



# S.P.M College, Udantpuri

Bachelor Of Computer Application (BCA)

Part -1 (Paper-2)

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## OPERATING SYSTEM -OS



### ❖ User Interfaces

This is the environment given by the OS to control how a user enters data and instructions and how information is displayed.

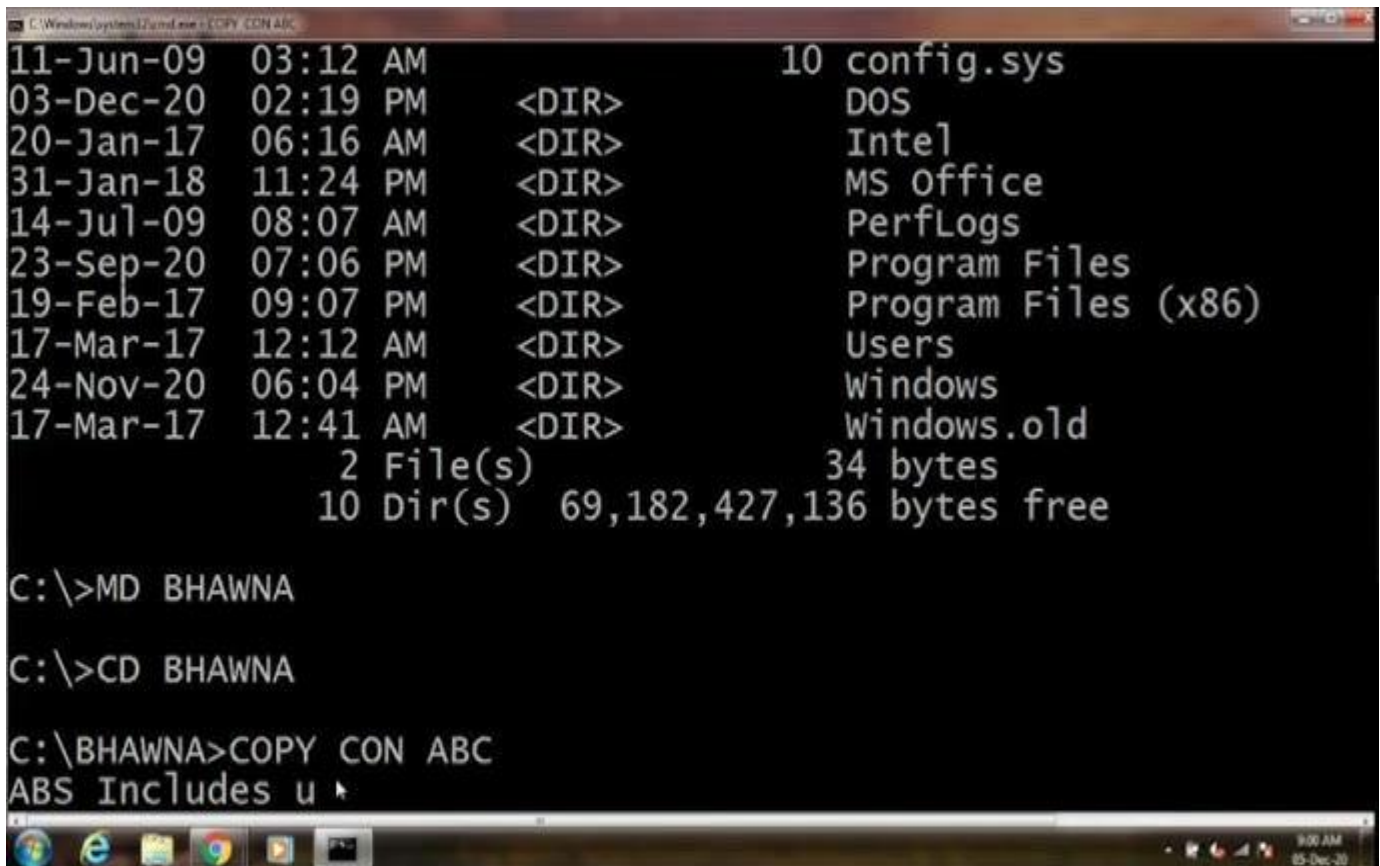
### ❖ Types of OS based on User Interfaces

→ 2 types of OS based on User Interfaces

- A. CLI (Command Line Interface)/ CUI (Command User Interface)
- B. GUI (Graphical User Interface)

## A. Command-Line Interface

- In command line interface, a user types keyboard or press special keys on the keyboard to enter data and instructions.
- The set of commands a user uses to interact with the computer is called command language.
- Examples are **DOS, UNIX, Linux**.
- You are provided with a virtually empty screen with a blinking cursor where commands are keyed and the computer executes them by pressing the enter key.



```
C:\Windows\system32\cmd.exe - COPY CON ABC
11-Jun-09 03:12 AM          10 config.sys
03-Dec-20 02:19 PM      <DIR>      DOS
20-Jan-17 06:16 AM      <DIR>      Intel
31-Jan-18 11:24 PM      <DIR>      MS Office
14-Jul-09 08:07 AM      <DIR>      PerfLogs
23-Sep-20 07:06 PM      <DIR>      Program Files
19-Feb-17 09:07 PM      <DIR>      Program Files (x86)
17-Mar-17 12:12 AM      <DIR>      Users
24-Nov-20 06:04 PM      <DIR>      Windows
17-Mar-17 12:41 AM      <DIR>      Windows.old
          2 File(s)              34 bytes
          10 Dir(s) 69,182,427,136 bytes free

C:\>MD BHAWNA

C:\>CD BHAWNA

C:\BHAWNA>COPY CON ABC
ABS Includes u
```

## Advantages of Command User Interface

- Commands are executed faster.
- Consumes limited Random Access Memory.
- Cannot easily be affected by viruses.
- Ideal for programming and programmers.
- Commands can be grouped together.

## Disadvantages of Command User Interfaces

- Commands are not easily memorized.
- Requires a lot of knowledge to master the commands.
- No graphics on the screen.
- A mouse cannot be used.

## B. Graphical User Interface (GUI)

- Graphical user interface allows the user to use menus and visual images such as icons, buttons and other graphical objects to issue commands.

E.g – Windows, Android,....

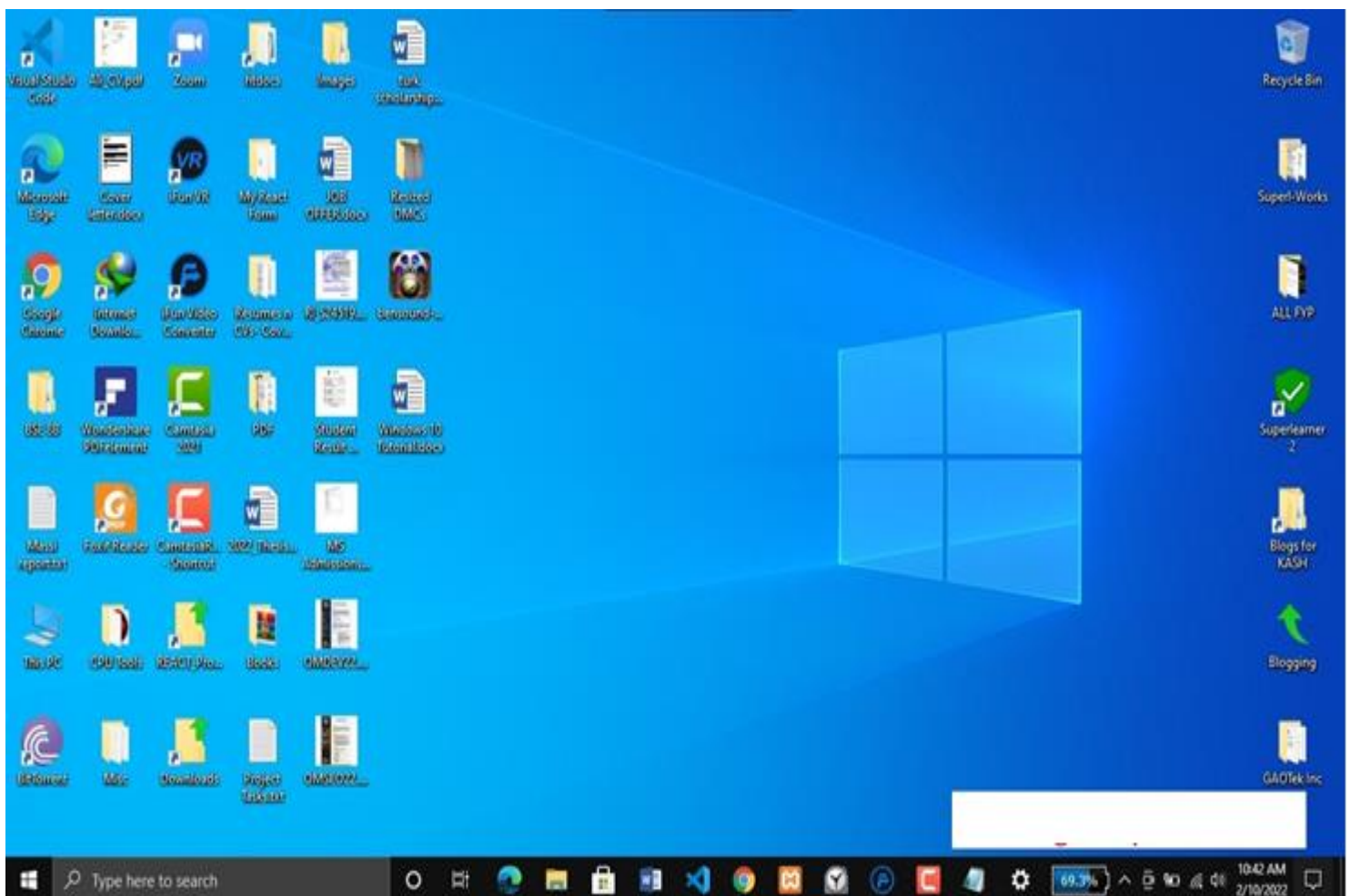
## Advantages of GUI

- It is user friendly because it is easy to learn and work with
- There is no need to type and memorize any command language.

- The interface is similar for any application.
- You are provided with a coloured screen with icons each representing a program.
- A mouse may be used.

## Disadvantages of (GUI)

- Require much more memory and as well as the processor
- Require much more desk space to hold the files
- Difficult to automate for expert users
- Easily affected by viruses
- Not good for programmers.



# ❖ **Operating System types based on task**

## **1. Single-user,Single tasking**

DOS,PC-DOS, CP/M (use old microcomputer), Free DOS

## **2. Single-User, Multi Tasking**

Android, IOS, Windows 95/7/8/10/11,MAC OS

## **3. Multi-user, Multi-tasking (Server based)**

Unix, Linux, Ubuntu,Windows Server, Windows NT

## **4. Real Time operating Systems / Embedded OS / Process Control**

Fax Machines, Printers, Scanners, Routers, Robots.

=====HIRA KUMAR=====

- ✓ First OS Run on machine = IBM 701
- ✓ First OS = 1956 (GMOS-General Motors OS)
- ✓ Father of OS = Gary Kildall = CP/M OS
- ✓ CP/M OS = Control Program For Microcomputers = 1974
- ✓ Famous 1<sup>st</sup> OS for PC → CP/M OS
- ✓ Close Computer in Short time no use = Sleep Mode
- ✓ Close Computer in Long time no use = hibernate Mode