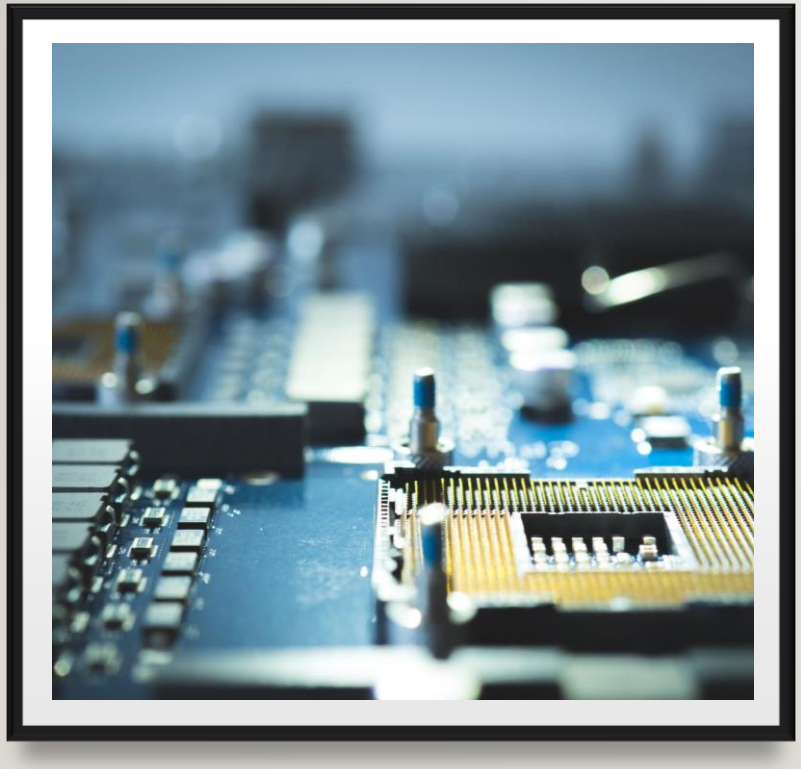
https://velttech.org/

NOTES ON INTRODUCTION TO COMPUTERS

2 WHAT IS A COMPUTER ?



- A computer is an electronic device that is capable of accepting, processing and giving out information.

3 BASIC FUNCTIONS OF COMPUTERS

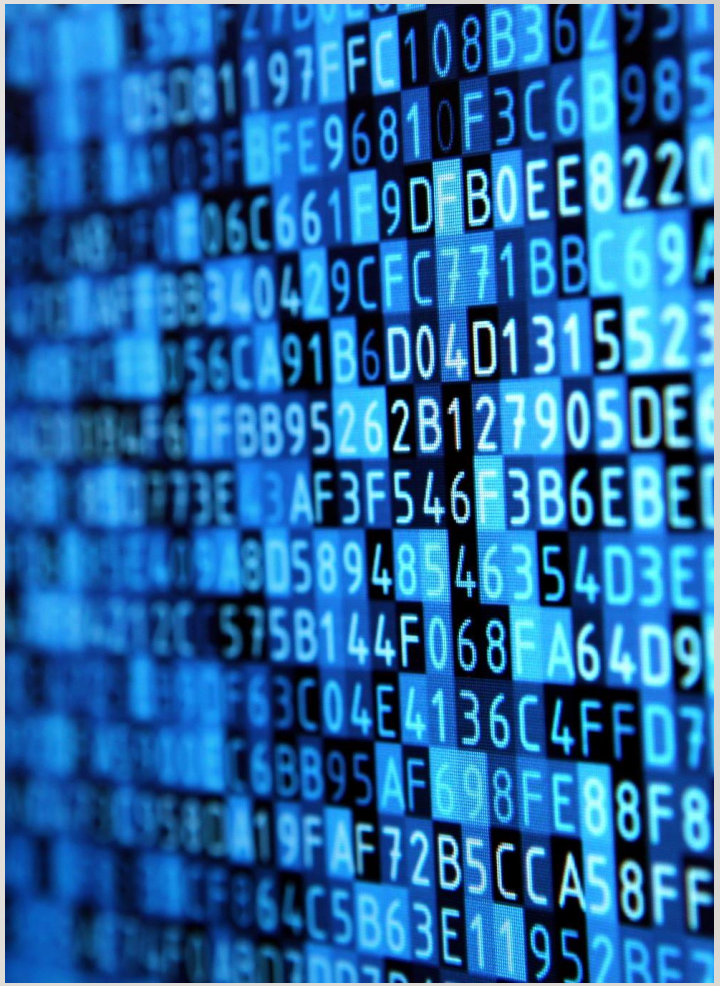
Computers are built to perform the following basic operations

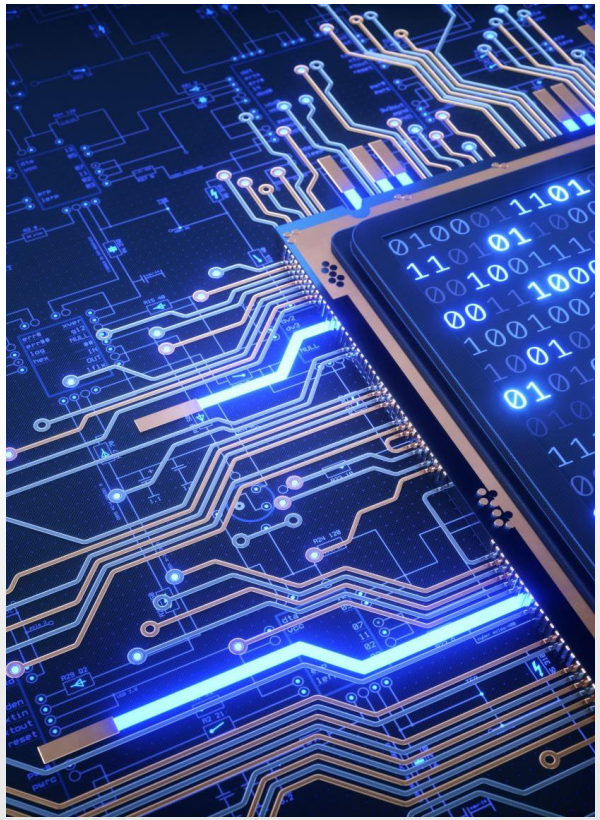
1. Accepting information (input): The computer allows users to input data using input devices such as microphone, keyboard and mouse.
2. Processing Data: The computer is capable of processing data into meaningful information using the CPU.
3. Storage: The computer provides space for processed information so that it can be used again in the future. The computer uses its memories to store information for output.
4. Output: The computer uses devices such as the monitor to display processed information to others.

4 CLASSIFICATION OF COMPUTERS

Computers can be classified according to the following

- Classification by purpose
- Classification by capacity and size
- Classification by nature or type



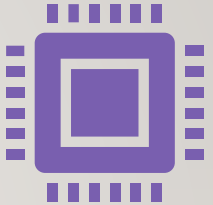


CLASSIFICATION OF COMPUTERS BY PURPOSE

Computers can be classified based on the purpose they were designed for. The classification of computers by purpose has been subdivided into **General Purpose Computers and Special Purpose Computers.**

GENERAL PURPOSE COMPUTERS

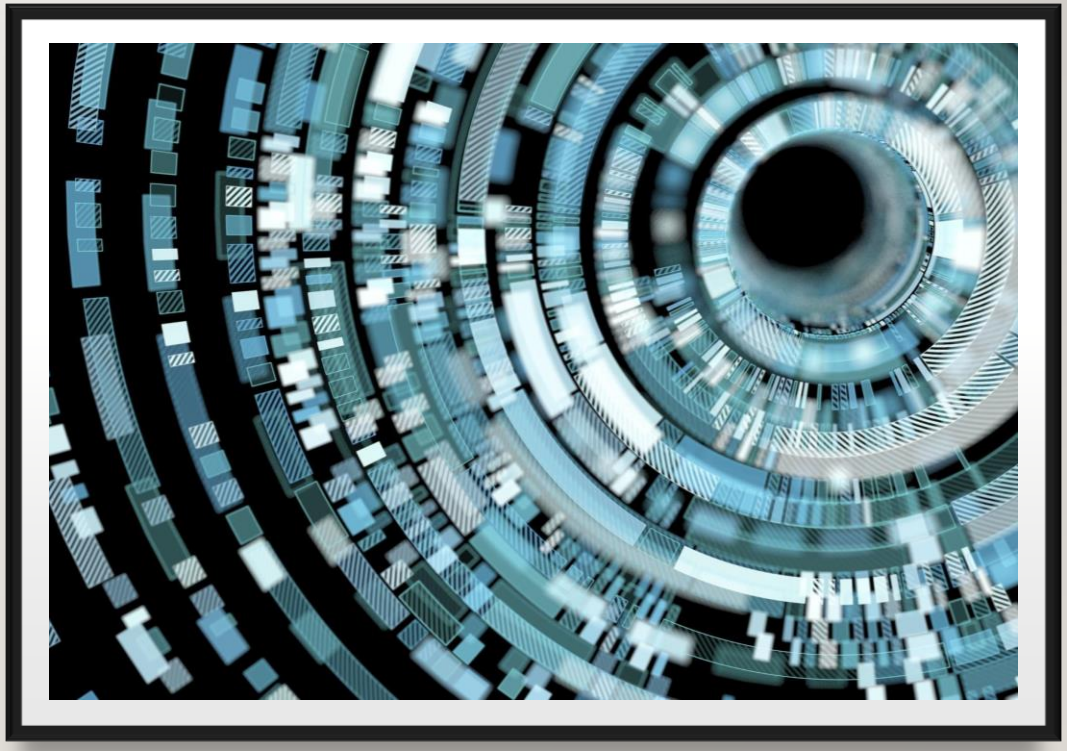
General Purpose computers are designed to solve varieties of problems depending on the type of software used.



These types of computers are sometimes referred to as **TURNING COMPLETE** because of their ability to solve complex and diverse computational problems.

7 SPECIAL PURPOSE COMPUTERS

Special Purpose Computers are designed to solve specific or special problems. Eg. Traffic lights, Calculators, Digital Camera, Digital thermometers, Automated Teller Machine (ATM)



CLASSIFICATION OF COMPUTERS BY CAPACITY AND SIZE

Computers can be grouped according to their capacities and physical size, speed, storage, cost and live ware (users).

Computers can be classified **as Super Computers, Mainframe Computers, Minicomputers and Personal Computers**.

SUPER COMPUTERS

Image source: Wikipedia

Image source:
https://www.nbcnews.com

10 SUPER COMPUTERS

- Super computers were first introduced in the 1970s.
- They are the most expensive.
- They are the most powerful computers.
- They are large enough and can fill an entire room.
- Scientist and businesspeople use them to solve complex problems in research and industry.
- They are number crunches because they can quickly analyze large quantities of numerical data.
- The computer speed of supercomputer is measured megaflops.

11 MAIN FRAME COMPUTERS

- Image Source: https://www.ibm.com/topics/mainframe

MAINFRAME COMPUTERS

- Mainframe computers were introduced in the 1960s.
- They can perform task at the same time.
- They are large.
- They can run multiple operating systems.
- They have large storage space.
- They have high processing speed.
- They are usually used by banks, airlines, large business government agency and universities.

MINICOMPUTERS

- They were introduced in the late 1950s.
- They are much smaller than main frame computers and some even can fit of a table.
- They store large amount of data compared to microcomputer.
- They have terminals connected to them.

14 MICROCOMPUTERS

- They were made to be used by a single user at a time.
- Microcomputers are small.
- They are relatively inexpensive.
- They are easily moved about.
- They can fit on a table.

EXAMPLES OF MICROCOMPUTERS

- Desktop computer
- Network computer
- Laptops
- Palm tops or PDA (PERSONAL DIGITAL ASSISTANCE)

16 PERSONAL COMPUTER (PC)

Personal computer refers to a microcomputer that is designed to be used by single users to help them do their own work at their offices and homes.

Example of personal computers are the desktop unit system and the tower case unit system. Desktop unit system is wide and flat and are often placed on the table. You can put your monitor on top of the desktop unit system. Tower case computers are tall and are often placed on the ground.

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LAPTOP COMPUTER

A laptop computer is a microcomputer designed for mobile use. A laptop computer is powered by electricity through its rechargeable battery.

ADVANTAGES AND DISADVANTAGES OF LAPTOPS

ADVANTAGES OF LAPTOPS

- They are portable.
- They are compact.
- They have low powered consumption.
- They have rechargeable batteries which enable them to work even when there is power outage.

DISADVANTAGES OF LAPTOPS

- They are relative expensive compared to desktop computers.
- It can easily be stolen due to its portability.
- Laptops parts are relatively expensive compared to desktop computers.
- They are relatively difficult to repair when they get damaged as compared to desktop computers.
- They can easily get damaged since they are portable. Eg. One can mistakenly drop it.

DIFFERENCE BETWEEN LAPTOPS AND DESKTOPS COMPUTERS

LAPTOP COMPUTERS	DESKTOP COMPUTERS
They are portable	They are not portable
They can be easily setup	They are not easily set up
They are more expensive	They are less expensive
They are smaller	They are bigger than laptops
They are compact (Components are together as a single package)	They are not compact
They have rechargeable batteries	They do not have rechargeable batteries

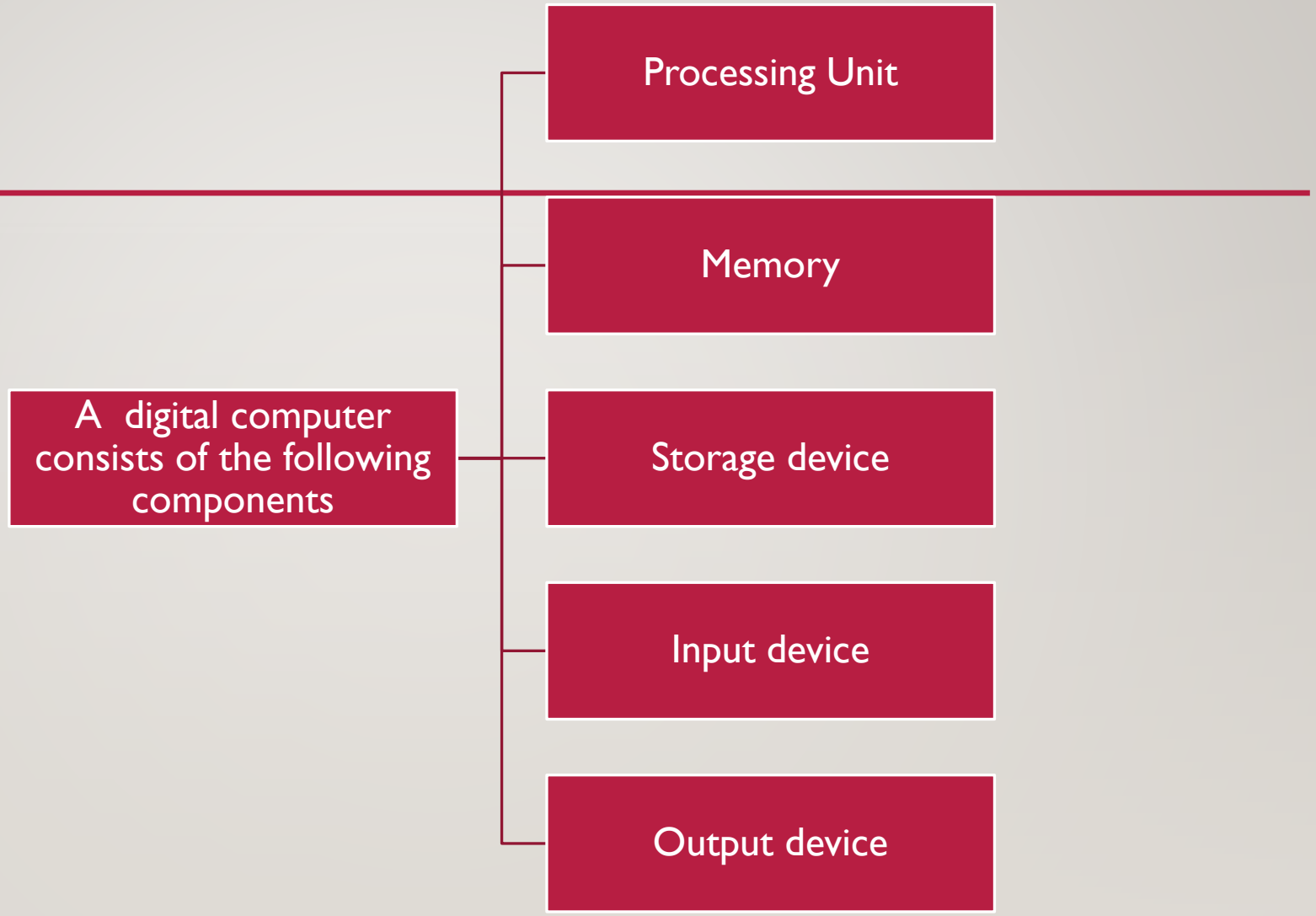
CLASSIFICATION OF COMPUTERS BY THEIR NATURE

Under classification by nature/type, computers are grouped into how data is presented and processed. Under this classification, computers can be classified as **Analogue, Digital or Hybrids.**

DIGITAL, ANALOGUE AND HYBRID COMPUTERS

A digital computer is a type of computer that communicate or operates using the binary mode. Digital computers operate on two states which are the ON STATE and the OFF STATE. These two states represent HIGH and LOW voltages respectively.

Examples of digital computer include Desktop Computer, Supercomputer, Mainframe, Minicomputer and cell phones.


A digital computer consists of the following components
Processing Unit
Memory
Storage device
Input device
Output device

24 ANALOGUE COMPUTERS

Analogue computer operates on data in a form of continues varying physical phenomena

Examples of analogue computer include speedometer, Analogue Thermometers and Hydrometers.