch
- Feel
- Or even hit sometimes!!

Hardware examples?

- *PCs and Mainframes in Businesses*
- *Supermarket Scanners at Checkouts*
- *Credit Cards Swiped In Stores, Petrol Stations*
- *ATMs outside Banks*
- *Washing Machine/Dishwasher Electronic Control Units*
- *Sony Playstations, Furbys, Tomagotchis!*

Software ... what is it?

Software is the set of instructions that enable a computer to process data.

Operating Software (OS)

- *Controls and monitors the hardware.*
- *Usually “invisible” to the end user*

Some Examples Please??!!!!!!!!!!!!!!

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Application Software

- *Provides the end-user with practical output.*
- *Examples of Application Software are endless.*

Some Examples Please??!!!!!!!!!!!!!!

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Connectivity What is it??

Connectivity is the concept of computers communicating / connecting with each other to (1) share, exchange, upload, download information, (2) share resources like hardware (printers) or software.

The concept is achieved through the use of an integrated system called a network. As a result, hardware and software designed for different systems can work together. This should result in better control of resources for organizations, and also for more effective and economical use of resources.

A Network could be:

- *A Local Area Network (LAN)*
- *A Wide Area Network (WAN)*
- *A Value Added Network (VAN)*
- *The Internet*

People.....The Thread which holds it all together

Information resources must be controlled by people. Because there are so many different possible information processing systems and applications, people must determine the organisation's computing needs, implement and control the system and supervise the process.

The people will fall into two possible categories:

USERS

- *Managers who have a practical need in their work area*
- *Input Operators responsible for Data Entry*
- *Operations Staff who need systems to assist in their function*

COMPUTER PROFESSIONALS

- *MIS Managers*
- *Systems Analysts*
- *Programmers*
- *Computer Operators etc*

There are practical people considerations in determining the hardware software combination which will be used.

- *Will the system improve the operating / working situation for the individuals involved?*
- *Will the output be relevant, timely, economical, accurate and complete?*
- *Will the Physical Ergonomics of the situation be satisfactory?*
- *Will all Health and Safety requirements be satisfied?*
- *Will the Training Needs be fully addressed?*

And of course.....the final consideration.....

**Will the organization be measurably better off
after than it was before???**

TREE-STRUCTURED DIRECTORIES ON A HARD DISK

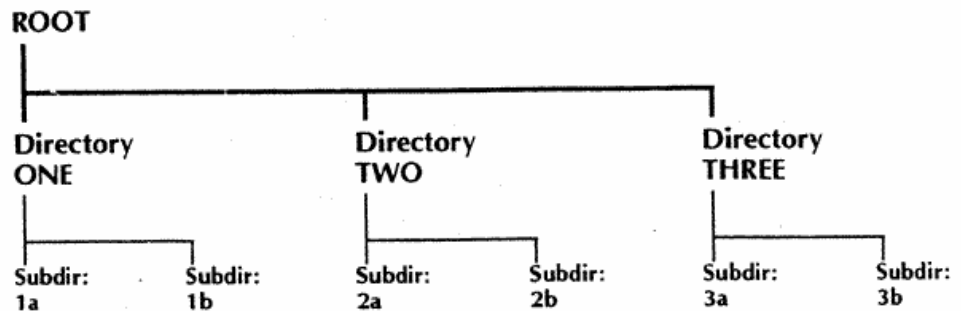
A high-density 5.25" floppy disk can store up to 1.2 megabytes (or million characters).

A high-density 3.5 "disk can store some 1.4 megabytes or million characters.

A hard disk may have a capacity of 120 gigabytes. It becomes more difficult for the user to keep track of, and organise files in a logical order, and it takes the operating system much longer to search for files saved randomly on a disk of this capacity.

It is better therefore, to store related files in separate sections, or FOLDERS on a hard disk. (It is possible to use a folder structure on 3.5" disks, but not so necessary in view of their relative storage capacity).

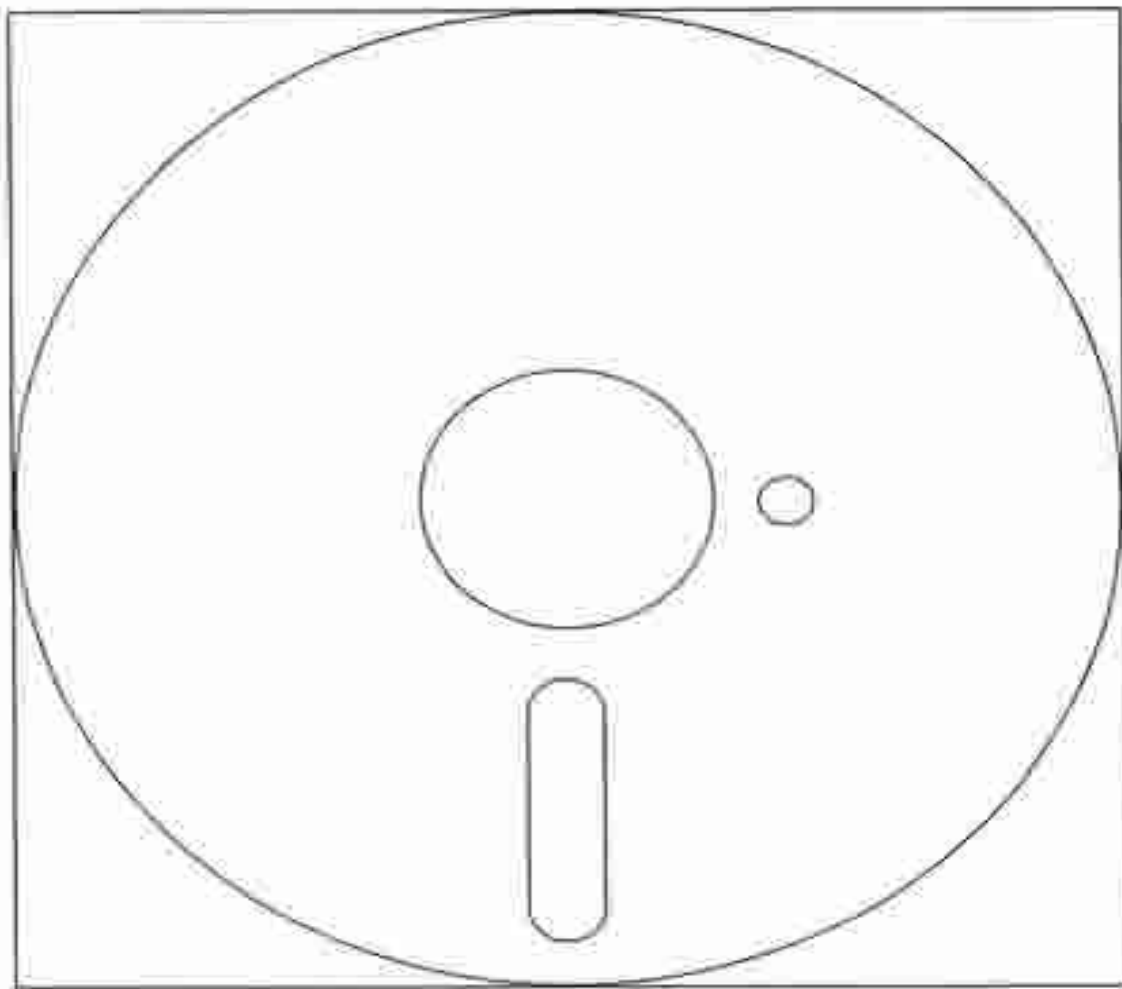
The FOLDER structure always starts at the ROOT directory and branches downwards to incorporate any number of directories and subdirectories, e.g.:



You do not need to create a ROOT folder. It is the area of the disk that is accessed first when the operating system is 'booted'..

Folder names can be of any reasonable length

UNFORMATTED DISK

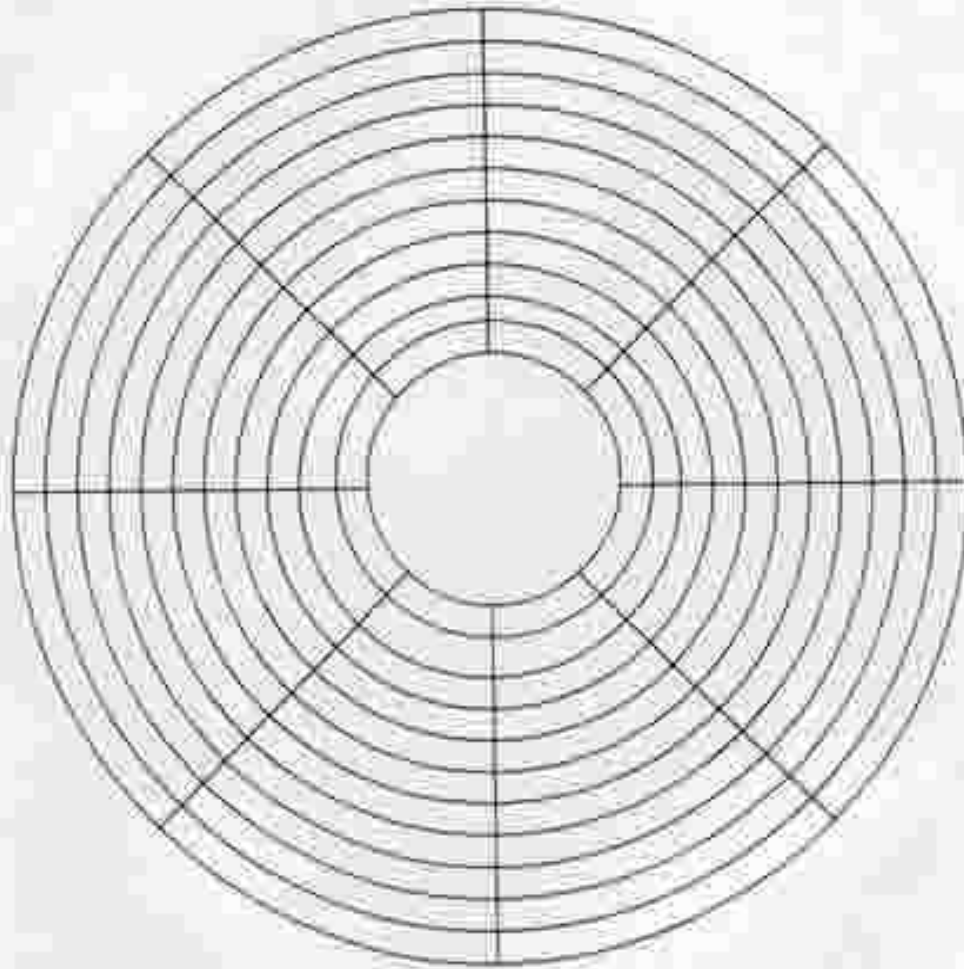


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JEB

IT SKILLS - TEACHER RESOURCE PACK

WITH TRACKS AND SECTORS



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COMPUTER SYSTEM

