

Notes - ICS20

1. Computer Hardware

2. Computer Data

- Computer data is information required by the computer to be able to operate. It is used to:
- Run programs - This is the actual executable program data that the computer will execute to run the program such as Microsoft Word.
- Store program or system configuration information.
- Store information that the computer user needs such as text files or other files that are associated with the program the computer user is running. A common example of a program the computer user is running is the Microsoft Office suite of products which include Microsoft Word, Microsoft Excel, and others. These programs are also known as applications.

3. Computer Hardware

- The term computer hardware refers to the various electronic components that are required for you to use a computer along with the hardware components inside the computer case. As you know your computer equipment is made of several common components. These include:
 - The main computer box.
 - A monitor - Looks like a television screen.
 - A keyboard.
 - A mouse.
 - Speakers.
 - An optional printer

The main computer box is the main component of the computer. It has computer hardware parts inside that perform the following functions:

- Temporary storage of information (known as data in more technical terms) - This function is done by memory.
- Permanent storage of information - This function is done by a hard disk, floppy disk, or CD ROM.
- Manipulation or processing of data - Used to determine where data is stored and perform calculations which support operations that the user is doing.
- Interfacing to the outside components or to the outside world - This supports the ability for the user to communicate with the computer and know how the computer is responding to commands which are done primarily through the monitor, keyboard, and mouse along with their interface components in the main computer box.
- A power supply which provides the electrical power to the components in the computer box.

4. Hardware and Software

- The term hardware describes the physical parts of your computer which you can physically touch or see such as your monitor, case, disk drives, microprocessor

- and other physical parts.
 - The term software describes the programs that run on your system (OS/programs)
 - BIOS - how everything integrates with the physical box.
5. The nature of the Network
 - From the cables/hardware to the cloud - information is moved around electronic systems.
 6. The internet
 - The word internet is used to describe a network of networks which incorporate a very large and complicated set of equipment.
2. Operating System
 1. The operating system is the core software component of your computer. It performs many functions and is, in very basic terms, an interface between your computer and the outside world (usually through drivers).
 2. How it works
 3. How it can be abused
 3. Applications
 1. Applications are programs that are installed. on computers to give users the ability to do specific tasks.
 2. How they work
 3. How they can be abused
 4. Files
 1. Files are a collection of data onto a permanent storage structure.
 - What they do
 - Characteristics (name, extension, size)
 - type (linked with extension)
 - Date modified
 2. File management
 5. Security
 1. Viruses/Worms
 2. Trojans
 3. Malware in general (websites/files)
 4. How to secure your box
 - [firewalls](#)
 - [virus/malware scanners](#)