



# **SNS COLLEGE OF TECHNOLOGY**

**Coimbatore-35**  
**An Autonomous Institution**



Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

## **DEPARTMENT OF INFORMATION TECHNOLOGY**

### **PROGRAMMING FOR PROBLEM SOLVING**

**I YEAR - I SEM**

**UNIT 1 – Introduction to Problem Solving Techniques**

**TOPIC 3 – COMPUTER SOFTWARE**



# SOFTWARES OF A COMPUTER



- Instructions that tell the computer how to process data into the form you want.
- Software and programs are interchangeable.
- Two major types:
  - System Software
  - Application Software



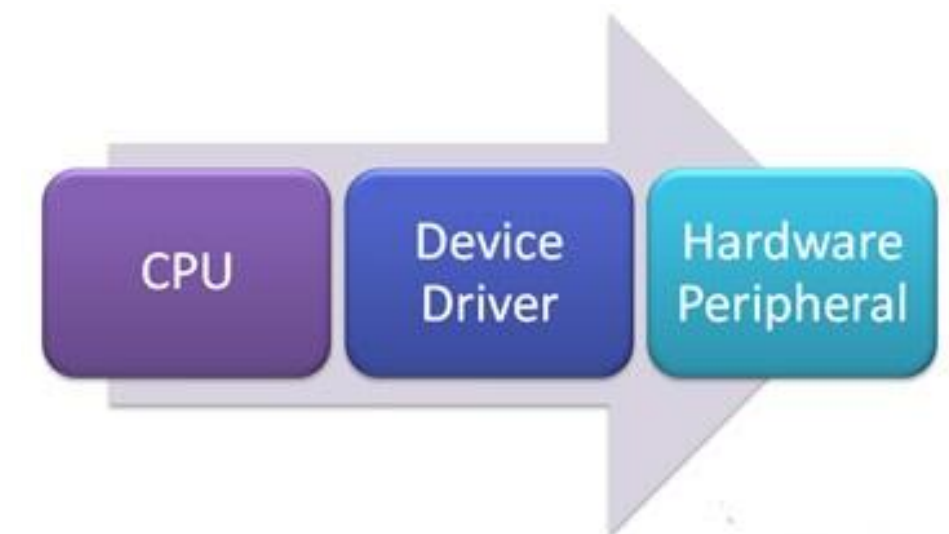
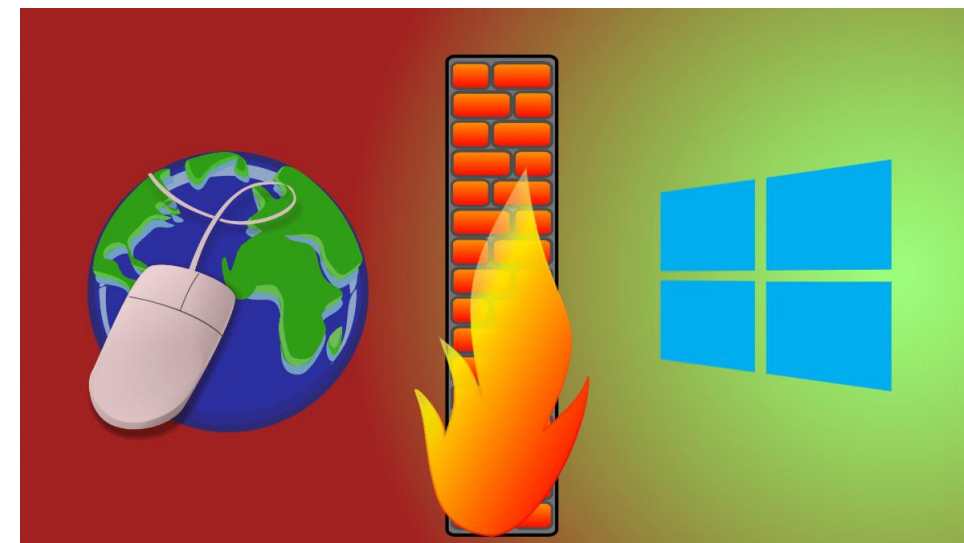
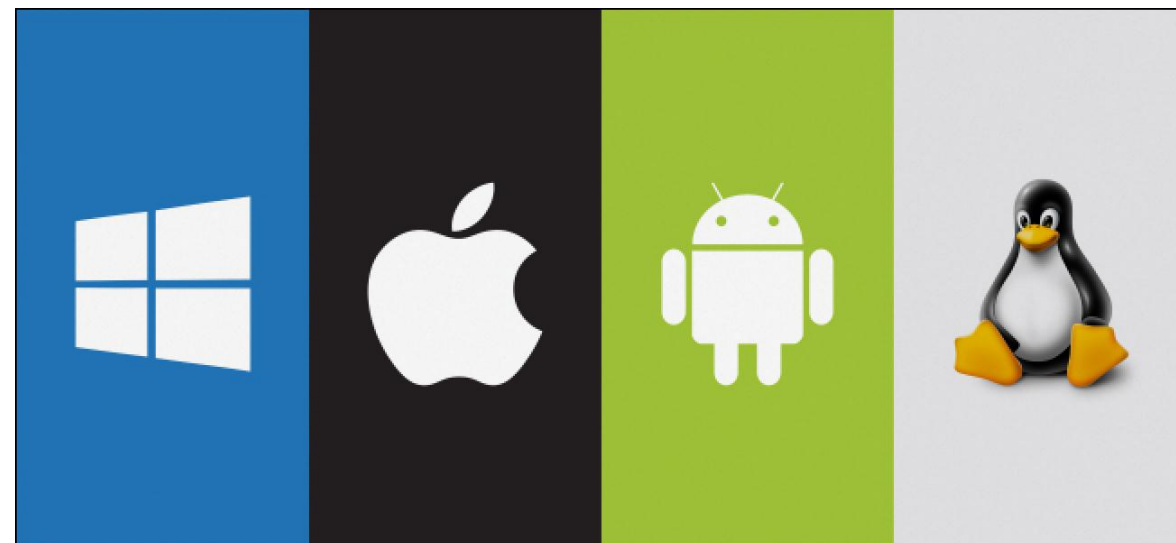


# KINDS OF SOFTWARE – SYSTEM SOFTWARE



System Software enables the application software to interact with the computer hardware.

- Operating Systems are programs that coordinate computer resources, provide an interface between users and the computer; and run applications.
- Utilities perform specific tasks related to managing computer resources.
- Device drivers are specialized programs designed to allow particular input or output devices to communicate with the rest of the computer system.



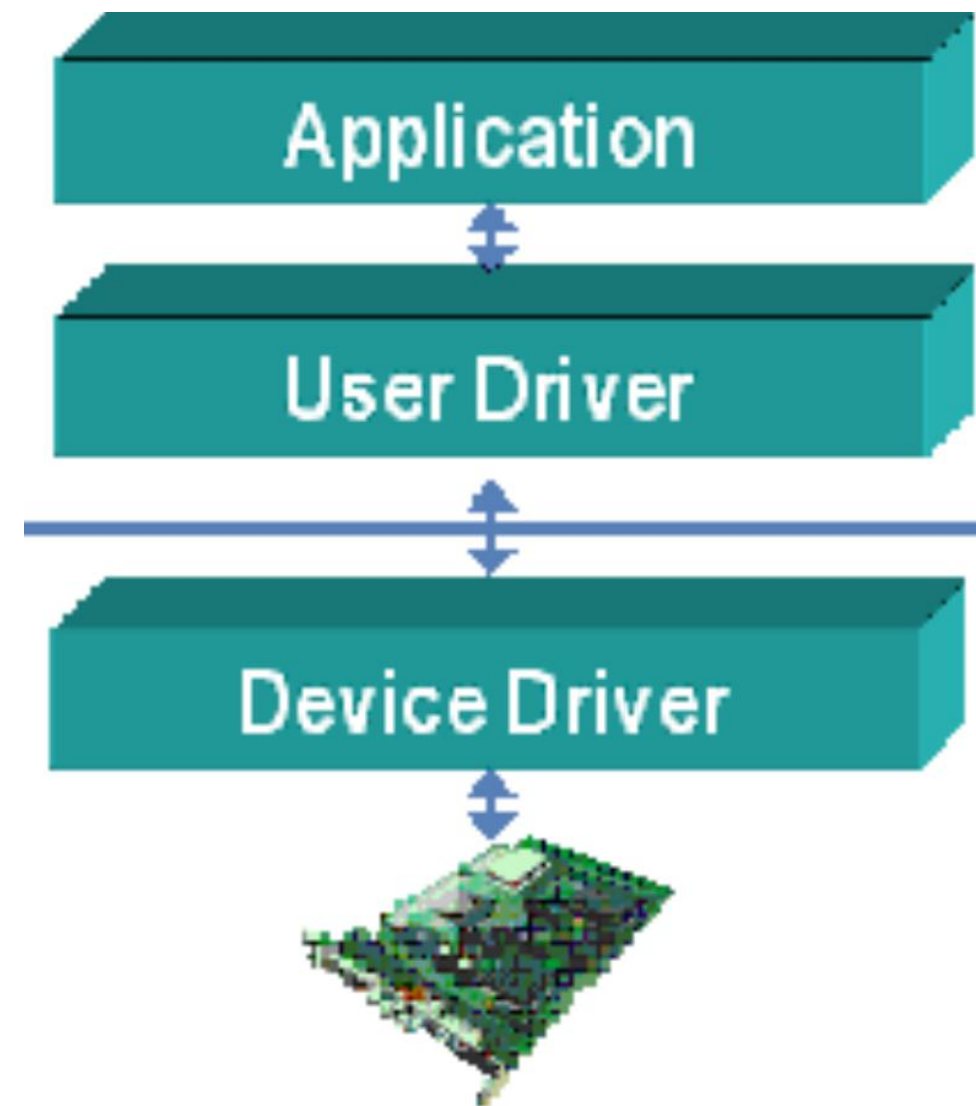
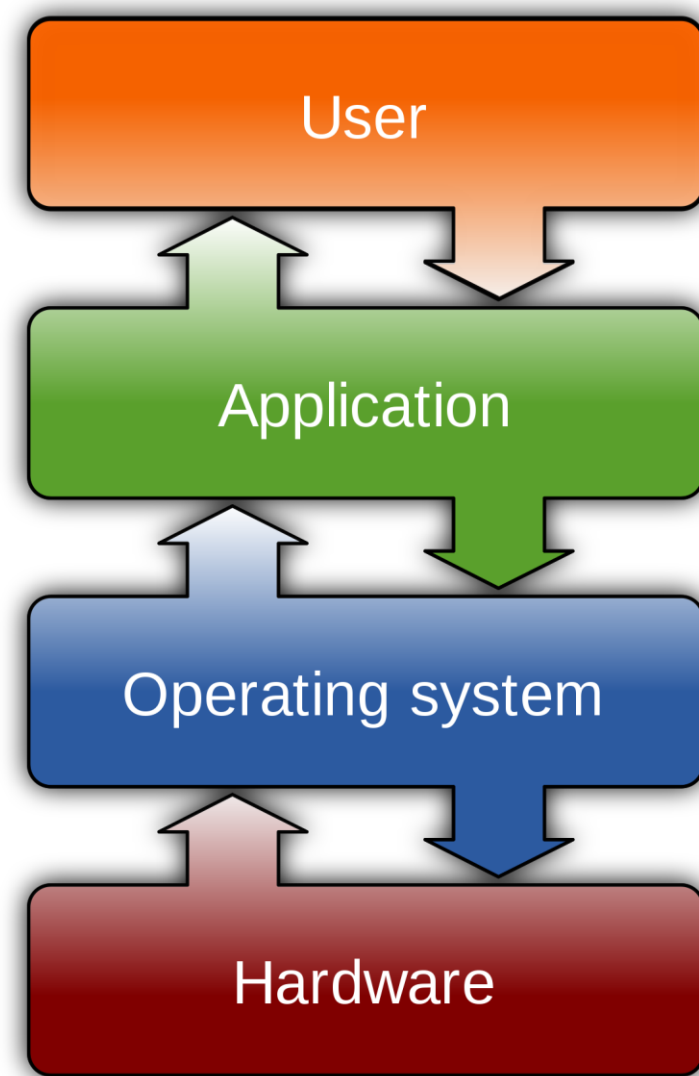




# FUNCTIONS OF A SYSTEM SOFTWARE



- Managing resources (memory, processing, storage, and devices like printer).
- Providing user interface
- Running applications

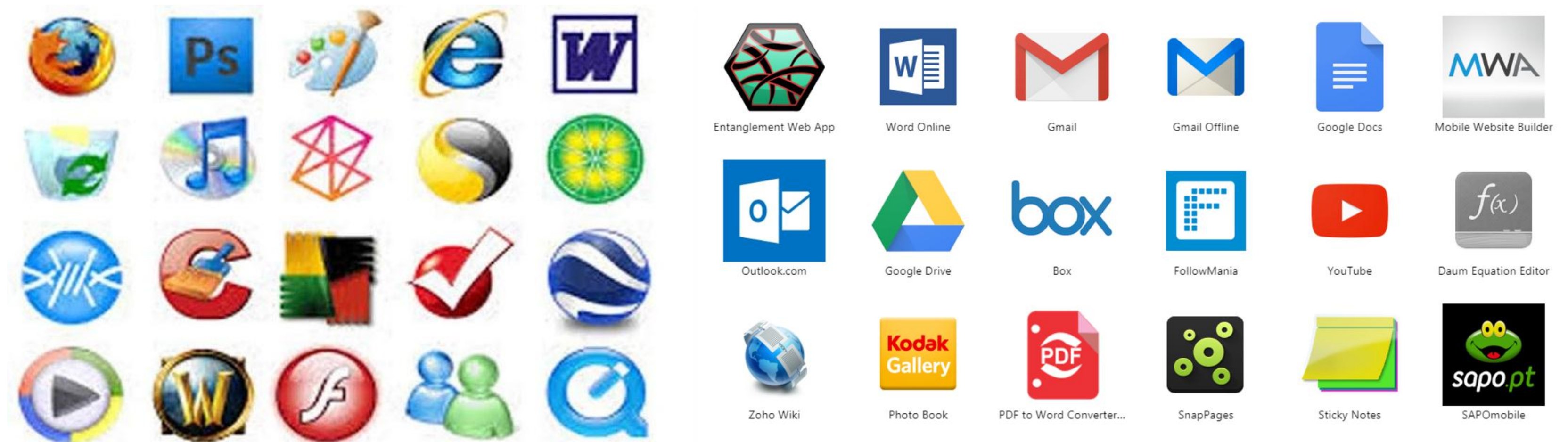




# KINDS OF SOFTWARE – APPLICATION SOFTWARE



- Applications Software provides the real functionality of a computer.
- Helps to use the computer to do specific types of work.
- Basic Applications, widely used in all career areas.
- Specialized Applications, more narrowly focused on specific disciplines and occupations.







# DOS AND GUI OPERATING SYSTEM



- Disk Operating System
- DOS was the first widely installed operating system for personal computers.
- Command-driven
- MS-DOS Commands
- A **COMMAND** is the name of a special program that makes your computer carry out a task.

```
C:\DOS>chkdsk
Volume Serial Number is 3E76-4B58

2,146,467,840 bytes total disk space
 131,072 bytes in 2 hidden files
  32,768 bytes in 1 directories
 7,405,568 bytes in 124 user files
2,138,898,432 bytes available on disk

   32,768 bytes in each allocation unit
 65,505 total allocation units on disk
65,274 available allocation units on disk

655,360 total bytes memory
602,704 bytes free

Instead of using CHKDSK, try using SCANDISK. SCANDISK can reliably detect
and fix a much wider range of disk problems. For more information,
type HELP SCANDISK from the command prompt.

C:\DOS>_
```

```
Administrator: C:\Windows\System32\cmd.exe - diskpart

Disk 0      Online          298 GB         0 B
Disk 1      No Media         0 B            0 B
Disk 2      Online          3819 MB        0 B

DISKPART> select disk 2
Disk 2 is now the selected disk.

DISKPART> clean
DiskPart succeeded in cleaning the disk.

DISKPART> create partition primary
DiskPart succeeded in creating the specified partition.

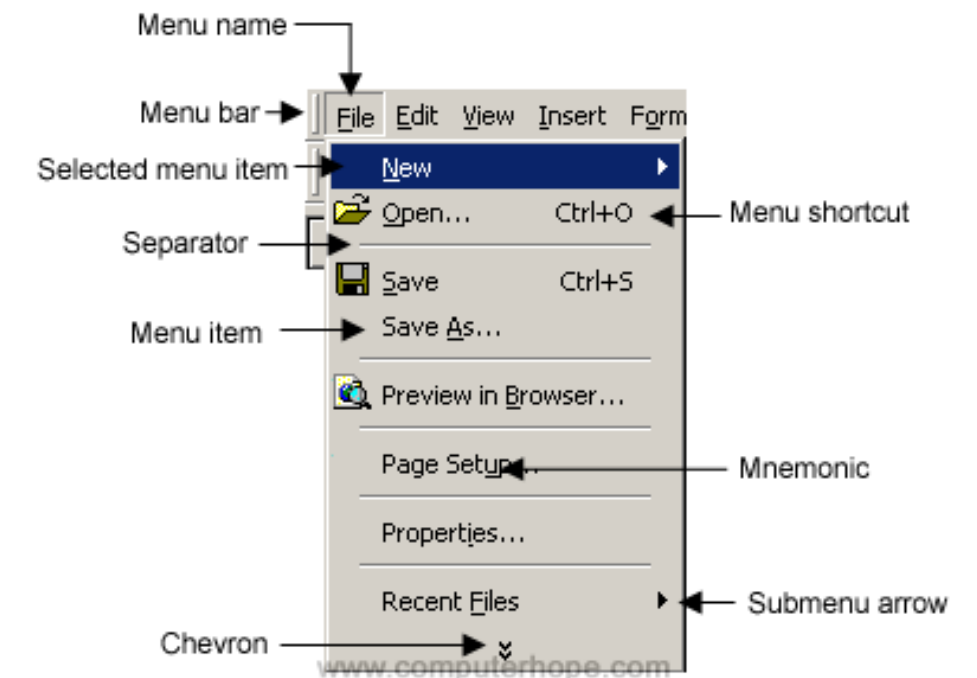
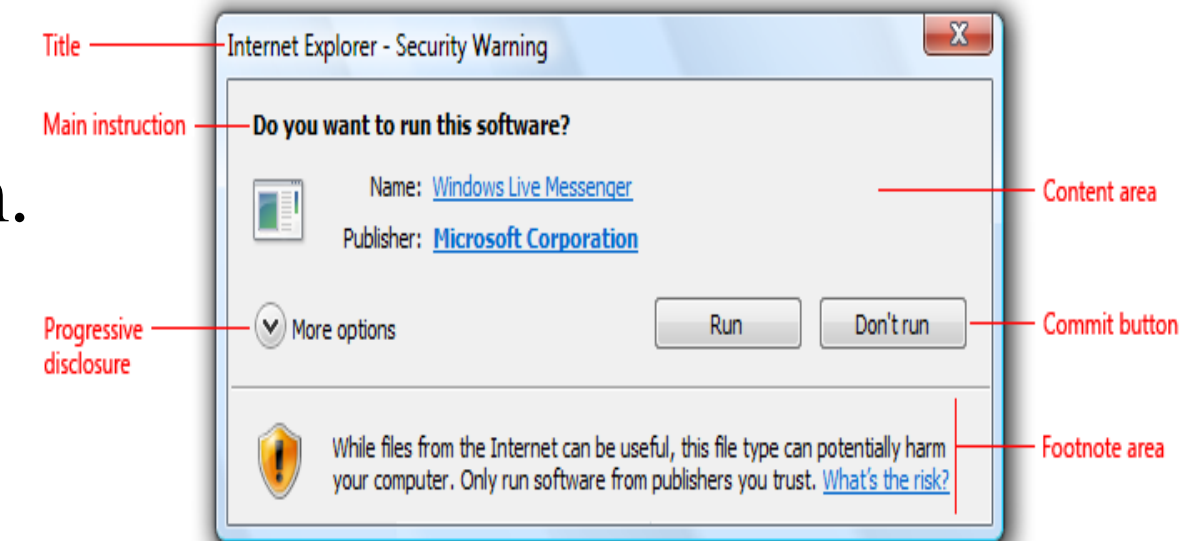
DISKPART> format fs=ntfs
                2 percent completed
```



# DOS AND GUI OPERATING SYSTEM



- Graphical User Interface (GUI).
- Through GUI, users can interact directly with the operating system.
- Microsoft Windows
- Icons, Menus, Dialog boxes.





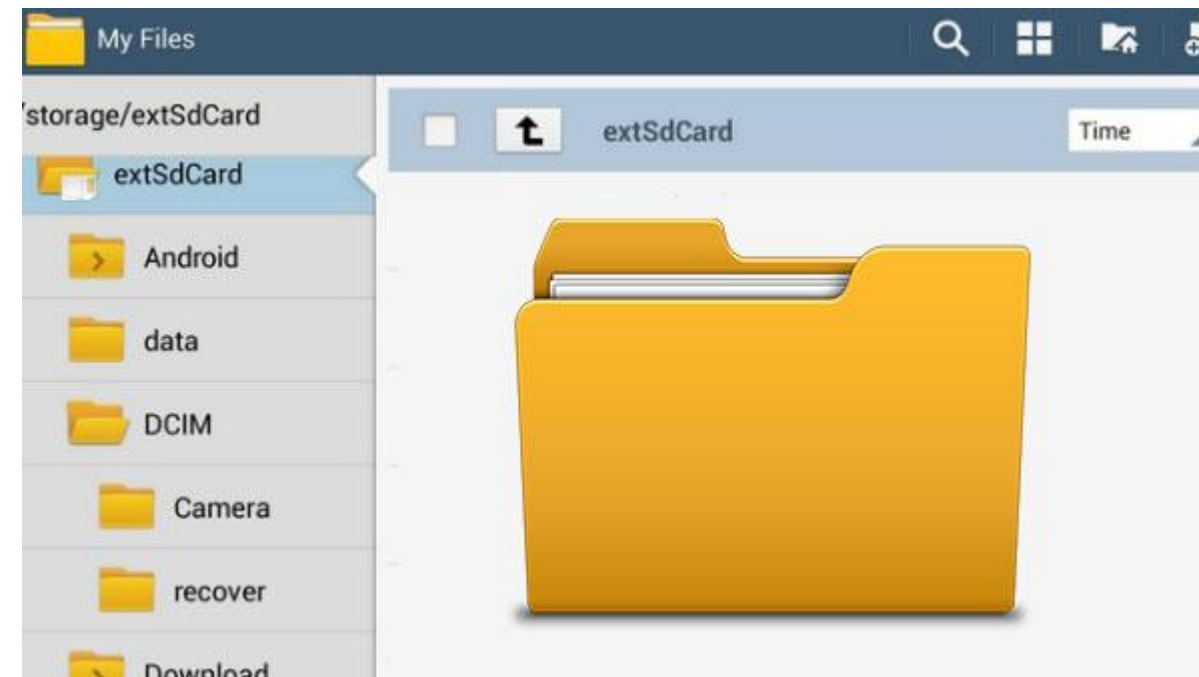


# FILES & EXTENSIONS



FILE is simply a collection of information that you store on a disk or diskette.

- Must have a unique name
- Two parts: the “filename” and “extension” separated by a period.
- Use extension to make filenames more descriptive.
  - .DOC – word documents
  - .XLS – excel documents
  - .PPT – powerpoint documents





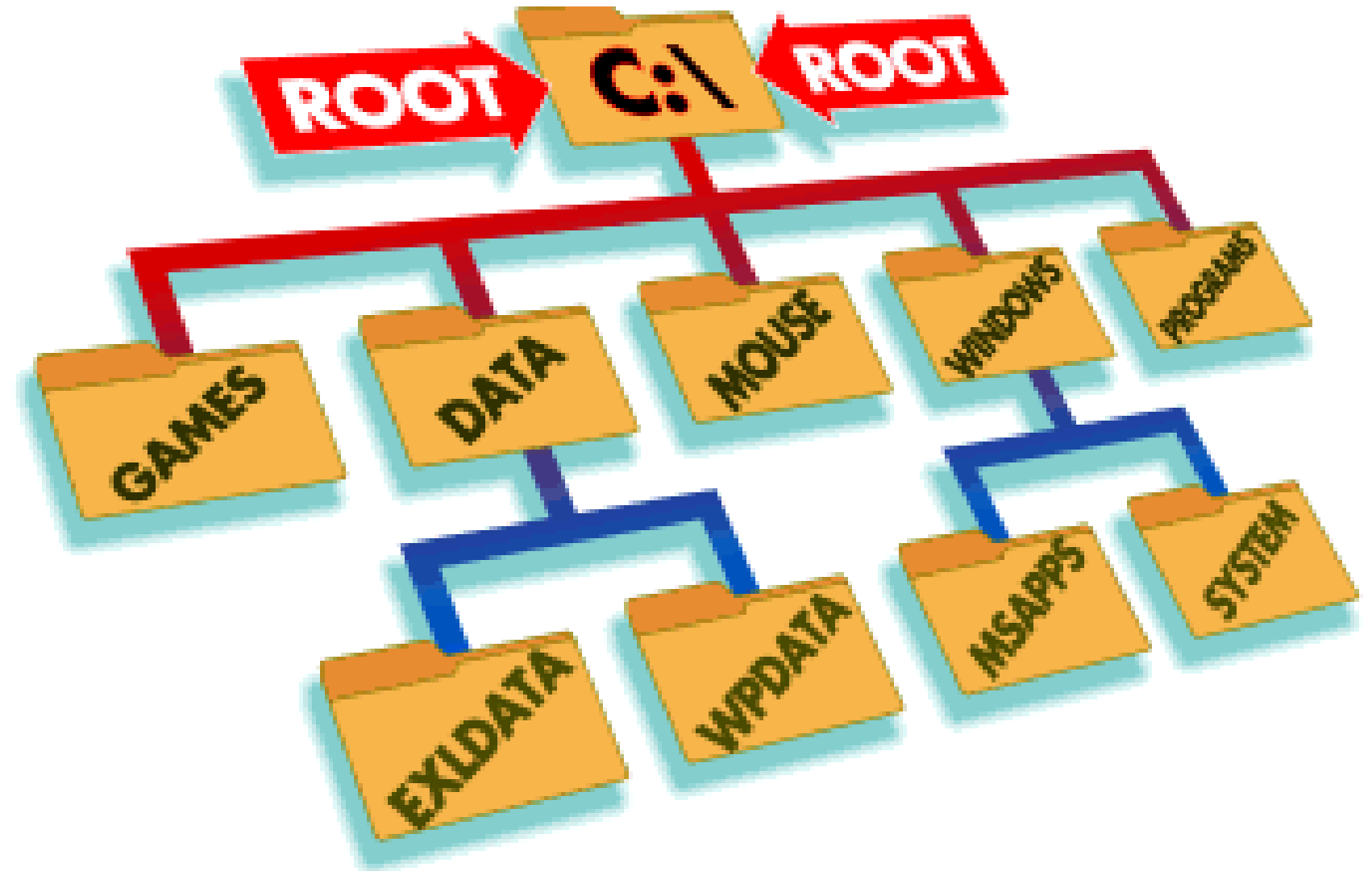
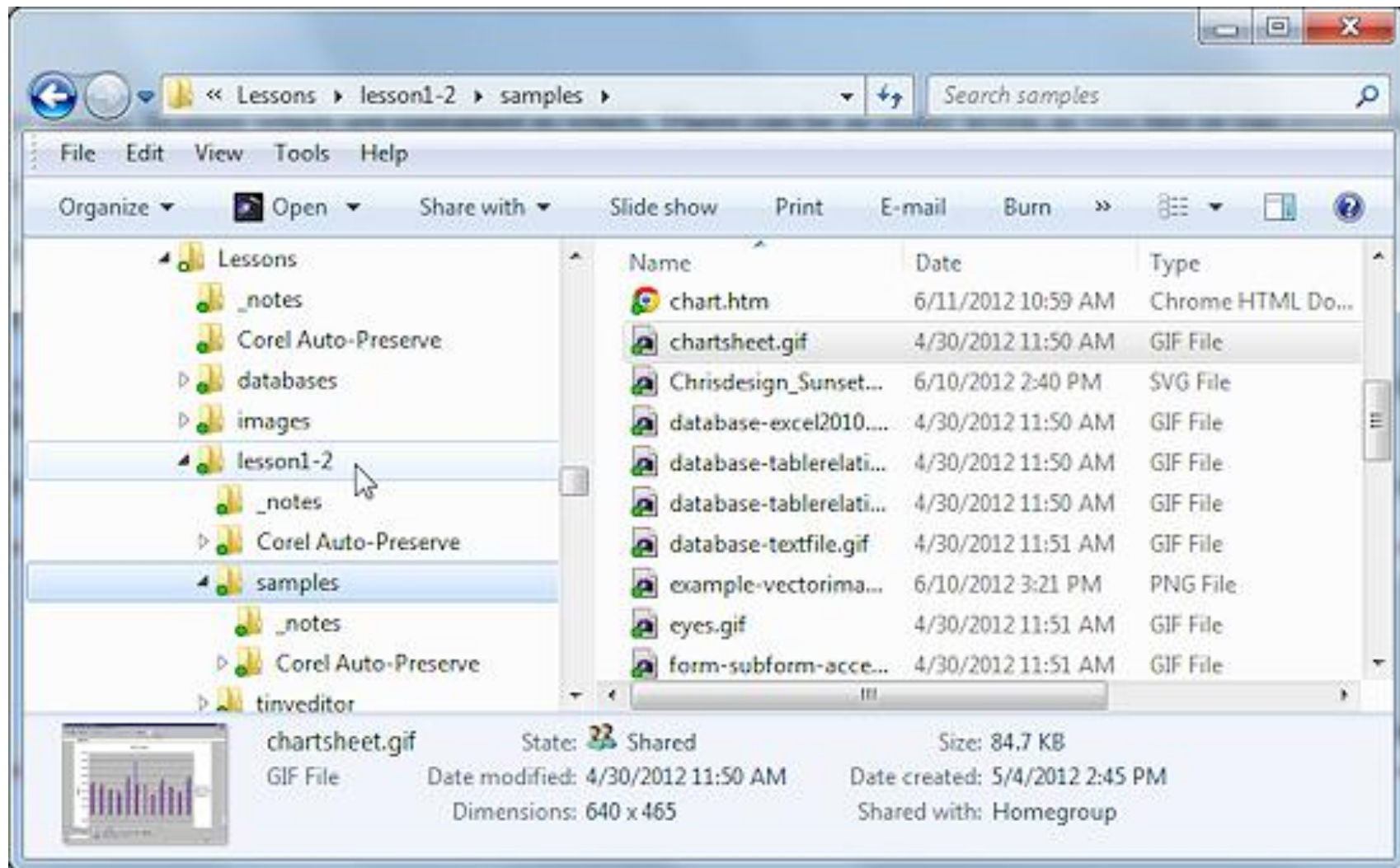


# DIRECTORIES



One way of organizing the files on the computer Hard Disk

- ROOT – one basic directory
- Rest - Subdirectories

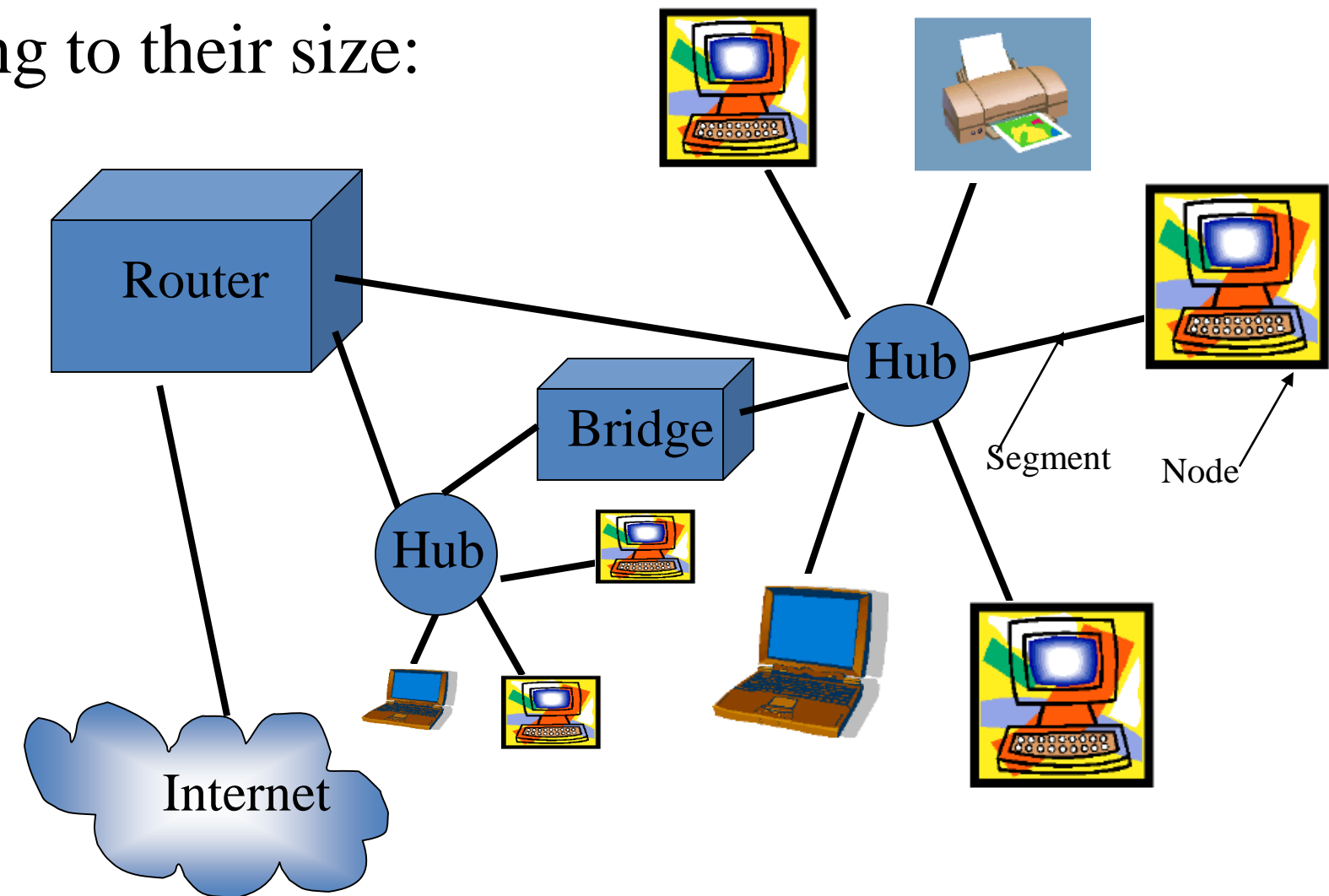
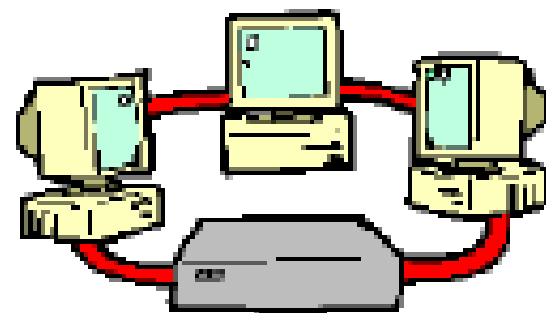




# COMPUTER NETWORKS



- A computer network is a system for communicating between two or more computers and associated devices
- A popular example of a computer network is the internet, which allows millions of users to share information
- Computer networks can be classified according to their size:
  - Personal area network (PAN)
  - Local area network (LAN)
  - Metropolitan area network (MAN)
  - Wide area network (WAN)

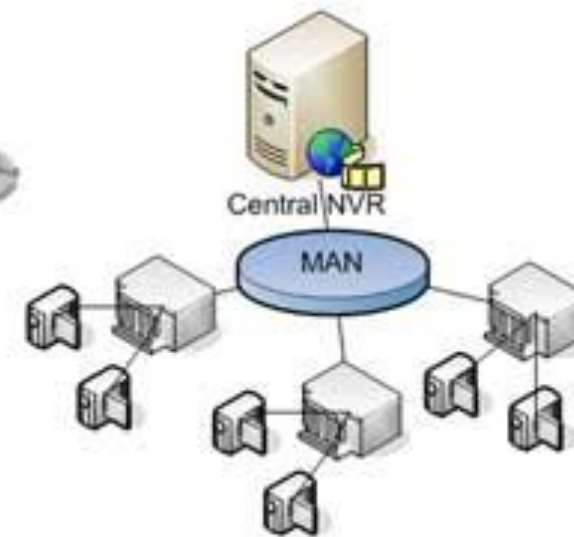
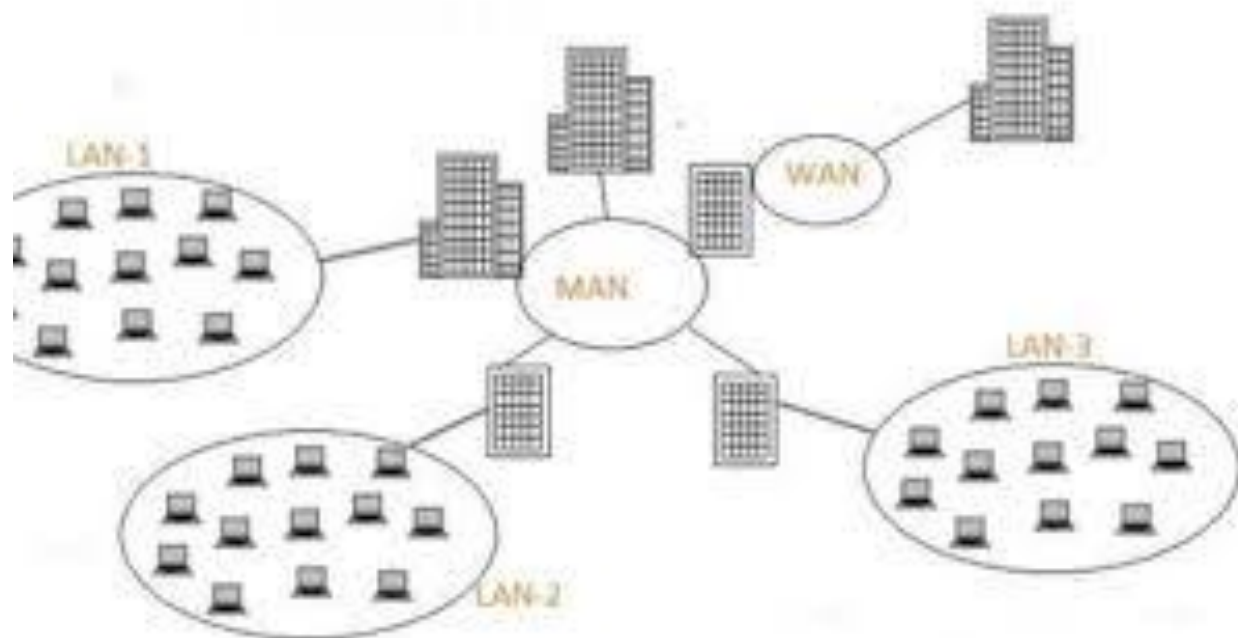






# PAN, LAN, MAN, WAN

- Network in small geographical Area (Room, Building or a Campus) is called LAN (Local Area Network)
- Network in a City is call MAN (Metropolitan Area Network)
- Network spread geographically (Country or across Globe) is called WAN (Wide Area Network)





# NETWORK TOPOLOGIES



- The network topology defines the way in which computers, printers, and other devices are connected.
- A network topology describes the layout of the wire and devices as well as the paths used by data transmissions

