INFORMATION SHEET No. 1.1

Types of Computer

Learning Objectives: After reading this information sheet, the trainee is expected to:

1. Identify the different types of computer.
2. Recognize the function/use of each type of computer
3. Appreciate the important role of each type of computer in the community

When people think “computers,” usually it’s something like a laptop or your office computer that comes to mind. Computers are actually all around us, and can be broken down into separate categories depending on their size and processing power.

So what are these categories of computer types? There are four main ones: supercomputers, mainframe computers, minicomputers, and finally microcomputers.

1. Supercomputer

The most powerful computers in terms of performance and data processing are the Supercomputers. These are specialized and task specific computers used by large organizations. These computers are used for research and exploration purposes, like NASA uses supercomputers for launching space shuttles, controlling them and for space exploration purpose.

The supercomputers are very expensive and very large in size. It can be accommodated in large air-conditioned rooms; some super computers can span an entire building.

Popular Supercomputers

IBM’s Sequoia, in United States
Fujitsu’s K Computer in Japan

IBM’s Mira in United States
IBM’s SuperMUC in Germany
NUDT Tianhe-1A in China

2. Mainframe Computer

Like supercomputers, mainframe computers are huge, towering machines with lots of processing power. Mainframe computers are mostly used by corporations, government agencies, and banks – organizations that need a way to store large quantities of information. They are not the same as supercomputers. The processing capabilities of mainframe computers are measured in MIPS, or millions of instructions per second. Mainframes are also used as e-commerce servers, handling transactions over the internet.

Popular Mainframe Computers

Fujitsu’s ICL VME
Hitachi’s Z800

3. Minicomputer

Minicomputers are used by small businesses & firms. Minicomputers are also called as “Midrange Computers”.

These are small machines and can be accommodated on a disk with not as processing and data storage capabilities as super-computers & Mainframes**.** These computers are not designed for a single user. Individual departments of a large company or organizations use Mini-computers for specific purposes. For example, a production department can use Mini-computers for monitoring certain production process.

Popular Minicomputers

-K-202 - SDS-92

-Texas Instrument TI-990

- IBM Midrange computers\

1.Microcomputer

Microcomputers are smaller computers that run on microprocessors in their central processing units. They are much, *much* cheaper than supercomputers, mainframe computers and even minicomputers, because they're meant for everyday uses that are more practical than professional. The range of capabilities for microcomputers are still vast, though.

Microcomputer can be classified as:

1. Desktops – It is more convenient to be able to connect peripherals like screens and keyboard and computer mice that fit your needs. In this sense, desktop computers could be used at the office for professional tasks, or at the home. Desktop computers can be specialized for things like gaming as well, equipped with high-end graphics cards and more RAM.

2. Portables

Laptop: - This computer is similar to a desktop computers but the size is smaller. They are expensive than desktop. The weight of laptop is around 3 to 5 kg.

Notebook: - These computers are as powerful as desktop but size of these computers are comparatively smaller than laptop and desktop. They weigh 2 to 3 kg

Tablet: A flat, keyboard-less screen (though some of them come with keyboard attachments) that utilizes touch-screen functionality for navigation and use.

3. Hand-helds They are also called as personal Digital Assistant (PDA). These computers are small in size. They can be held in hands. It is capable of doing word processing, spreadsheets and hand writing recognition, GAME playing, faxing and paging.

Handheld game console: Devices like the Game Boy, Game Boy Color, Game Boy Advance, Sega Nomad, PlayStation Portable (PSP), and PlayStation Vita are handheld game consoles. Just like regular consoles, these are tiny computers that let people play games on the go.

Cellphones and smartphones: The iPhone and the Samsung Galaxy are examples of powerful smartphones that are also mobile computers.

elf-check 1.1

Identify what is being describe in each statement. Write the answer on separate sheet of paper.

1. They are smaller computers that run on microprocessors in their central processing units.
2. These computers are used for research and exploration purposes, like for launching space shuttles, controlling them and for space exploration purpose.
3. A flat, keyboard-less screen (though some of them come with keyboard attachments) that utilizes touch-screen functionality for navigation and use.
4. They are huge, towering machines with lots of processing power that are mostly used by corporations, government agencies, and banks – organizations that need a way to store large quantities of information.
5. These are small machines and can be accommodated on a disk with not as processing and data storage capabilities as super-computers & Mainframes.

6. It is more convenient to be able to connect peripherals like screens and keyboard and computer mice that fit your needs.
7. This computer is similar to a desktop computers but the size is smaller and more expensive.

What are the classification of Microcomputers?

8.
9.
10.

Direction: Utilizing the Internet and the website YouTube, view a video regarding parts of the computer. Use the URL below:

https://www.youtube.com/watch?v=uD0acIhi8xE

INFORMATION SHEET No. 1.2

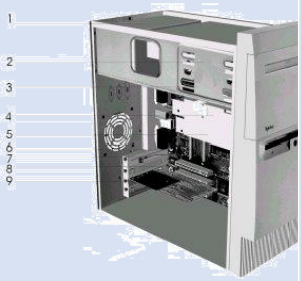
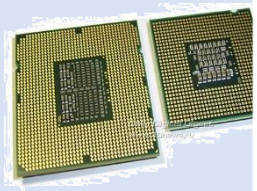
Computer Parts and Peripherals

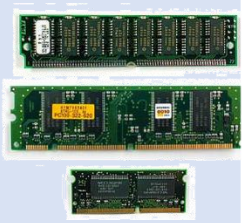
Learning Objectives: After reading this information sheet, the learner is expected to:

1. Know the different parts and peripherals of computer
2. Identify the use of each computer parts and peripherals
3. Value the importance of each parts and peripherals in the computer system

As an aspiring computer technician, it is very important to know the different components of a computer system. These are the hardware, software and peopleware. Each component plays an important role, without each other computer systems will not work properly.

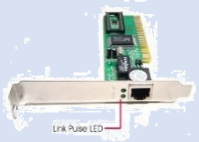
Computer parts are the most common hardware in a desktop computer system.

System unit Case –A **computer case** (also known as a computer chassis, enclosure, or housing) is the enclosure that contains most of the components of a computer.		**CPU (Central Processing Unit) – also known as processor,** respon sible for interpreting and executing most of the commands from the computer's hardware and software.	

Power Supply Unit- (**PSU**) is connected to 220 volts AC and provides 5 – 12 volts DC.		**Motherboard –** a part of the computer to which every other component is connected.	
Hard disk – stores and provides relatively quick access to large amounts of data on an electromagneti cally charged surface or set of surfaces.		**RAM (Random Access Memory) –** measured in MB, GB where the operating system, application programs, and data in current use are kept so that they can be quickly reached by the computer's proces sor.	

Computer peripherals are add-on hardware to the computer to expand its abilities or improve its performance. A peripheral device is any component or piece of equipment that expands a computer's input, storage, and output capabilities. Peripheral devices serve specific purpose, enhance a computer's functions, or add new service or additional resources.

Speaker – plays sounds transmitted as electrical signals from the sound card		**Printer -** an output device that produces text and graphics on paper.	
Microphone - a device that converts		**Scanner -** it is an input device that	

sounds to electrical signals by means of a vibrating diaphragm		reads text or illustration printed on paper, translates the information into a form that a computer can use	
Joy Stick - a hand-held control stick that allows a player to control the movements of a cursor on a computer screen or a symbol in a video game		**Modem –** an electronic device that connects computers via a telephone line, allowing the exchange of information	
Optical Drive – (CD/DVD ROM) a disk drive that uses laser light or electromagnetic waves near the light spectrum as part of the process of reading or writing data to or from optical discs.		**Video Card or Graphic Card -** device used to produce the display images on the computer screen	
Sound Card – allow the user to hear sounds played by the OS and programs.		**Network Card –** enables computer to physically connect to a local area network	

INFORMATION SHEET No. 1.3

System Unit and Its Parts

Learning Objectives: After reading this information sheet, the learner is expected to:

1. Understand the use of system unit
2. Operate system unit and its parts properly

3. Practice Occupational Health and Safety Procedure when using the System Unit

A system unit is the part of the computer that houses the primary devices that perform operations and produce results for complex calculations. It includes the motherboard, CPU, RAM, and other components, as well as the case in which these devices are housed. This unit performs the majority of the functions that a computer is required to do.

The term system unit is generally used to differentiate between the computers itself and its peripheral devices, such as the keyboard, mouse and monitor.

A system unit is also known as the chassis, or a tower in layman's terms.

The system unit holds the system devices that perform calculations as requested from the input device, which can range from a microprocessor to a capacitor or system clock.

Every system device has its own function. The system unit includes the electronic equipment that interacts simultaneously in order to perform calculations and transfer the results to the corresponding input and output devices.