



BUKIDNON STATE UNIVERSITY

IT111

INTRODUCTION TO COMPUTING

Glaiza Mae Libe
IT Faculty



CHAPTER III:

INFORMATION PROCESSING CYCLE

The information processing cycle refers to the order of events that go into processing information, including input, processing, storage and output.

Input consists of acquiring, entering and validating the data, while output consists of interactive queries and the running of reports.

DATA VS INFORMATION



DATA

is representation of facts, concepts, or instructions in a formalized manner, which should be suitable for communication, interpretation, or processing by human or electronic machine. It is represented with the help of characters such as alphabets (A-Z, a-z), digits (0-9) or special characters (+,-,/,*,<,>,= etc.)



INFORMATION

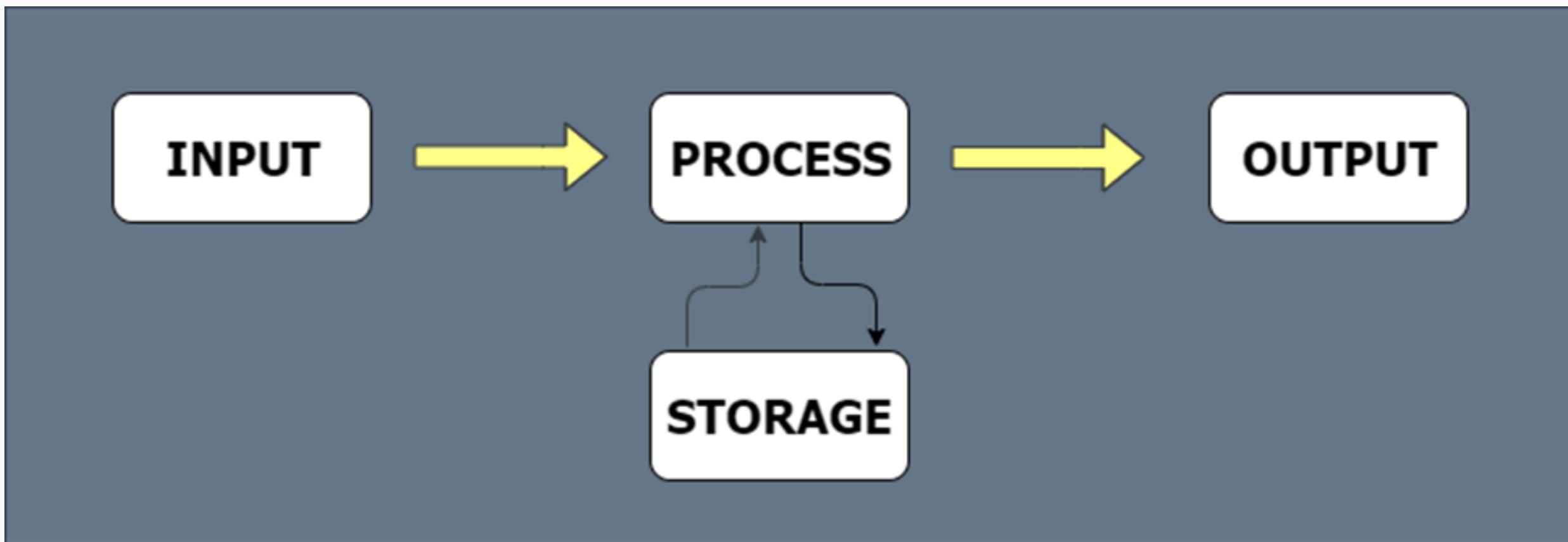
is an organized or classified data, which has some meaningful values for the receiver. It is processed data on which decisions and actions are based.

DATA PROCESSING

Data processing is the organized and systematic manipulation of information or data to convert it into a more useful form. It involves a series of actions or steps that transform raw data into meaningful insights or output.

INFORMATION PROCESSING CYCLE

It is a sequence of events consisting of Input, Processing, and Storage & Output.



FOUR PHASES OF THE CYCLE TO PROCESS INFORMATION

INPUT

Computer receives data and instructions.

PROCESS

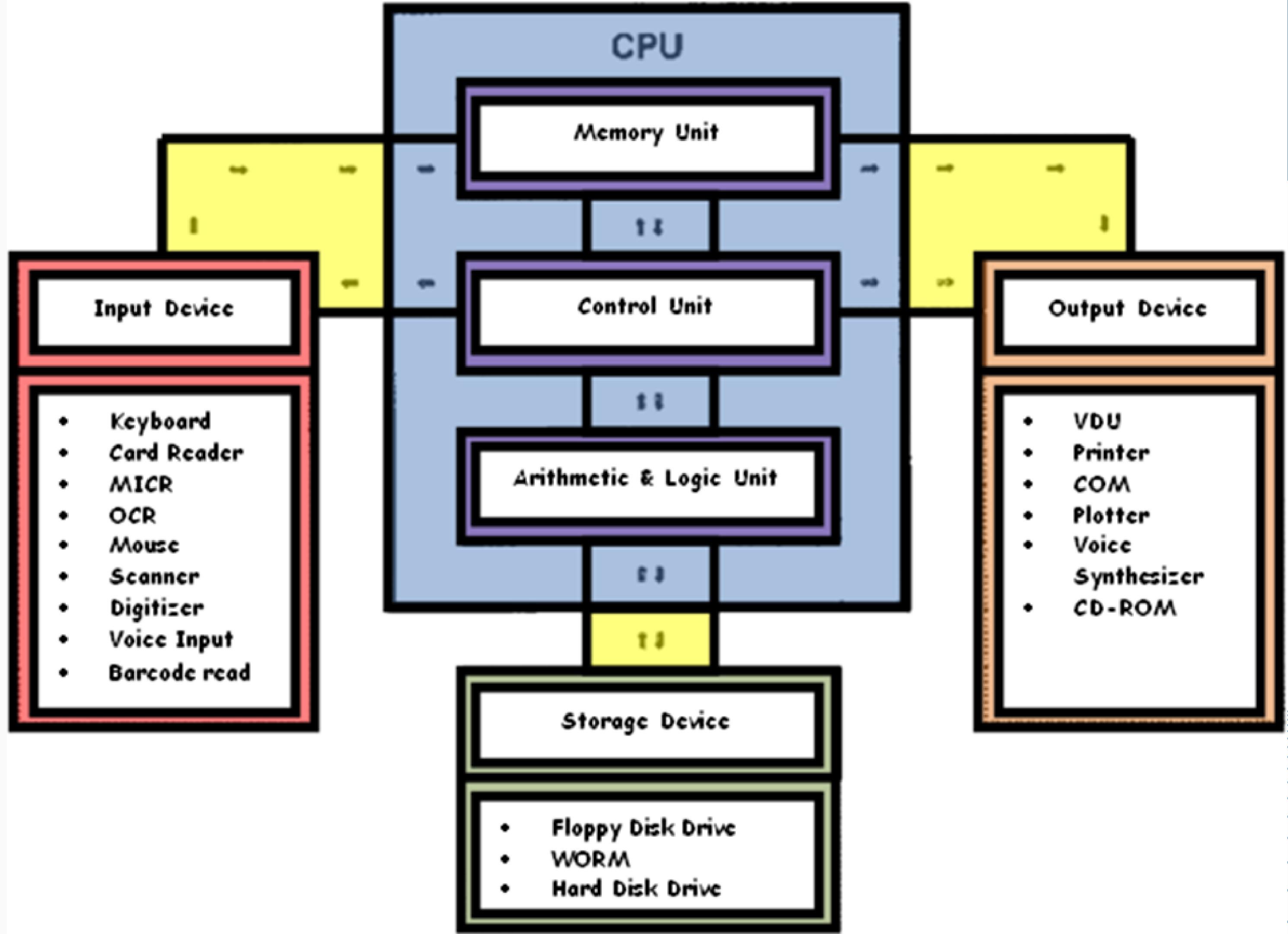
Computer applies instructions to data to produce information (organized Data).

STORAGE

Saving the information for a subsequent use or use in future.

OUTPUT

Computer sends information to people in a usable format.



CHARACTERISTICS OF GOOD INFORMATION



CHAPTER IV:

INTRODUCTION TO COMPUTER

SYSTEMS

Computer System is defined as the systematic interaction between entities, processes and operations utilizing an electronic device known as the **computer**.

4 COMPONENTS IN A COMPUTER SYSTEM

HARDWARE

PEOPLE WARE

SOFTWARE

DATA WARE

BRAIN IN ACTION:

A. Classification:

Classify the following as: **A. Hardware**, **B. Software**, **C. Peopleware**. **D. Dataware**

Write only the corresponding letter of your choice before the number.

- 1. Mobile Legends
- 2. Programmer
- 3. Windows
- 4. Monitor
- 5. Website Designer
- 6. Photoshop
- 7. Disk Defragmenter
- 8. Speaker
- 9. Student Record
- 10. Inventory

- 11. Flash Drive
- 12. Hard Disk Drive
- 13. Printer
- 14. iTunes
- 15. MacOS
- 16. Apple OS X
- 17. Network Administrator
- 18. Analytics
- 19. Barangay Records
- 20. Cashier

BRAIN IN ACTION:

Classify the following devices as **A. Input**, **B. Output**, **C. Storage**.

Write only the corresponding letter of your choice before the number.

 16. Mouse

 17. Random Access Memory

 18. Microphone

 19. Printer

 20. Stylus Pen

 21. Joystick

 22. Flash Drive

 23. External Hard Drive

 24. Speakers

 25. LED Monitor

4 COMPUTER COMPONENTS IN A COMPUTER SYSTEM

HARDWARE

PEOPLE WARE

SOFTWARE

DATA WARE

4 COMPUTER COMPONENTS IN A COMPUTER SYSTEM

HARDWARE

Hardware refers to the physical component that makes up a computer system and can be classified into as:

- 1. Input devices
- 2. Output devices
- 3. Storage devices
- 4. Memory
- 5. Processors
- 6. Scanning Devices

HARDWARE

1. INPUT DEVICE

Components which are used to input raw data are categorized under input devices. They aid in feeding data such as text, images, and audiovisual recordings. They even aid in file transfers between computers.



HARDWARE

2. OUTPUT DEVICE

Output devices are peripheral devices that enable us to view or hear the computer's processed data.



HARDWARE

3. STORAGE DEVICE

Serves as the storage area of data and information.

PRIMARY MEMORY

is a computer memory that a processor or computer accesses first or directly. It allows a processor to access running execution applications and services that are temporarily stored in a specific memory location.

SECONDARY MEMORY

This type of memory is also known as external memory or non-volatile. It is slower than the main memory. These are used for storing data/information permanently.

Example of...

PRIMARY MEMORY

Random Access Memory (RAM):

Read Only Memory (ROM):

Programmable Read Only Memory
(PROM).

EPROM: Erasable Programmable
Read Only Memory,
Cache Memory

SECONDARY MEMORY

CD-ROM

DVD

Magnetic Tape

Magnetic Disk

Floppy Disk

Optical Disk

4 COMPUTER COMPONENTS IN A COMPUTER SYSTEM

SOFTWARE

Is a collection of electronic instructions that programmers write using a programming language and that a computer's CPU can interpret to carry out a specific task.

2 Types of Software

1. System Software
2. Application Software

SOFTWARE

1. SYSTEM SOFTWARE

System software refers to the files and programs that make up your computer's operating system. System files include libraries of functions, system services, drivers for printers and other hardware, system preferences, and other configuration files.

SOFTWARE

- CLASSIFICATION OF SYSTEM SOFTWARE

- Multi-user allows two or more users to run programs at the same time.
- Multi-processing supports running a program on more than one CPU.
- Multi-tasking allows more than one program to run currently.
- Multi-threading allows different parts of a single program to run concurrently.
- Real-time responds to input instantly.

SOFTWARE

2. APPLICATION SOFTWARE

Includes all programs that do real work for users.

A. Business Application – software dedicated for business use. These are canned software that has been designed in accordance with the great principles of business concepts. (ex. Word processors, Spreadsheets)

SOFTWARE

2. APPLICATION SOFTWARE

B. Personal Application – is designed to take away drudgeryout of your personal chores and even make these chores fun. (ex. Email, reminders, phone book)

C. Entertainment Application – is designed for entertainment purposes, embedded with educational objectives and goals. (ex. Computer games, media player,movie apps)

SOFTWARE

2. APPLICATION SOFTWARE

D. Utility Application – helps you manage and maintain your own computer.

Example of utility application:

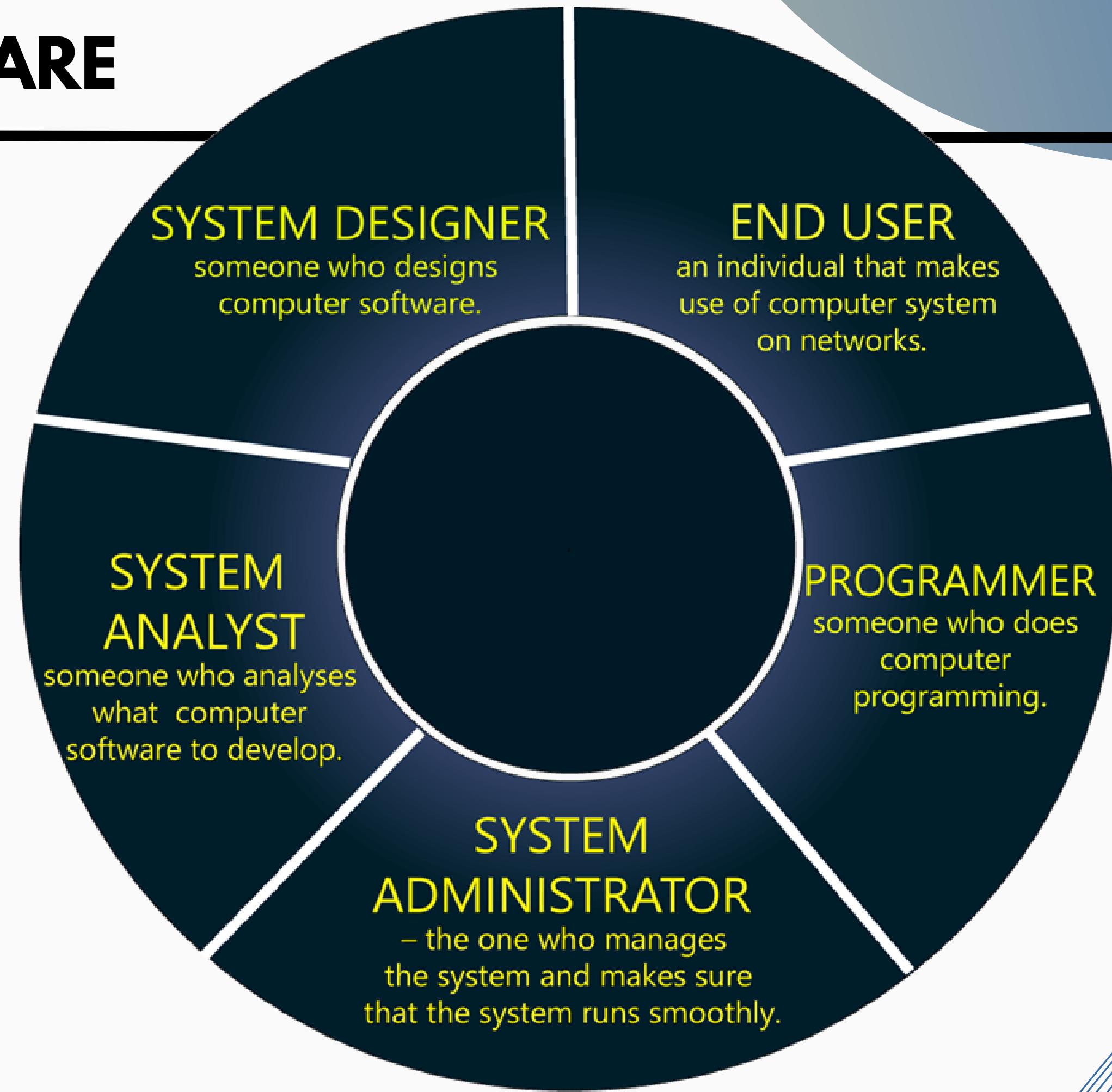
1. **Disk defragmenter** – makes sure your computer is using its disk optimally so you need to defragment disk once in a while.
2. **Antivirus** – examines RAM for viruses , parasitic programs that can delete or scramble files or replicate.

4 COMPUTER COMPONENTS IN A COMPUTER SYSTEM

PEOPLE WARE

People ware refers to people who work with the computer so that it can be used to find solutions to problems and also refers to the person who uses the information generated by the computer.

PEOPLE WARE



4 COMPUTER COMPONENTS IN A COMPUTER SYSTEM

DATA WARE

Data ware generally refers to software and systems used for data management, such as databases, data warehouses, data analytics tools, and related software applications. These tools are used to store, organize, manipulate, and analyze data.

4 COMPUTER COMPONENTS IN A COMPUTER SYSTEM

DATA WARE

Data is a collection of values. Those values can be characters, numbers, or any other data type. If those values are not processed, they have little meaning to a human. Information is data that was processed so a human can read, understand, and use it.

Information – a collection of data that is understandable to humans.

EXAMPLE OF DATA

UT, 1234, Joe, Circle, SLC, 8015553211, 84084, Smith

In this example, the original data appears to be a set of random words and numbers, separated by commas.

EXAMPLE OF INFORMATION

Joe Smith

1234 Circle

Salt Lake City, UT 84084

(801) 555-3211

