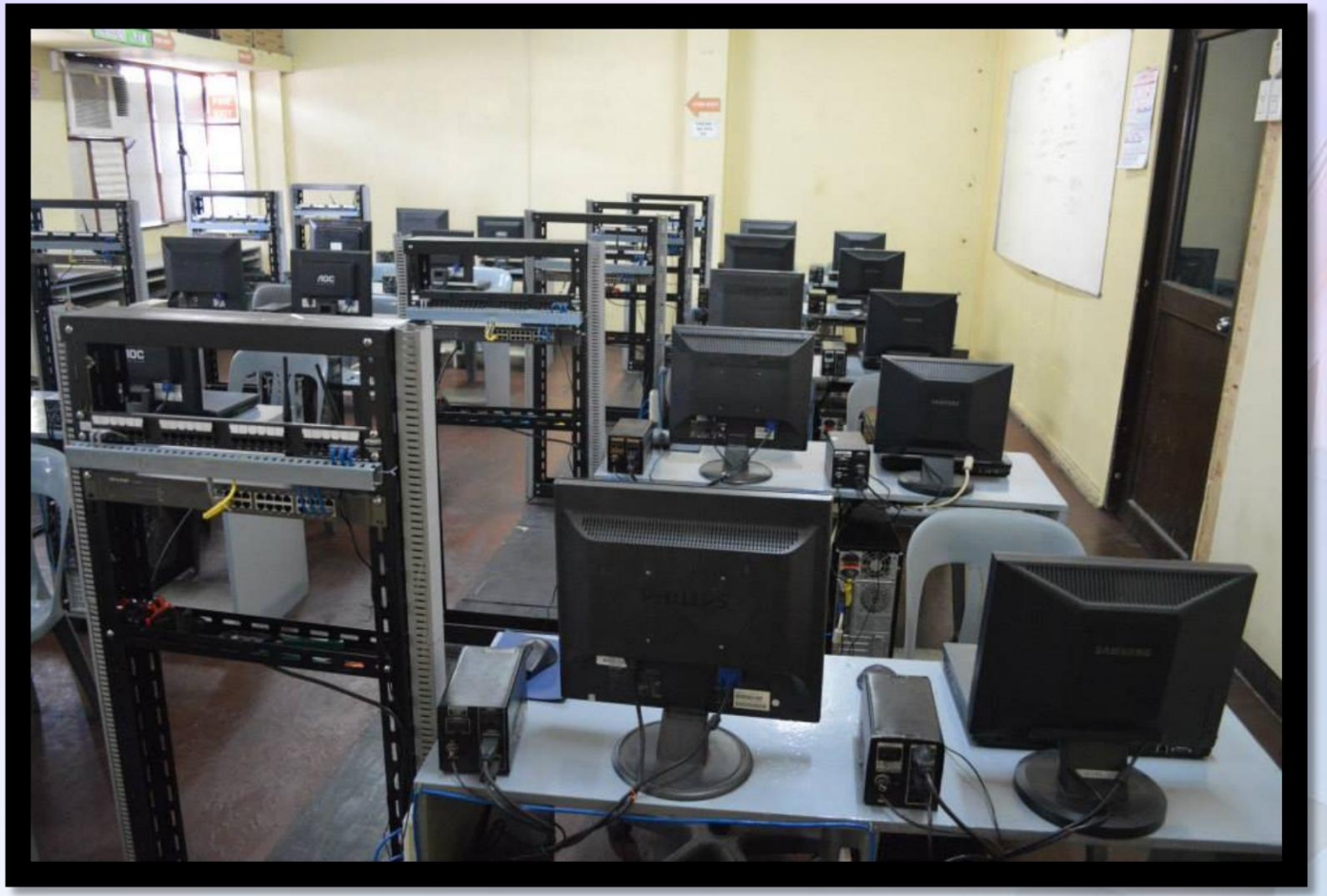
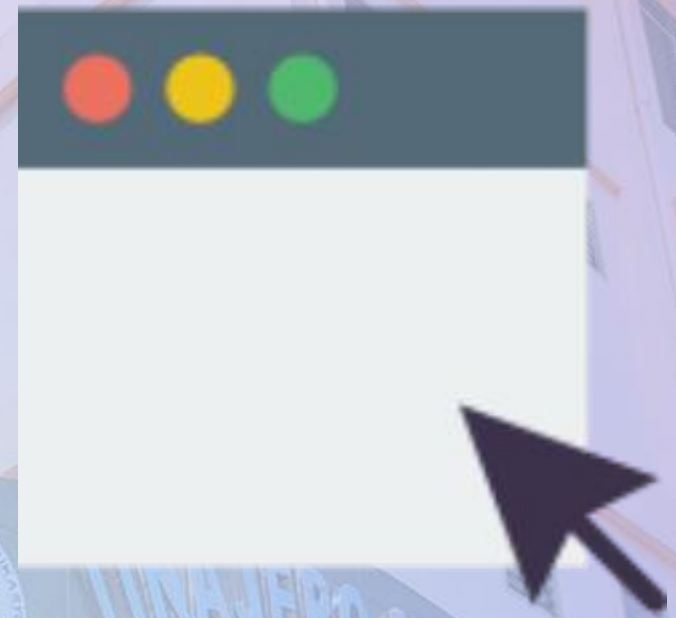


Computer Systems Servicing NC II

- Installing Operating Systems
- Device Drivers
- Application Software's

LESSON 2: Installing Operating Systems

When you open a computer, usually this will either be a Windows PC or a Macintosh computer. They will have different user interfaces or applications that may be specific to that computer. The Windows or the Mac are called *operating systems.*



The **Operating System (OS)** is a layer of software which is used to manage computer resources. It also provides an interface, so that users can utilize computer resources. It configures and manages hardware to connect the components and the applications.

TOPIC 1: Different Operating Systems

The three most popular operating systems are **Windows, MAC**, and **Linux**.

- Windows is the dominant over the other two. 90% of computer users use Windows operating system.

- Windows and MAC are expensive operating systems however, MAC OS requires the users to buy the MAC systems (Macbook, Mac) built by Apple.

- On the other hand, Linux is a free operating system.

- Windows and MAC have similar file structures while Linux has a different code base (single file tree compared to Windows and MAC's many directories)

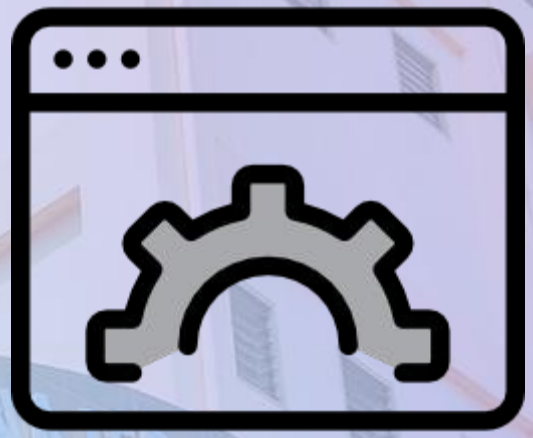
- Windows interface has a Start menu, Taskbar, System Tray, and the Windows Explore while Linux has easy to switch interfaces.

- Linux is most preferred by programmers, MAC is preferred by graphic artists, and Windows is perferred by gamers.

LESSON 3: Installing Device Drivers

This is an essential step that you need to be aware of after installing an operating system. Basically, the device drivers tell your operating system how to use the components like the motherboard, graphics card, network interface cards, sound cards, and other devices.

Most of the time, Windows would be able to recognize a device and will install drivers automatically. Some cases would require to install generic drivers.

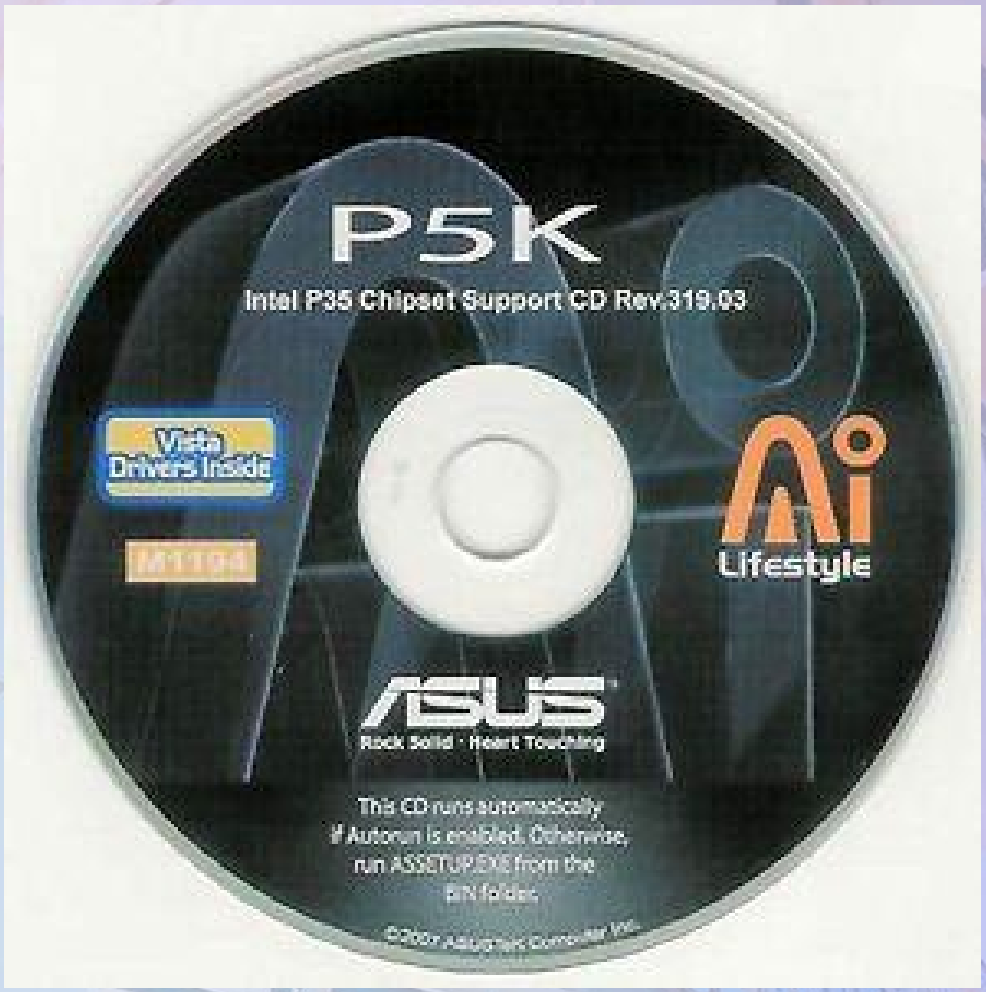


Drivers – small software programs that help the operating system use the device. When a device is malfunctioning, one should ask whether the right driver has been installed.

LESSON 3: Installing Device Drivers

There are several ways to install device drivers for your newly installed components:

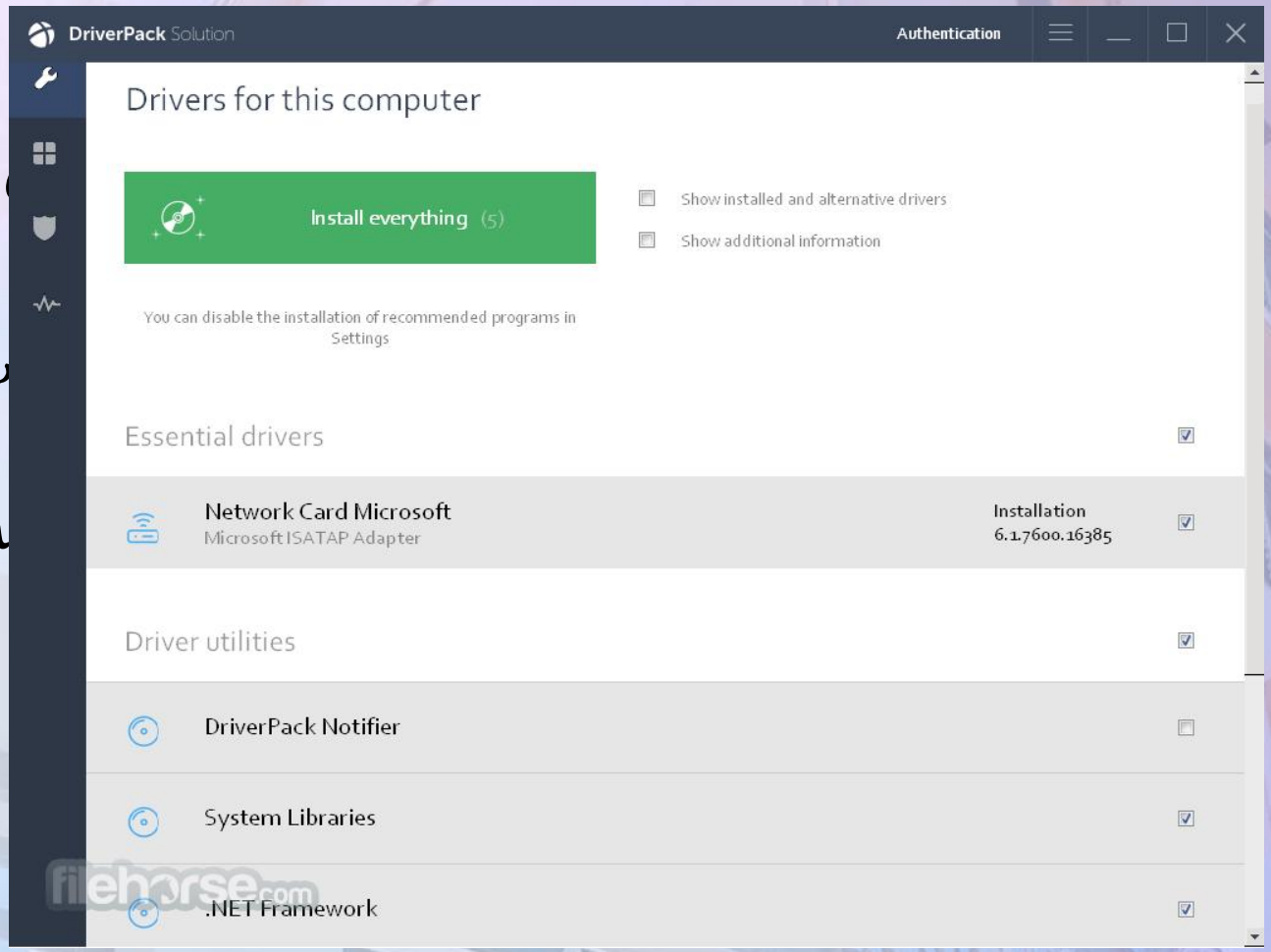
1. Manufacturer's DVD Installer – Provided upon buying a computer, laptop, device



LESSON 3: Installing Device Drivers

There are several ways to install device drivers for your newly installed components:

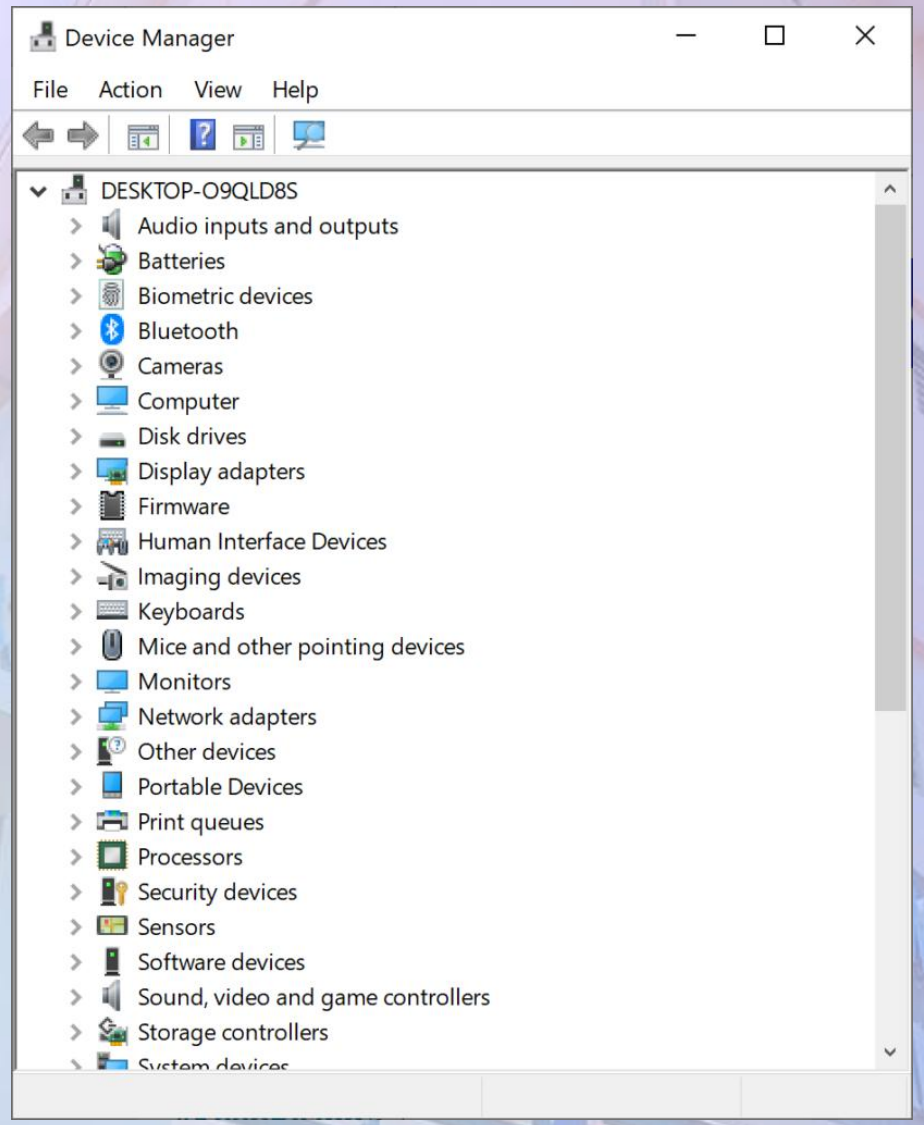
2. Driverpack Solution – A free tool which automatically finds proper drivers for a computer, then downloads and installs it without wizards or installation prompts.



LESSON 3: Installing Device Drivers

There are several ways to install device drivers for your newly installed components:

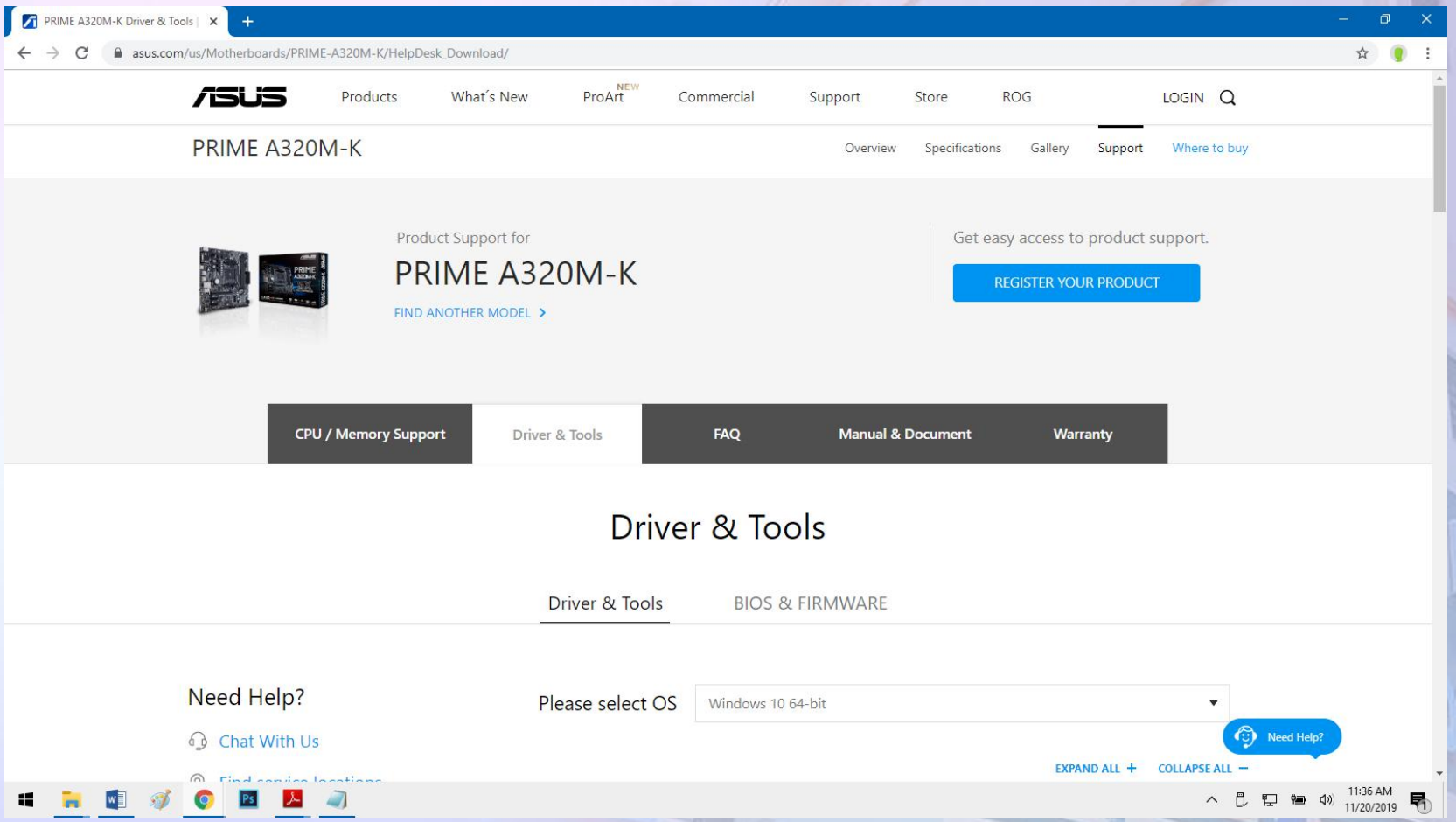
3. Device Manager (Driver Update) – Can be accessed by clicking Start > Computer > Manage > Device Manager. From here, each component can have the option to install a driver through a CD or through searching automatically online.



LESSON 3: Installing Device Drivers

There are several ways to install device drivers for your newly installed components:

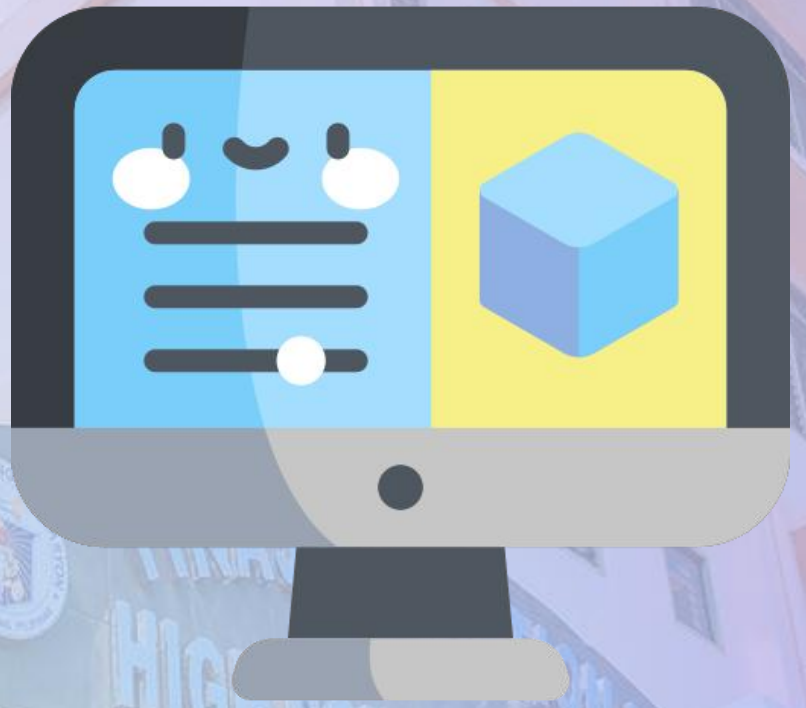
4. Download Online – Look for unit's Model Name and Number



LESSON 4: Installing Software

Software is basically the instructions and programs that tells the computer to run different tasks. It can be categorized into system or OS, application, and programming.

System/Operating System - tells the CPU what to do. The most common types of operating systems are MS DOS Windows, MAC OS, and Corel Linux.

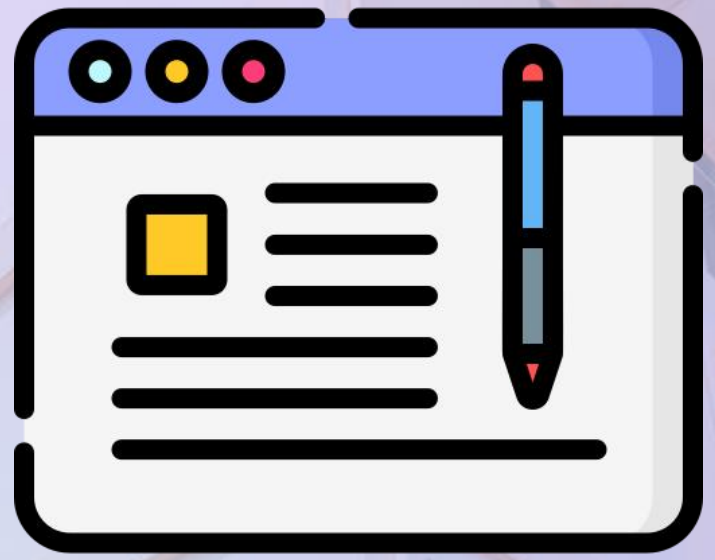


Application - assigned to perform specific functions / tasks on the computer.

Programming - it is development of various sets of instructions for a computer to do a task. Different programming languages can be used to carry out a certain task and to let the computer operate smoothly.

TOPIC 1: Establishing Installation Procedure

Installer – computer program that installs files, such as applications, drivers, software onto a computer.



Installation (setup) of a computer program is making a program ready for execution or user access. This process may varied depending on the program, type of computer, computer operating system, etc.

TOPIC 1: Establishing Installation Procedure

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Common Windows Installer File Extension:

Executable – .exe

Microsoft Windows Installation – .msi

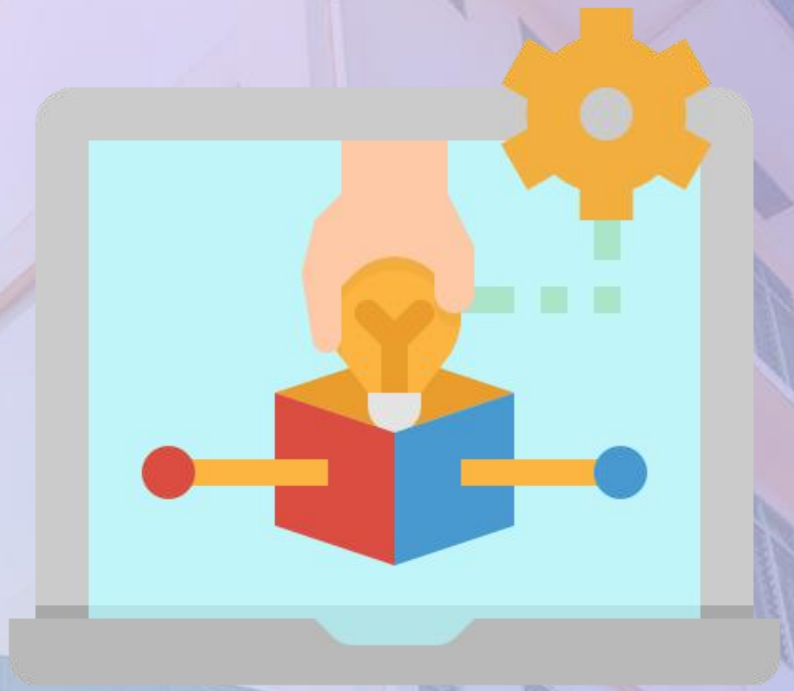
Compressed Zip File – .zip

ISO image – .iso

TOPIC 2: Types of Software

System Software

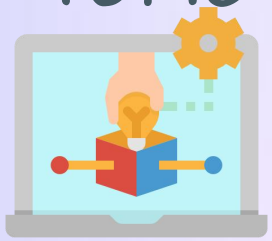
Also known as Operating System. It tells the CPU what to do.
Most common examples include Windows, MAC OS, MS-DOS and Linux.



Application Software

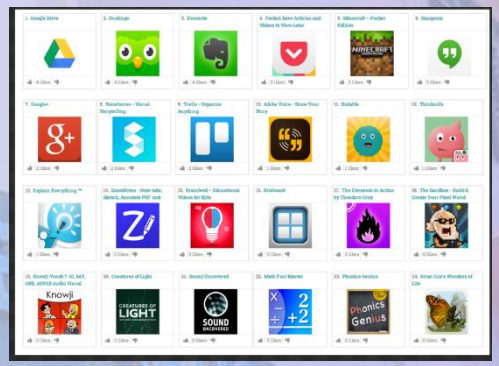
It accomplishes specific tasks intended for personal, business, or scientific purposes. Example tasks include inventory management, payroll processing, human resource management, etc.

TOPIC 2: Types of Software



Common Application Software:

- Word Processor
- Spreadsheets
- Database Programs
- Presentation Software
- Desktop Publishing Software
- Reference Software
- Graphics Programs
- Educational Software
- Computer Games
- Network Software
- Language Software



Programming Software

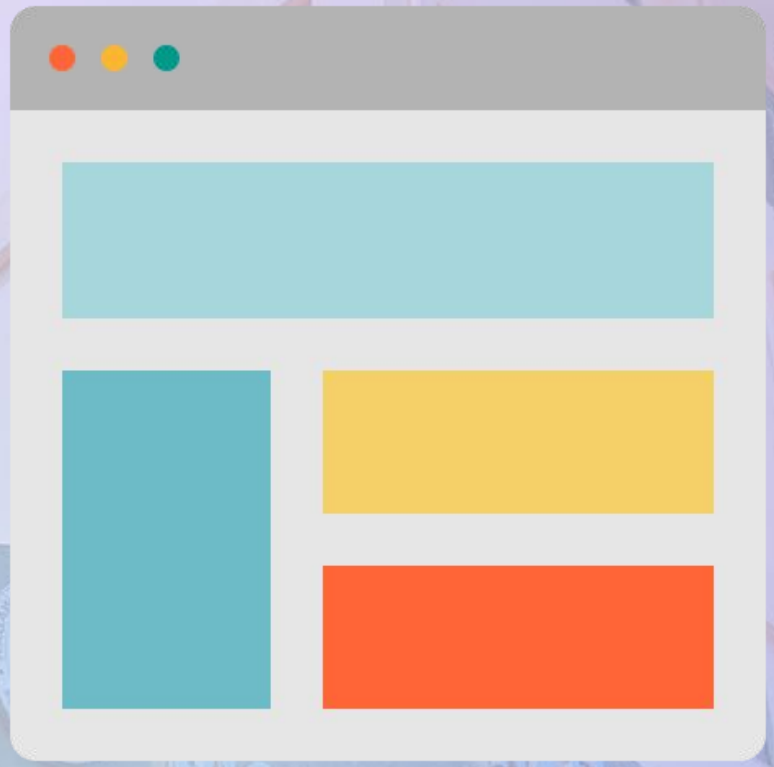
- Used to make computer programs. Programming language is used to create computer programs.

- Eclipse
- Coda
- Notepad ++
- Sublime Text

TOPIC 3: File System Types/Formatting

File System – A program used by the operating system to organize data or application files.

The type of file system is used to determine how data and programs will be accessed. In addition to that, it can also control what data or programs will be available to users.



Types of File System

1. FAT File System

File Allocation Table Type allows the operating system to look for files on a disk.

2. FAT32 File System

More advanced version of the FAT File System. It can partition size as well as access speed. Because of this, FAT32 allows users to have better disk space utilization.

3. ExFAT

Stands for Extended File Allocation Table. A file system type that can be used for memory sticks and SD cards.

4. NTFS File System

New Technology File System. Compared to FAT and FAT32, NTFS has a much bigger partition and file size. It is a highly reliable file system type because it is recoverable. It also has fault tolerance which means that logged transactions can be used to recover data.

TOPIC 3: File System Types/Formatting Storage File System Formatting

Follow the guidelines to format the file system in a storage.

1. By default, formatting is set to FAT.
   - If you try to format an internal hard disk that is smaller than 32 GB, you will see the options for NTFS, FAT and FAT32.
   - If you try to format an internal hard disk that is larger than 32 GB, you will only see the option for NTFS.
   - If you try to format an external USB device smaller than 32 GB, you will see all the options.
   - If you try to format and external USB device larger than 32 GB, you will only see NTFS and exFAT.

2. Devices smaller than 32 GB should be formatted in FAT or FAT32 for more reliability and less disk space wastage.

3. Files larger than 32GB should be formatted in exFAT for latest operating systems.

4. For other compatible devices and other operating systems, files larger than 32 GB should be formatted using NTFS.

TOPIC 3: File System Types/Formatting
Common File Formats

The following are the most common file formats that you will encounter when working in a computer.

File type	File extension
Text	.doc .docx .asc .rtf .msg .txt .wpd .wp s
Image	.jpg .gif .png .bmp .eps .pict .psd .tif
Sound	.mp3.aac .au .mid .ra .snd .wma .wav
Video	.mp4.avi .mpg .mov .wmv
Program	.exe .bat .com
Compresse d	.arj .gz .hqx .rar .sit .tar .z .zip .arc