



Computer Application

Computer Education (Jiwaji University)



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COMPUTER APPLICATION-I

PRACTICAL FILE

SUBMITTED TO:-

Asst.Prof Krishnakant Yadav

SUBMITTED BY:-

Kashish Pandey

B.A.LLB (Hons.)

5th Sem

DECLARATION

I, Kashish Pandey of B.A. LLB (HONS.) 5th Sem declare that the Computer

Application-I about the practical file which is submitted by me in the line of partial fulfillment of requirement for the award of the Degree of B.A. LLB from Prestige Institute of Management and Research affiliated to Jiwaji University, Gwalior have completed practical file. I assure that this practical file is the result of my own efforts and that any other institute for the award of any degree or diploma has never submitted this practical file anywhere.

Date:13/01/2024

Name of the Student

Place: Gwalior

Kashish Pandey

B.A.LLB (Hons.)

5th Sem

CERTIFICATE

This is to certify that **Kashish Pandey**, a student of BA.LLB (Hons.) 5th

Semester of Prestige Institute of Management and Research Gwalior have successfully completed her Computer Application-I practical file under my guidance and supervision.

Date:12/12/2023

Asst.Prof Krishnakant Yadav

Place: Gwalior

Faculty Guide

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“Gratitude is the hardest of all emotions to express. There is no word capable of conveying all that one feels until we reach the world where thoughts can be adequately expressed in words ,”Thank you” will have to do.”

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Q.1. Write on the computer system and mention about its types.

Ans. “Basically, a computer system is a combination of hardware and software devices that help computers to receive data or information by communicating

with each other. It is a set of integrated devices that accept data (input), Then process it and finally give us a result (output) This is known as the "Computer System".

The computer system work with the help of the main four basic work 'INPUT', 'OUTPUT', 'STORAGE', and 'PROCESSING'. These four words define the meaning of Computer systems.

It includes a CPU, monitor, keyboard, mouse, etc, and many other components, etc.

"A computer system is a set of integrated devices that inputting, Processing and outputting the storing data and information is known as "Computer System".

TYPES OF COMPUTER SYSTEM

The computer system is generally classified by its performance, Their performance is judged by the:

- The amount of data that can be stored in the memory.
- Speed of internal operation of the computer.
- Number and types of peripheral devices.
- Amount and type of software available for use with the computer.

There are basically three types of computer are:

- I. Analog Computer
- II. Digital Computer

III. Hybrid Computer

I. Analog Computer

These computers are those computers which are mostly used for measurement like Speedometer, Thermometer, Voltmeter, etc. This type of computer works on continuous data values it is known as an “Analog computer”.

II. Hybrid Computer

Hybrid computers are those computers that provide the features of both analog and digital computers. It uses analog data and digital data, first it takes analog data and then converts it into a digital version for further processing. These are known as “Hybrid Computers”.

III. Digital Computer

Digital Computers are those computers whose has two discrete value “0” and “1” which are also known as binary numbers or machine language. It stores data in a numerical format and performs some calculations and logical operations to provide results to the users so that they can understand easily. These computers are known as “Digital Computers”. For example, the Modern computers are we using right now are digital computers(desktops, laptops, etc).

Types of Digital Computers are:

- i. Microcomputers
- ii. Minicomputers

- iii. Medium-size computers
- iv. Large Computers
- v. Mainframe Computers
- vi. Super Computers

i. Micro Computers:-

Microcomputers are small, affordable, and versatile digital computers designed for individual or business use. They feature a microprocessor as the central processing unit, memory for data storage, input/output devices, storage options, and run operating systems like Windows or macOS. Examples include desktops, laptops, and compact forms like mini PCs, serving various personal, educational, and professional purposes.

ii. Mini Computers:-

Mini computers are mid-sized digital computers that offer more processing power and storage capacity than microcomputers but are smaller and less powerful than mainframes. They are suitable for handling complex tasks and multiple users simultaneously. Mini computers often serve as servers, handling network tasks, databases, and business applications. They are more scalable and powerful than microcomputers, catering to the needs of small to medium-sized businesses and organizations.

iii. Medium Size Computers:-

Compared to both microcomputers and minicomputers, these computer systems offer faster speeds and a larger storage space. These computers have numerous

disk drives that can be utilized to process online access requests as well as a sizable number of high-speed input-output devices.

iv. Large Computers:-

Mainframe computer is the largest computer. Mainframe computers can execute millions of instruction simultaneously. Supercomputers are the largest computers in the world. Mainframe computers are also large computers but somewhat smaller than supercomputer.

v. Mainframe Computers:-

A mainframe, also known as big iron, is a high-performance computer used for large-scale, compute-intensive purposes and tasks that require greater availability and security than smaller-scale machines. Historically, mainframes have been associated with centralized rather than distributed computing.

vi. Super Computers:-

A supercomputer is defined as an extremely powerful computing device that processes data at speeds measured in floating-point operations per second (FLOPS) to perform complex calculations and simulations, usually in the field of research, artificial intelligence, and big data computing.

Q.2. What is memory? Explain its types.

Ans. Memory is the electronic holding place for the instructions and data a computer needs to reach quickly. It's where information is stored for immediate use. Memory is one of the basic functions of a computer, because without it, a computer would not be able to function properly. Memory is also used by a computer's operating system, hardware and software.

There are technically two types of computer memory: primary and secondary. The term memory is used as a synonym for primary memory or as an abbreviation for a specific type of primary memory called random access memory (RAM). This type of memory is located on microchips that are physically close to a computer's microprocessor.

If a computer's central processor (CPU) had to only use a secondary storage device, computers would become much slower. In general, the more memory (primary memory) a computing device has, the less frequently the computer must access instructions and data from slower (secondary) forms of storage.

Types of computer memory

In general, memory can be divided into primary and secondary memory; moreover, there are numerous types of memory when discussing just primary memory. Some types of primary memory include the following

- 1) Cache memory- This temporary storage area, known as a cache, is more readily available to the processor than the computer's main memory source. It is also called CPU memory because it is typically integrated directly into

the CPU chip or placed on a separate chip with a bus interconnect with the CPU.

- 2) RAM- The term is based on the fact that any storage location can be accessed directly by the processor.
 - a) Dynamic RAM- DRAM is a type of semiconductor memory that is typically used by the data or program code needed by a computer processor to function.
 - b) Static RAM- SRAM retains data bits in its memory for as long as power is supplied to it. Unlike DRAM, which stores bits in cells consisting of a capacitor and a transistor, SRAM does not have to be periodically refreshed.
 - c) Double Data Rate SDRAM- DDR SRAM is SDRAM that can theoretically improve memory clock speed to at least 200 MHz.
 - d) Double Data Rate 4 Synchronous Dynamic RAM- DDR4 RAM is a type of DRAM that has a high-bandwidth interface and is the successor to its previous DDR2 and DDR3 versions. DDR4 RAM allows for lower voltage requirements and higher module density. It is coupled with higher data rate transfer speeds and allows for dual in-line memory modules (DIMMS) up to 64 GB.
 - e) Rambus Dynamic RAM. DRDRAM is a memory subsystem that promised to transfer up to 1.6 billion bytes per second. The subsystem consists of RAM, the RAM controller, the bus that connects RAM to the microprocessor and devices in the computer that use it.

- 3) Read-only memory- ROM is a type of computer storage containing nonvolatile, permanent data that, normally, can only be read and not written to. ROM contains the programming that enables a computer to start up or regenerate each time it is turned on.
- a) Programmable ROM- PROM is ROM that can be modified once by a user. It enables a user to tailor a microcode program using a special machine called a PROM programmer.
 - b) Erasable PROM- EPROM is programmable read-only memory PROM that can be erased and re-used. Erasure is caused by shining an intense ultraviolet light through a window designed into the memory chip.
 - c) Electrically erasable PROM- EEPROM is a user-modifiable ROM that can be erased and reprogrammed repeatedly through the application of higher than normal electrical voltage. Unlike EPROM chips, EEPROMs do not need to be removed from the computer to be modified. However, an EEPROM chip must be erased and reprogrammed in its entirety, not selectively.
 - d) Virtual memory- A memory management technique where secondary memory can be used as if it were a part of the main memory. Virtual memory uses hardware and software to enable a computer to compensate for physical memory shortages by temporarily transferring data from RAM to disk storage.

Q.3. What are input devices and output devices? Mention each 5 input and output devices.

Ans. The functioning of a computer system is based on the combined usage of both input and output devices. Using an input device we can give instructions to the computer to perform an action and the device reverts to our action through an output device.

a) Input Device: A piece of equipment/hardware which helps us enter data into a computer is called an input device. For example keyboard, mouse, etc.

b) Output Device: A piece of equipment/hardware which gives out the result of the entered input, once it is processed (i.e. converts data from machine language to a human-understandable language), is called an output device.

For example printer, monitor, etc.

List of Input Devices

Given below is the list of the most common input devices along with brief information about each of them.

1) Keyboard

- A simple device comprising keys and each key denotes either an alphabet, number or number commands which can be given to a computer for various actions to be performed. It has a modified version of typewriter keys.
- The keyboard is an essential input device and computer and laptops both use keyboards to give commands to the computer.

2) Mouse

- It is also known as a pointing device. Using mouse we can directly click on the various icons present on the system and open up various files and programs.
- A mouse comprises 3 buttons on the top and one trackball at the bottom which helps in selecting and moving the mouse around, respectively. In case of laptops, the touchpad is given as a replacement of the mouse which helps in the movement of the mouse pointer.

3) Joy Stick

- It is a device which comprises a stick which is attached at an angle to the base so that it can be moved and controlled. Mostly used to control the movement in video games.
- Apart from a computer system, a joystick is also used in the cockpit of an aeroplane, wheelchairs, cranes, trucks, etc. to operate them well.

4) Light Pen

- It is a wand-like looking device which can directly be moved over the device's screen. It is light-sensitive.

- Used in conjunction with computer's cathode ray tube.

5) Microphone

- Using a microphone, sound can be stored in a device in its digital form. It converts sound into an electrical signal. To record or reproduce a sound created using a microphone, it needs to be connected with an amplifier.

List of Output Device

The commonly used output devices have been listed below with a brief summary of what their function is and how they can be used.

- 1) **Monitor**-The device which displays all the icons, text, images, etc. over a screen is called the Monitor. When we ask the computer to perform an action, the result of that action is displayed on the monitor.
- 2) **Printer**-A device which makes a copy of the pictorial or textual content, usually over a paper is called a printer. For example, an author types the entire book on his/her computer and later gets a print out of it, which is in the form of paper and is later published.
- 3) **Speakers**-A device through which we can listen to a sound as an outcome of what we command a computer to do is called a speaker. Speakers are attached with a computer system and also are a hardware device which can be attached separately

4) Projector-An optical device which presents an image or moving images onto a projection screen is called a projector. If a projector is connected to a computer, then the image/video displayed on the screen is the same as the one displayed on the computer screen.

5) Headphones- They perform the same function as a speaker, the only difference is the frequency of sound. Using speakers, the sound can be heard over a larger area and using headphones, the sound is only audible to the person using them.

Q.4. What is Operating System? Write about its types.

Ans. An Operating System is the interface between the computer hardware and the end-user. Processing of data, running applications, file management and handling the memory is all managed by the computer OS. Windows, Mac, Android etc. Are examples of Operating systems which are generally used nowadays.

All modern computing devices including Laptops, Tablet, mobile phones, etc. comprise an Operating System which helps in the smooth working of the device.

Types of Operating System

Given below are the different types of Operating System along with brief information about each of them:

1. Batch Operating System

- There is no direct communication between the computer and the OS.
- There is an intermediate, the Operator, which needs to distribute the work into batches and sort similar jobs.
- Multiple users can use it.
- Can easily manager a large amount of work.

2. Real-Time Operating System

- It has a data processing system.
- The processing time is very small between the user's command and the output.
- Used in fields where the response needs to be quick and rapid.

3. Time-Sharing Operating System

- Multiple people at various terminals can use a program at the same time.
- The main motive is to minimize the response time.

4. Distributed Operating System

- When two or more systems are connected to each other and one can open files which are not present in their system but in other devices connected in the network.
- Its usage has now increased over the years.
- They use multiple central processors to serve real-time applications.
- Failure of one system does not affect the other systems connected in the network.

5. Embedded Operating System

- These special Operating systems are built into larger systems.
- They generally are limited to single specific functions like an ATM.

6. Network Operating System

- They have one main server which is connected to other client servers.
- All the management of files, processing of data, access to sharing files, etc. are performed over this small network.
- It is also a secure operating system for working with multiple users.

7. Mobile Operating System

- With the advancement in the field of technology, smartphones now are released with an Operating system.
- They are designed in a manner that they can help a small device work efficiently.

Functions of Operating System

- It helps with memory management. It keeps a track of the files being saved in the Main memory and the primary memory of the computer device.
- Whenever a computer is turned on, the Operating system automatically starts to work. Thus, the booting and rebooting

process of a computer device is also an important function of the OS.

- It provides a user interface.
- Managing of basic peripheral devices is done by the operating system.
- Using the password protection option of an operating system, the data in the device can be kept secure.
- It coordinates with the software and the user.
- Easy navigation and organisation of files and programs are managed by the OS.
- Any kind of program which needs to be run through the system is done by the operating system.
- If any kind of error or bug is found during the program is detected using the operating system.

Q.5. Mention command's name and commands, syntax and examples of MSDOS (Microsoft Disk Operating System).

Ans. MS-DOS (Microsoft Disk Operating System) commands are divided into internal and external commands. Internal commands are built into the command interpreter, while external commands are separate executable files. Here are ten examples of both internal and external commands along with their syntax and examples:

a) Internal Commands:

1) DIR:

- Syntax: DIR [drive:][path][filename] [/A[:attributes]] [/B] [/C] [/D] [/L] [/N] [/O[:sortorder]] [/P] [/Q] [/R] [/S] [/T[:timefield]] [/W] [/X] [/4]
- Example: DIR /W - Displays a wide list of files in the current directory.

2) CD (CHDIR):

- Syntax: CD [/D] [drive:][path]
- Example: CD C:\Windows - Changes the current directory to C:\Windows.

3) MD (MKDIR):

- Syntax: MD [drive:]path
- Example: MD C:\NewFolder - Creates a new directory called "NewFolder" in the C drive.

4) COPY:

- Syntax: COPY [/D] [/V] [/N] [/Y | /-Y] [/Z] [/A | /B] source [/A | /B] [+ source [/A | /B] [+ ...]] [destination [/A | /B]]
- Example: COPY file.txt C:\Backup - Copies file.txt to the Backup directory.

5) DEL (ERASE):

- Syntax: DEL [/P] [/F] [/S] [/Q] [/A[:attributes]] names
- Example: DEL *.tmp - Deletes all files with the .tmp extension.

6) REN (RENAME):

- Syntax: REN [drive:][path]filename1 filename2

- Example: REN oldfile.txt newfile.txt - Renames oldfile.txt to newfile.txt.

7) CLS:

- Syntax: CLS
- Example: CLS - Clears the screen.

8) TYPE:

- Syntax: TYPE [drive:][path]filename
- Example: TYPE C:\textfile.txt - Displays the contents of textfile.txt.

9) VER:

- Syntax: VER
- Example: VER - Displays the version number of MS-DOS.

10) TIME:

- Syntax: TIME [/T | time]
- Example: TIME 12:34 - Sets the system time to 12:34 PM.

b) External Commands:

1) FORMAT:

- Syntax: FORMAT drive: [/V[:label]] [/Q] [/U] [/F:size] [/B | /S]
- Example: FORMAT C: /Q - Formats the C drive quickly.

2) CHKDSK:

- Syntax: CHKDSK [drive:][[path]filename] [/F] [/V] [/R] [/X] [/I] [/C]
[/L[:size]]

- Example: CHKDSK C: /F - Checks and fixes errors on the C drive.

3) TREE:

- Syntax: TREE [drive:][path] [/F] [/A]
- Example: TREE C:\ /F - Displays the directory tree of the C drive, including files.

4) XCOPY:

- Syntax: XCOPY source [destination] [/A | /M] [/D[:date]] [/P] [/S [/E]] [/V] [/W] [/C] [/I] [/Q] [/F] [/L] [/G] [/H] [/R] [/T] [/U] [/K] [/N] [/O] [/X] [/Y] [/Y] [/Z] [/B] [/EXCLUDE:file1[+file2][+file3]...]
- Example: XCOPY C:\Source D:\Backup /S /E - Copies all files and subdirectories from C:\Source to D:\Backup.

5) EDIT:

- Syntax: EDIT filename
- Example: EDIT C:\TextFile.txt - Opens the TextFile.txt for editing.

6) DELTREE:

- Syntax: DELTREE [/Y] [drive:]path [[drive:]path[...]]
- Example: DELTREE C:\OldFolder - Deletes the OldFolder directory and its contents.

7) DISKCOPY:

- Syntax: DISKCOPY [drive1:][path]filename [drive2:][path] [/V]
- Example: DISKCOPY A: B: - Copies the contents of diskette in drive A to diskette in drive B.

8) ATTRIB:

- Syntax: ATTRIB [+R | -R] [+A | -A] [+S | -S] [+H | -H]
[drive:][path]filename [/S]
- Example: ATTRIB +H C:\HiddenFile.txt - Sets the hidden attribute for HiddenFile.txt.

9) SYS:

- Syntax: SYS [drive:]
- Example: SYS C: - Transfers system files to the C drive to make it bootable.

10) MOVE:

- Syntax: MOVE [/Y | /-Y] [drive:][path]filename1[,...] destination
- Example: MOVE *.txt C:\TextFiles - Moves all text files to the TextFiles directory.

CONCLUSION

The intricate world of computer systems encompasses a diverse array of components and functionalities. From various types of computer systems tailored to specific needs, such as personal computers, servers, and embedded systems, to the dynamic realms of memory with primary and secondary storage,

the foundation of computing is built upon these vital structures. Input devices like keyboards and mice, coupled with output devices like monitors and printers, form the essential interface facilitating user-machine interaction. Operating systems, ranging from Windows and Linux to macOS, play a pivotal role in managing resources and providing a user-friendly environment. Additionally, understanding MS-DOS commands and their syntax adds a historical perspective, showcasing the evolution of command-line interfaces. Together, these elements weave the intricate tapestry of modern computing, shaping the way we interact with and harness the power of technology.