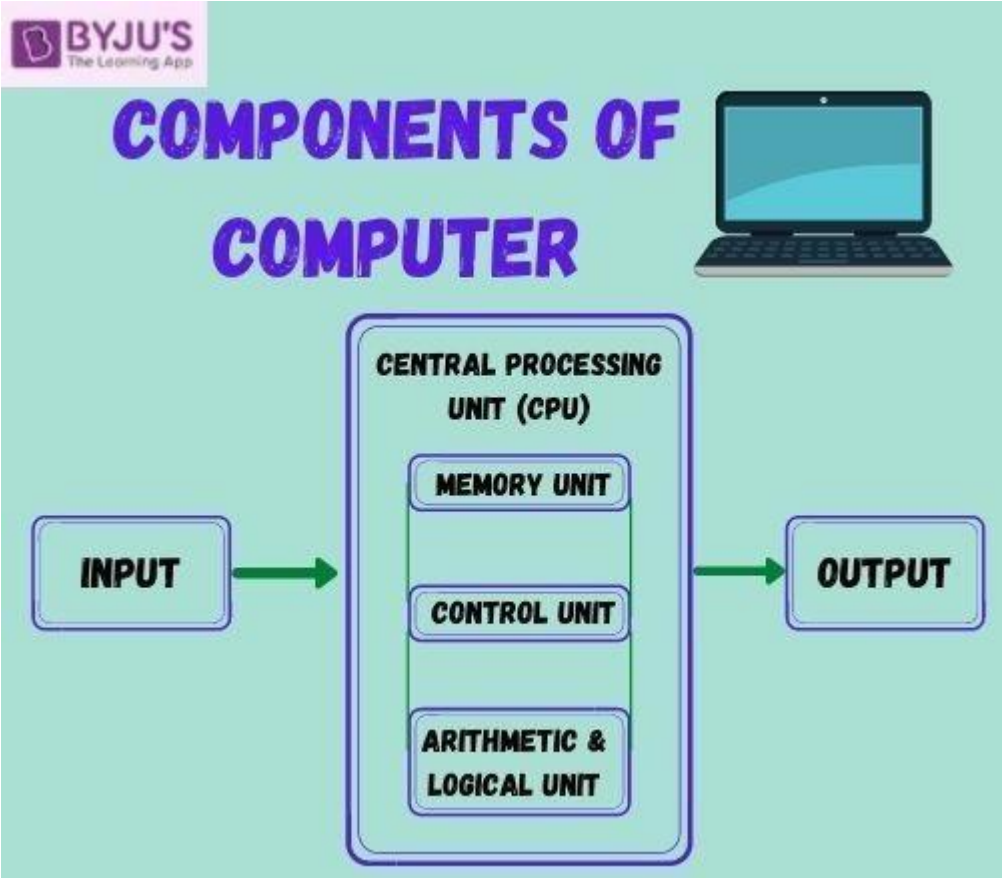
1. What are the four fundamental parts of computer? Explain it with the help of diagram.
   A computer has four main components: **Input Units, the central processing unit or CPU, the Primary memory, and Output units**. Input Unit - The devices to input information, such as a keyboard, and mouse. CPU - The CPU is further broken up into ALU, Control Unit, and Instruction Unit.



2. Discuss about the classification of computers based on size and capacity

Introduction

Classification of computers are based on their architecture, speed of executing commands or instructions, peripheral used and also their uses. Microcomputers are usually used in home and offices and only a single user can perform the task using a microcomputer. Its storage and data handling capacity are limited as per the requirement for home and office work. The another type of computer is called minicomputer which has usually larger storage and can handle multiuser at a time. This chapter includes the classification of computers.

Computer's Classification

Computers are classified on different parameters, such as, storage capacity, processing speed and component (CPU) used in computers. Depending upon the components used and features of different computers, they are classified into four groups, Microcomputers, Minicomputers, Mainframe computers and Supercomputers.

Micro Computers

Micro Computer is a computer whose CPU (Central Processing Unit) is a microprocessor. All the components of a microprocessor are on a single integrated circuit chip. Micro computer can be categorized as the desktop, programmable and workstation. The microprocessor based computers are called third generation computers. They are the backbone of the modern computer era. The first and second generation computers are based on vacuum tubes and bipolar junction transistors.

Desktop Computers

Desktop computer is a type of microcomputer. A desktop computer has a keyboard for input data, a LCD or CRT monitor to display information and Central processing unit tower contains storage, memory, different types of drives, such as, CD drive, hard drive, etc. A desktop computer is mainly used at home and office applications.

Programmable Computers (PDA)

Personal digital assistance is a type of hand held programmable digital computer. It isusedas notepads, address books and can connect to world web wave to share information. A PDA is equipped with mobile phone hence, called smallest computer.

Workstation

A workstation computer has greater memory capability and more extensive mathematical abilities. It is connected with other workstation computers or personal computer to exchange data and mostly used for scientific applications. It also supports multitasking applications.

Mini Computers

Minicomputers were introduced in early 1960s. They were faster than micro computers. Basically these computers were mainly multi-user systems, where many users work on the systems. Generally these types of computers had larger memories and greater storage capacity. They had large instruction set and address field. These kinds of computers have efficient storage for handling of text, in comparison to lower bit machines. Due to more efficient processor, speed and memory size, minicomputer was used in variety of applications and could support business applications along with the scientific applications. Minicomputer was a multi-user system which means more than one user could use this system simultaneously.

Comparison of Micro and Mini computers

Features	Microcomputer	Minicomputer
Primary memory	Shall memory	Larger memory
Word length	Small word length	Larger word length
Cost low	Low	High
Processor	Low	High

Mainframe Computers

Mainframe computers are large and expensive machines. The word length of mainframe computers may be 48, 60 or 64 bits, memory capacity being in some megabytes and storage capacity in some terabytes. Generally they handle huge volumes of information and data. In terms of speed, they are having significant processing capacity. They are used in research organizations, large industries, airlines reservation where a large database has to be maintained.

Super Computers

Super Computers are the fastest computer in current era. The processing capabilities of super computer lies in the range of GIPS2, word length 64-128 or may be in 256 or so. The memory capacity of super computer is in some gigabytes or in terabytes. The storage capacity of this type of computer is in exabytes.

The parallel processing of a super computer makes it very fast because it contains number of CPU that operates parallel. They are used at some research centers and government agencies involving sophisticated scientific and engineering tasks.

Super computers are used for the followings:

- ❖ Weapons research and development
- ❖ Nuclear and plasma physics
- ❖ Rocket research and development
- ❖ Atomic research
- ❖ Aerodynamics

Units For Measuring Word Length, Data, And Storage Capacity of a Computer

Computers are classified on the basis of their data processing speed better known as clock speed and the word length. The word length that is processed by a CUP at a time is one of the important feature of that CPU.

The followings are the units for the measurement of data volume:

bit	**bit**	**0 or 1**
Byte	**B**	**8 bite**
Kibibit	**Kibit**	**1024 bits**
kilobit	**Kbit**	**1000 bits**
kibibyte (binary)	**KiB**	**1024 bytes**
kilobyte (decimal)	**kB**	**1000 bytes**
megabit	**Mbit**	**1000 kilobits**
mebibyte (binary)	**MiB**	**1024 kibibytes**
megabyte (decimal)	**MB**	**1000 kilobytes**
gigabit	**Gbit**	**1000 megabits**
gibibyte (binary)	**Gibbs**	**1024 mebibytes**
gigabyte (decimal)	**GB**	**1000 megabytes**
terabit	**Tbit**	**1000 gigabits**
tebibyte (binary)	**TIB**	**1024 gibibytes**

terabyte (decimal)	**TB**	**1000 gigabyte**
Petabit	**Pbit**	**1000 terabyte**
pebibyte (binary)	**PiB**	**1024 tebibytes**
petabyte (decimal)	**PB**	**1000 terabytes**
exabit	**Ebit**	**1000 petabits**
exbibyte (binary)	**EiB**	**1024 pebibytes**
exabyte (decimal)	**EB**	**1000 petabytes**

3. What is the meaning of computer generation? How many Computer Generations are defined? What technologies were/are used?

S.No	Generation & Description
1	First Generation The period of first generation: 1946-1959. Vacuum tube based.
2	Second Generation The period of second generation: 1959-1965. Transistor based.
3	Third Generation The period of third generation: 1965-1971. Integrated Circuit based.
4	Fourth Generation The period of fourth generation: 1971-1980. VLSI microprocessor based.
5	Fifth Generation The period of fifth generation: 1980-onwards. ULSI microprocessor based.

4. Differentiate between Volatile & Non- Volatile memories

S.NO	Volatile Memory	Non-Volatile Memory

S.NO	Volatile Memory	Non-Volatile Memory
1.	Volatile memory is the type of memory in which data is lost as it is powered-off.	Non-volatile memory is the type of memory in which data remains stored even if it is powered-off.
2.	Contents of Volatile memory is stored temporarily.	Contents of Non-volatile memory is stored permanently.
3.	It is faster than non-volatile memory.	It is slower than volatile memory.
4.	**RAM(Random Access Memory)** is an example of volatile memory.	**ROM(Read Only Memory)** is an example of non-volatile memory.
5.	In volatile memory, data can be easily transferred in comparison to non-volatile memory.	In non-volatile memory, data can not be easily transferred in comparison to volatile memory.
6.	In Volatile memory, process can read and write.	In Non-volatile memory, process can only read.
7.	Volatile memory generally has less storage capacity.	Non-volatile memory generally has more storage capacity than volatile memory.
8.	In volatile memory, the program's data are stored which are currently in process by the CPU.	In non-volatile memory, any kind of data which has to be saved permanently are stored.
9.	Volatile memory is more costly per unit size.	Non-volatile memory is less costly per unit size.
10.	Volatile memory has a huge impact on the system's performance.	Non-volatile memory has a huge impact on a system's storage capacity.
11.	In volatile memory, processor has direct access to data.	In non-volatile memory, processor has no direct access to data.

S.NO	Volatile Memory	Non-Volatile Memory
12.	Volatile memory chips are generally kept on the memory slot.	Non-volatile memory chips are embedded on the motherboard.

5. Distinguish among system software, application software and open source software on the basis of their features

System software is meant to manage the system resources. It serves as the platform to run application software.	Application software helps perform a specific set of functions for which they have been designed.
System software is developed in a low-level language (assembly language for example)	Application software is developed in a high-level language such as Java, C++, .net and VB.
System software automatically starts running once the system is turned on and stops when the system is shut down.	Application software runs as and when the user requests it.
A system cannot even start without system software	Application software is user specific and it is not needed to run the system on the whole.
System software is endowed with a general purpose.	Application software carries a specific purpose.
A typical example for a system software is Windows Operating System	Some characteristic examples for application software is MS Office, Photoshop and CorelDraw

6. A) Create a file in MS-word to insert a paragraph about yourself and save it with file name "**yourself"**. Describe all steps involved in it.

NAME : Dorathiga s
DOB : 22.10.2003

ADDRESS : 25,durai stret,manjampatty(p.o),manapparai(t.k),trichy
QUALIFICATION : diploma in nursing

6. B) **Health is Wealth**

Health is Wealth

Health is Wealth

MS Word

Creating

1. Open Word. Or, if Word is already open, select File > New.
2. In the Search for online templates box, enter a search word like letter, resume, or invoice. Or, select a category under the search box like Business, Personal, or Education.
3. Click a template to see a preview. ...
4. Select Create

Editing

Click **Edit Document > Edit** in Word for the web to make changes to a document.
...
To make changes to your document, switch to Editing view, where you can add and delete content and do other things, such as:

1. Add tables and pictures.
2. Apply styles.
3. Adjust formatting.
4. Edit headers and footers.

Saving

Click FILE > Save, pick or browse to a folder, type a name for your document in the File name box, and click Save. Save your work as you go - hit Ctrl+S

Printing

1. Select File > Print.

2. To preview each page, select the forward and backward arrows at the bottom of the page. If the text is too small to read, use the zoom slider at the bottom of the page to enlarge it.
3. Choose the number of copies, and any other options you want, and select the Print button.

8. Create a file in MS-word for the following document and save it with file name '**equations'**. Describe all steps involved in it.

EQUATIONS

$X_2 + Y_5 = 30$

$Z^3 + Q^4 = 50$

$A_2 + B^8 = X_2 + Y^8$

9.Create a file in MS-word that convert existing highlight text to table as shown below and save it as file name 'text_to_table'. Describe all steps involved in it.

Select the text you want to convert.	Select the **Insert** tab.
Click on **Table** command. A dialogue box appears.	Click on **Covert to Text Table, a new** dialogue box appears
here set a number of columns.	Click on OK Finally Selected text converted in a table

10. Create a file in MS-Word to insert a table in the document. Describe all steps involved in it.

16. What is the difference between Machine Language and High Level Language

High-Level Language	Low-level language
It can be considered as a programmer-friendly language.	It is considered as a machine-friendly language.
It requires a compiler/interpreter to be translated into machine code.	It requires an assembler that would translate instructions.
It can be ported from one location to another.	It is not portable.
It is easy to understand.	It is difficult to understand.
It is easy to debug.	It is difficult to debug.
It is less memory efficient, i.e., it consumes more memory in comparison to low-level languages.	It consumes less memory.

17. Discuss about different data types of C programming Language.

1.integer
2.float
3.double
4.string
5.array

18. Find the output of the following expressions

a) X=20/5*2+30-5

Solution

$x=33$

b) Y=30 – (40/10+6) +10

solution

y=30

c) Z= 40*2/10-2+10

solution
z=16

19. Describe the syntax of the following statements
a) If – else statement
syntax:

```
if(condition)
{
Statement;
}
```

b) for loop
syntax:

```
for(initialization;condition;increment)

{

Statement

}
```

c) while loop
syntax:

```
while(condition)
{
Statement
}
```

d) do-while loop
syntax:

```
do
{
Statement
}
While(condition)
```

20. Find the output of the following program segments

a)

```
#include <stdio.h>
int main()
{
int i;
for (i=1; i<2; i++)
{
printf( "IMS Ghaziabad\n");
}
}
```

b)

```
#include <stdio.h>
int main()
{
int i =  1;
while ( i <= 2 )
{
printf( "IMS Ghaziabad\n");
i = i + 1;
}
}
```

c)

```
#include <stdio.h>
void main()
{
int a = 10, b=100;
if( a > b )
printf( "Largest number is %d\n”,
a);
else
printf( "Largest number is %d\n”,
b);
}
```

A. Output
   IMS Ghaziabad

B. Output
   IMS Ghaziabad
   IMS Ghaziabad

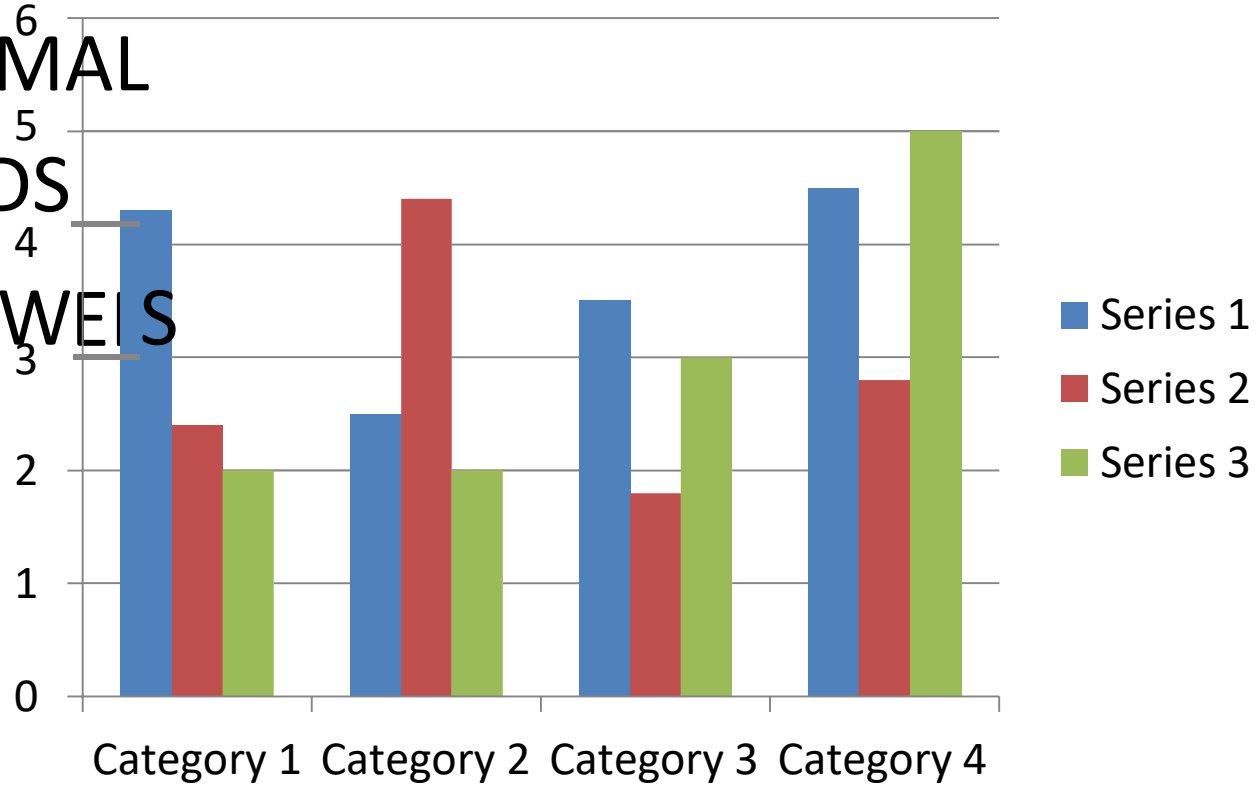
C. Output.
   Largest number 100

Roll no	Name	Marks
1	n1	60
2	n2	70
3	n3	80
4	n4	90
5	n5	40
6	n6	50
7	n7	77
8	n8	44
9	n9	88
10	n10	55
	sum	654
	avg	65.4

AADHAVAN COLLEGE OF ARTS AND SCIENCE

DORATHIGA

- ANIMAL
- BIRDS
- FLOWERS



WELCOME TO ALL