Chapter 2
Disk Operating System
(MS DOS)

What is an Operating System?

- A program that acts as an intermediary between a user of a computer and the computer hardware.
- Operating system goals:
  - Execute user programs and make solving user problems easier.
  - Make the computer system convenient to use.
- Use the computer hardware in an efficient manner.

Types of Operating System

- Disk Operating System (DOS)
- Windows Operating System
- Unix Operating System

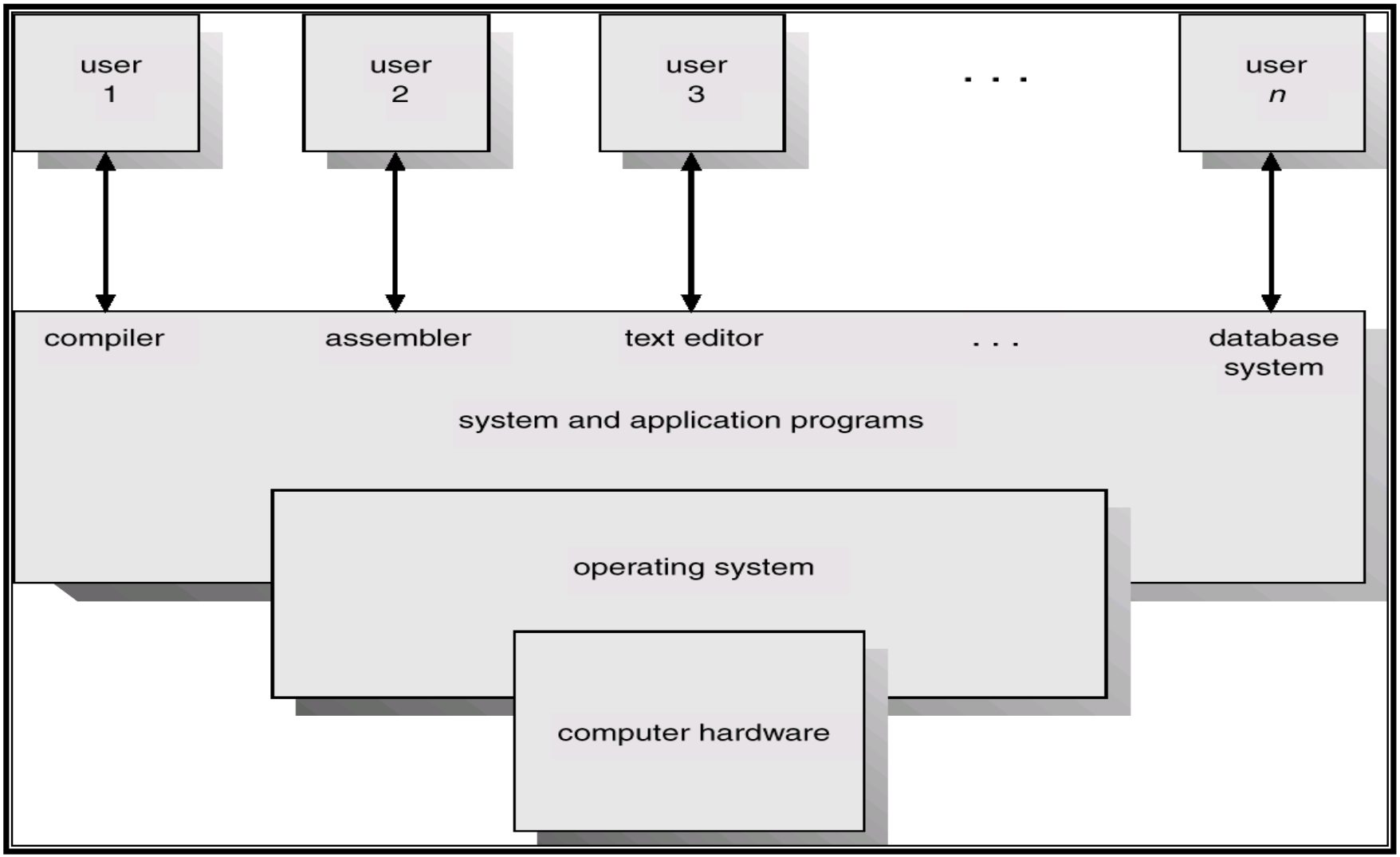
Following are the significant features of DOS –

- It is a single user system.
- It controls program.
- It is machine independence.
- It manages (computer) files.
- It manages input and output system.
- It manages (computer) memory.

Computer System Components

1. **Hardware** – provides basic computing resources (CPU, memory, I/O devices).
2. **Operating system** – controls and coordinates the use of the hardware among the various application programs for the various users.
3. **Applications programs** – define the ways in which the system resources are used to solve the computing problems of the users (compilers, database systems, video games, business programs).
4. **Users** (people, machines, other computers).

Abstract View of System Components



What is a computer system?

- **A computer system** consists of hardware and software that are combined to provide a tool to solve specific problems.

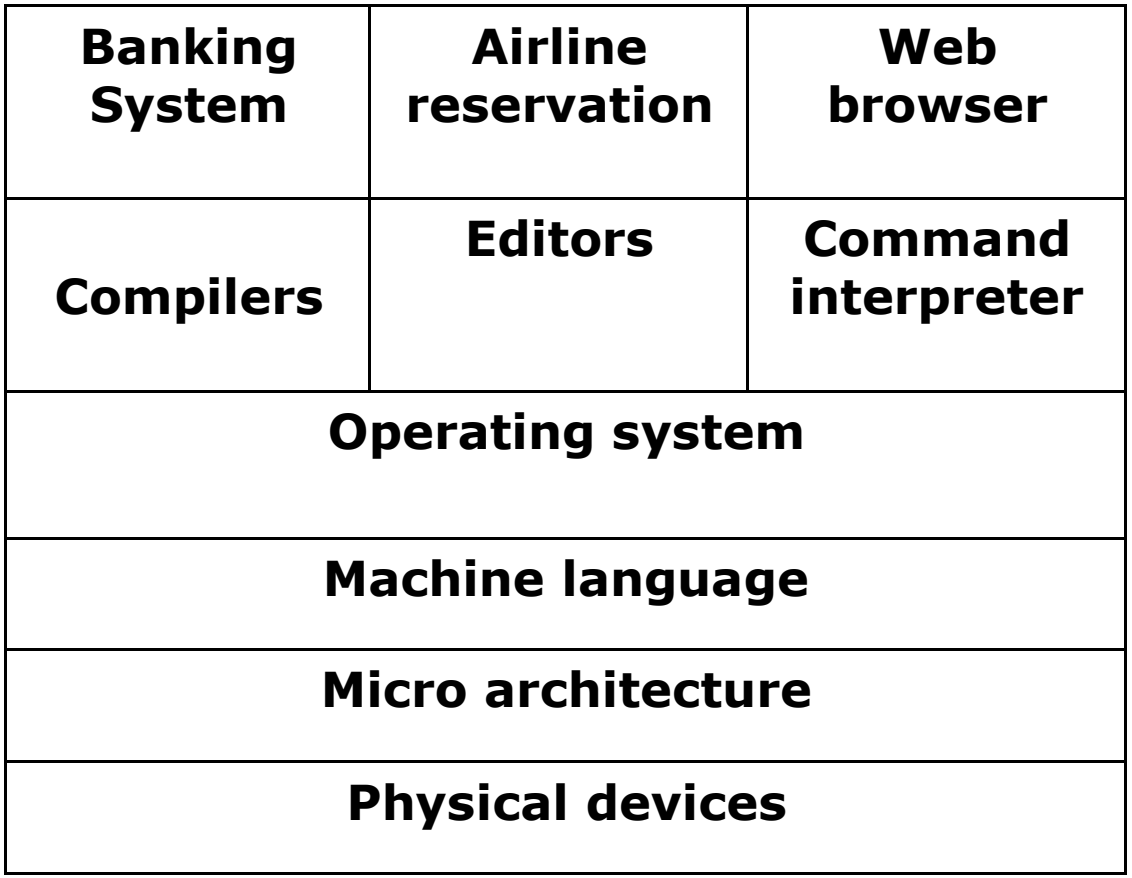
Hardware Resources

- ***Processor*** **(CPU):**
  - The brain of the computer. Executes instructions.
- ***Memory*****:**
  - Stores program and data.
- **A typical memory hierarchy:**
  - Registers, Cache, Main Memory(RAM), Magnetic disk, Magnetic Tape.
- ***Input / Output*** **(I/O) controllers:**
  - Transfers data to and from I/O devices.
- ***Disk device*****:**
  - Long term storage for data.

Software Classification

- ***System Programs*:** Provides a general environment in which programmers can create specific applications.
  - Operating System, Application Software's (compilers, editors, command interpreter, etc.)
- ***Application Programs*:** Intended to solve a specific problem.
  - Word processing, spread sheets, database systems.

Computer System



DOS

- **Microsoft DOS was introduced in 1981**
- **DOS stands for Disk Operating System**
- **DOS controls the computer's hardware and provides an environment for programs to run**
- **This system program must always be present when working with your computer**

Why we need DOS?

- **Because**

1. **DOS controls the flow of information between you and the computer (translator).**
2. **DOS allows you to retrieve information stored on your computer.**
3. **DOS gives you access to all its function (i.e. saving, copying, and printing files).**

What's in DOS?

- The MS-DOS software consists of three files
  - MS-DOS.SYS
  - IO.SYS
  - COMMAND.COM

- These are the system files necessary to boot the computer system

Commands

- **Internal Commands**
  - **The internal commands are stored in COMMAND.COM**
  - **Examples: DIR, DEL, TIME**
- **External Commands**
  - **The external commands are stored in MS-DOS.SYS**
  - **Examples: FORMAT, DISKCOPY**

BIOS

- **IO.SYS is the Basic Input Output Services (BIOS) is a permanent program stored in the memory.**

MS-DOS Commands

1. **DATE**

Purpose: To view the current system date and change it, if required

Syntax: DATE

MS-DOS Commands

2. TIME

Purpose: To view the current system time and change it, if required

Syntax: TIME

MS-DOS Commands

3. VER

Purpose: To display the MS-DOS version number

Syntax: VER

MS-DOS Commands

4. CLS

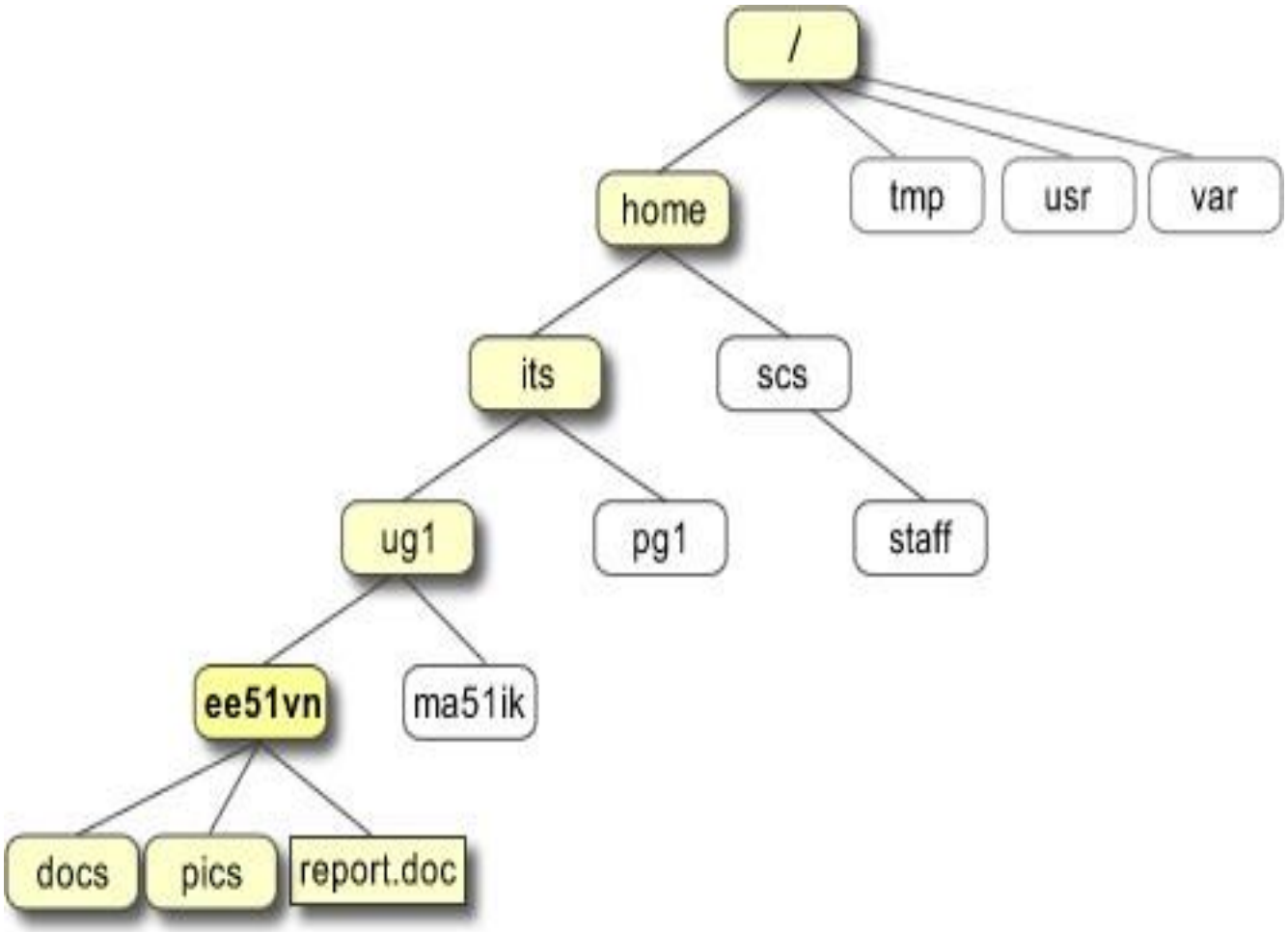
Purpose: To clear the screen

Syntax: CLS

Files and Directories

- Files on a disk can be stored in a folder or directories
- Each file and folder are assigned a name
- DOS provides a hierarchical structure of directories and subdirectories
- The topmost directory is called as “root directory”
- The root directory is denoted by a backslash (\)

Hierarchical Directory Structure



Directory Commands

5. DIR

Purpose: Displays a list of a directory's files and subdirectories

Syntax: DIR [drive:][path][filename][/p][/w]

Examples

- ***Example 1***

C> DIR

To display a directory listing for drive C

- ***Example 2***

C> DIR D:

To display a directory listing for drive D

Exercise

1. **What command is used to display the date?**

2. **What command is used to clear the screen?**

3. **What command is used to display the current directory?**

4. **What command is used to view a file whose name is student.doc?**

5. **What command is used to view a file which is in subdirectory LCCT and the file name is student.doc?**

Explain

- **DIR /w**
- **DIR A:LCCT \ Student \ LVT.DOC**
- **DIR C:QBASIC.PPT**
- **DIR D:LCCT \ INTER \ COM \ LVTII.DOC**

MD / MKDIR

- Purpose: To create a directory
- Syntax: MD[drive:][path]

- ***Example 1***
- MD LCCT
- This command will create a folder called LCCT
- ***Example 2***
- MD\LCCT\INTER
- This command will create a folder inside the LCCT folder

RMDIR / RD

- Purpose: Deletes a directory.
- ** Before you can delete a directory, you must delete its files and subdirectories.

- Syntax: RD [drive:]path

- Example:

RD \lcct\inter

RD lcct

DEL

- Purpose: Deletes specified files
- Syntax: del [drive:][path]filename
- Example:

  DEL hello.doc

  DEL D: hello.doc

Delete Command - DEL

- ***Delete a single file***
- Example

DEL student.doc

It will delete the file student

Delete Command - DEL

- ***Delete a group of file***
- Example

DEL *.doc

It will delete all the files with the extension .doc

Delete Command - DEL

- ***Delete all files in a directory***
- Example

DEL *.*

It will delete all the files in the current directory

FORMAT Command

- ***Format a Floppy disk***

  FORMAT A:

  It will format the floppy disk in drive A

DISKCOPY

- ***To copy all the files from one floppy disk to another.***

  DISKCOPY A: A:

- When asked to put in the source disk, put in the diskette that has the information you want to copy into drive **A** and press **enter.**
- Wait a few seconds. When asked to insert a target disk, take out the diskette from drive A and insert the blank floppy disk and press **enter.**

Copy File

- To copy a file from hard drive to floppy disk

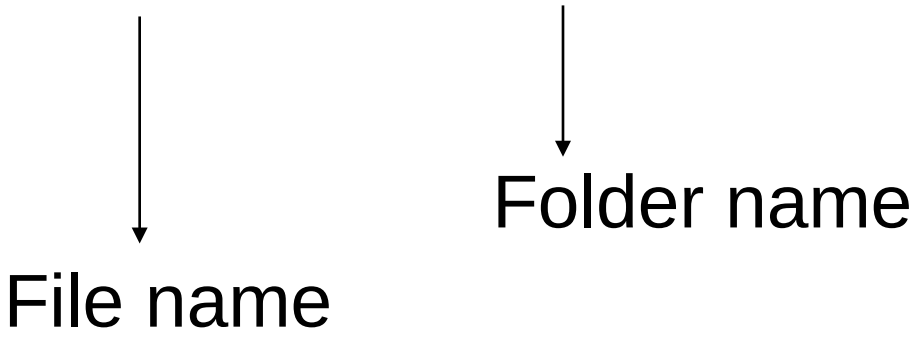
  copy <insert filename here> a:

- Example

  Copy student.doc g:

COPY

- The **COPY** command lets you copy files from one directory to another.
- **copy student.doc D:\lcct**



COPY

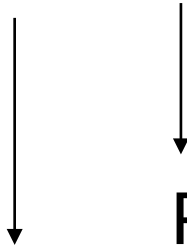
- To copy group of files
- **copy *.doc D:\lcct**

Folder name

All files with .doc extension

COPY

- To copy all the files
- **copy *.* D:\lcct**



Folder name

All files

MOVE

- Allows you to move files or directories from one folder to another, or from one drive to another.
- Syntax

  MOVE [/Y | /-Y] [drive:][path]filename1[,...] destination

- Example

  move c:\windows\temp*.* c:\temp

IPConfig

- Ipconfig to display the network settings currently assigned and given by a network.
- **Syntax**

  ipconfig