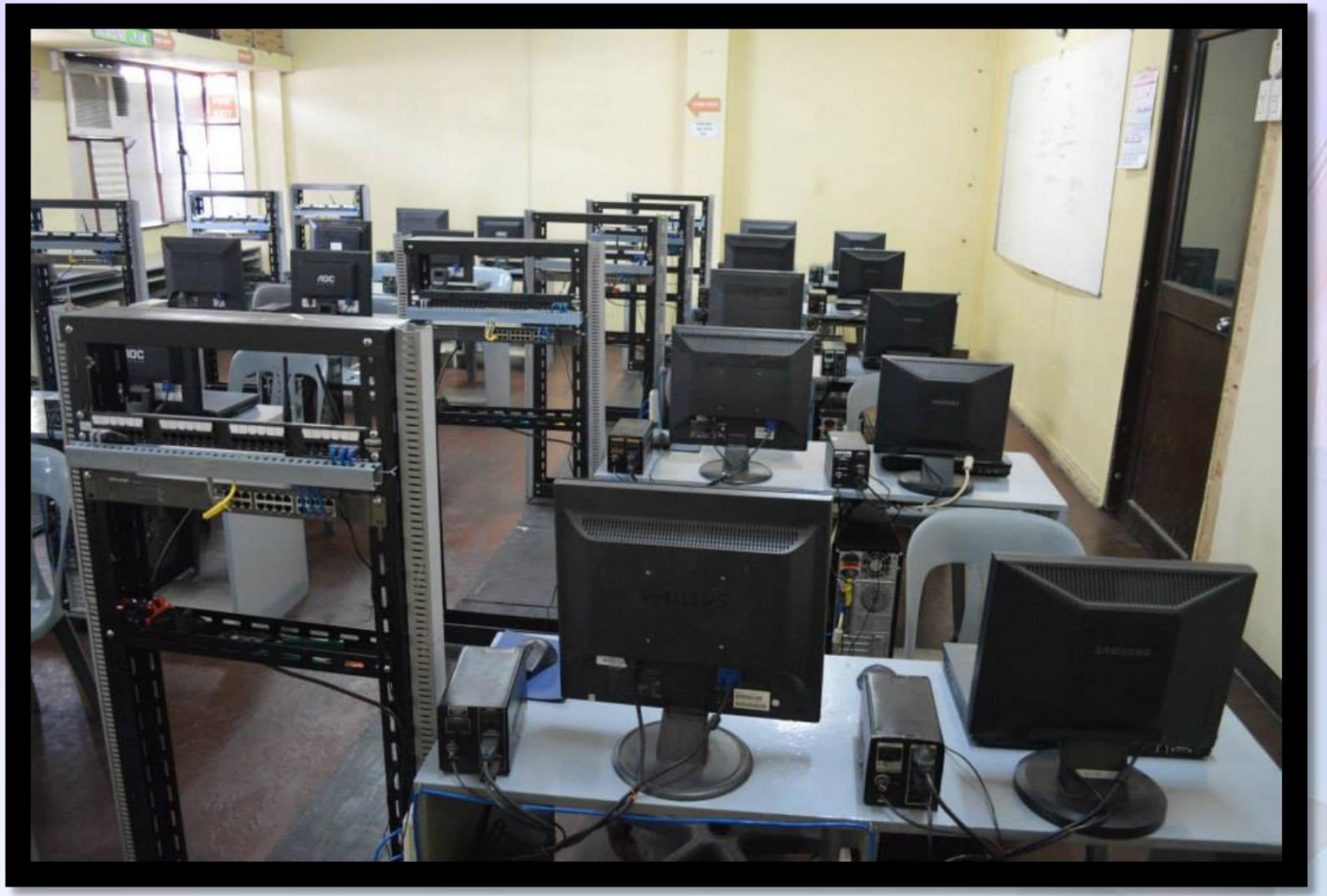


Computer Systems Servicing NC II

- LESSON 5: Conducting Tests

LESSON 2: Installing Operating Systems

After installing hardware and software, it is important that we make sure that the computer runs perfectly.

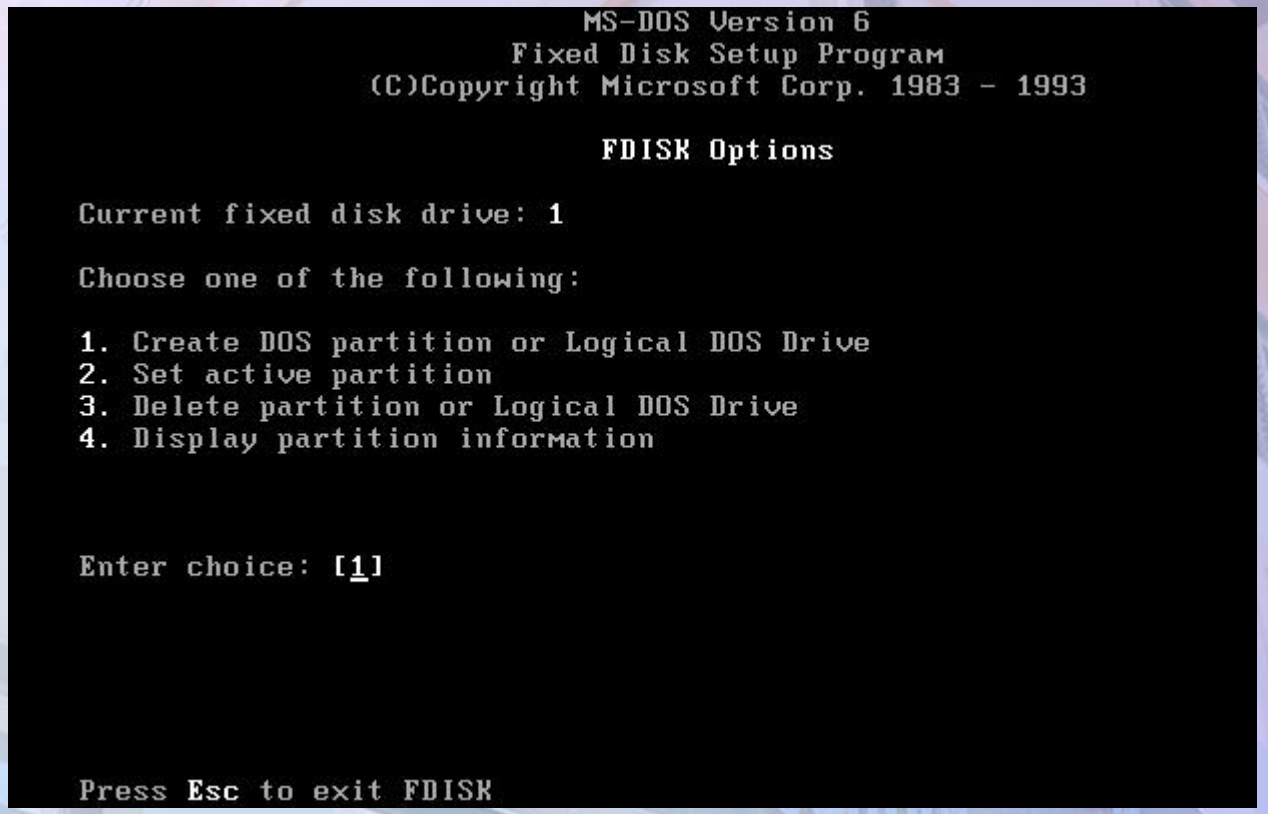
Testing the computer through stress tests is a good example to check if there are remaining issues in the computer. There are procedures such as gathering test information, validating and responding to these may help in making sure that everything runs smoothly.

TOPIC 1: Software Tools/Disk Management Tools

The following are different disk management tools and procedures that can optimize a PC to its full performance as well as check errors/issues along the way.

fDisk

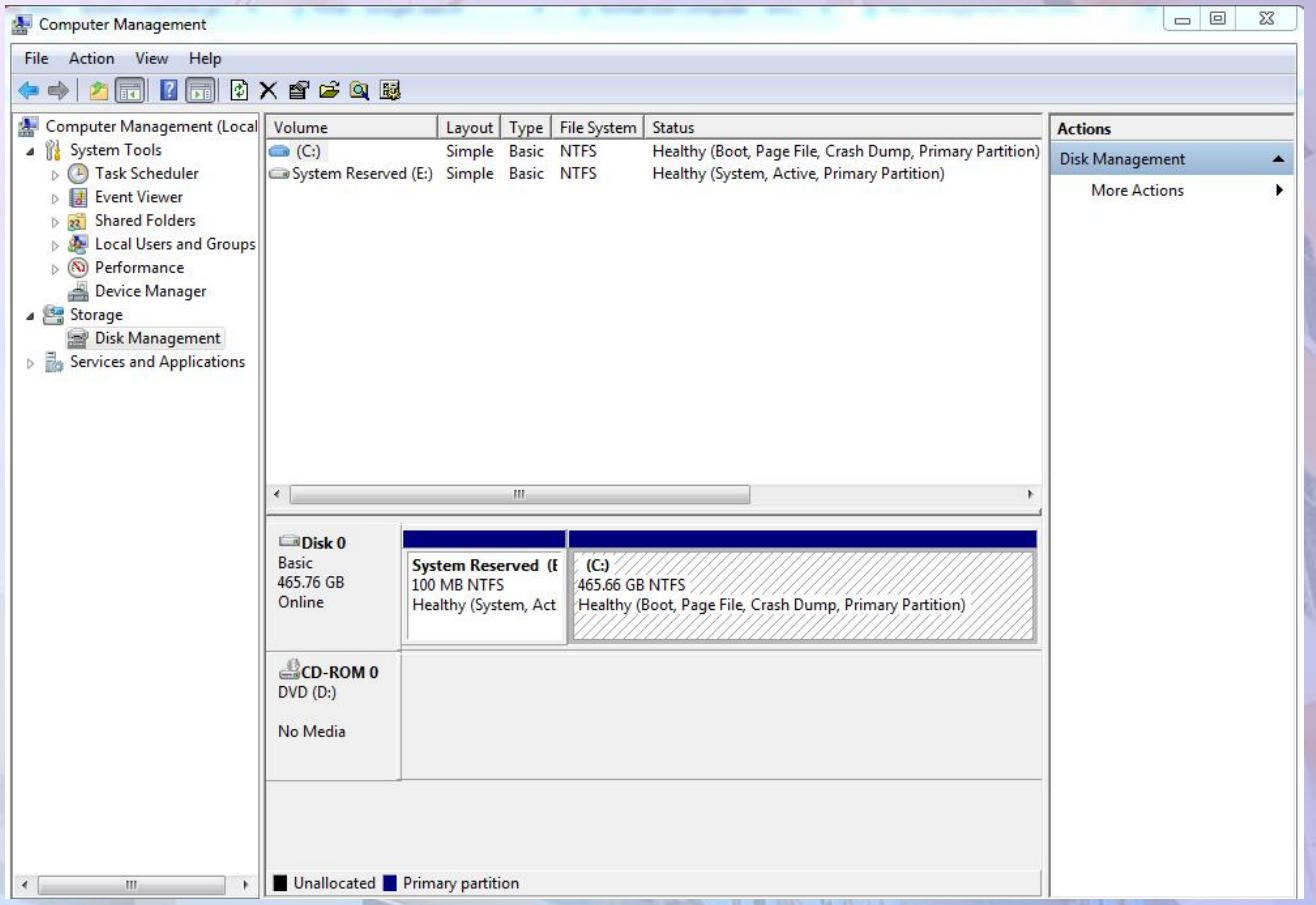
A command-line tool that creates and deletes partitions on a hard drive. It is available from Windows 2002 onwards. For newer units (from Windows XP onwards) the disk management tool is used.



TOPIC 1: Software Tools/Disk Management Tools

Disk Management Tool

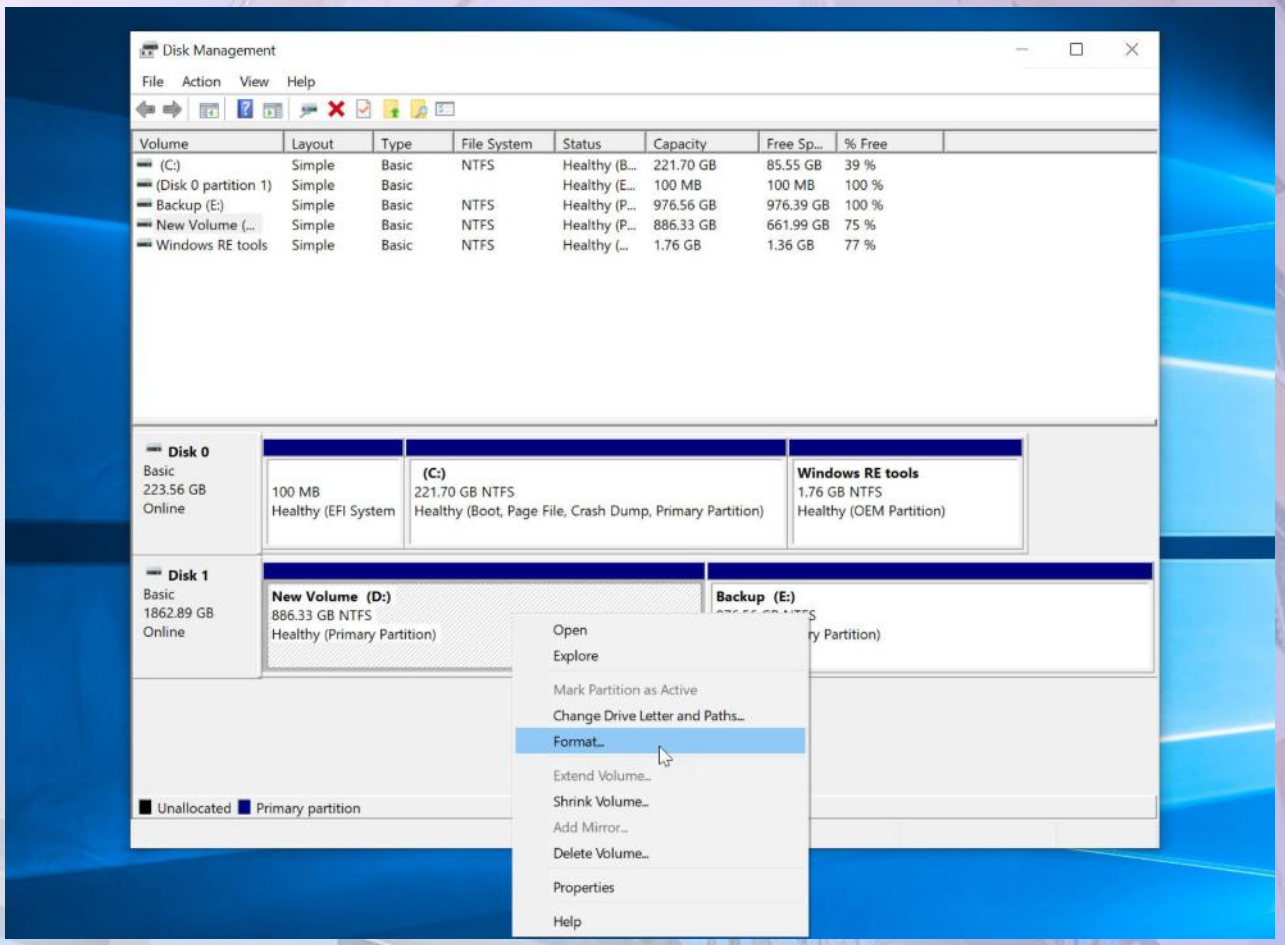
This is used to manage disks and drives (like internal and external hard drives), create partitions, and format devices This is used on newer versions of Microsoft Windows.



TOPIC 1: Software Tools/Disk Management Tools

Format

It is the process of preparing a data storage device (i.e. hard drive, USB drive, solid-state drive) to store information.



TOPIC 1: Software Tools/Disk Management Tools

ScanDisk or CHKDSK
Used to check integrity of files and folders in your unit. This can also be used to check the disk surface for physical errors.

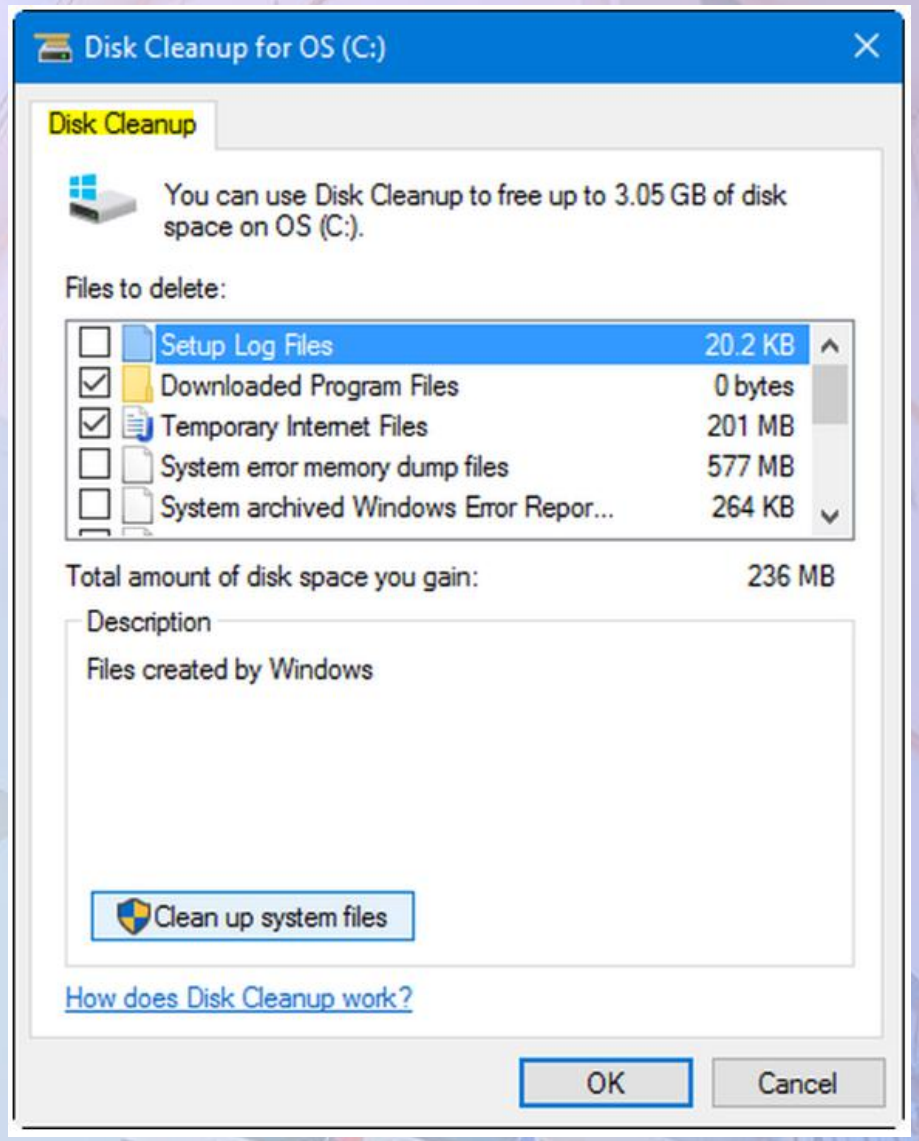
TOPIC 1: Software Tools/Disk Management Tools

Defrag
It optimizes space on hard drive and allow faster access to programs and data.

TOPIC 1: Software Tools/Disk Management Tools

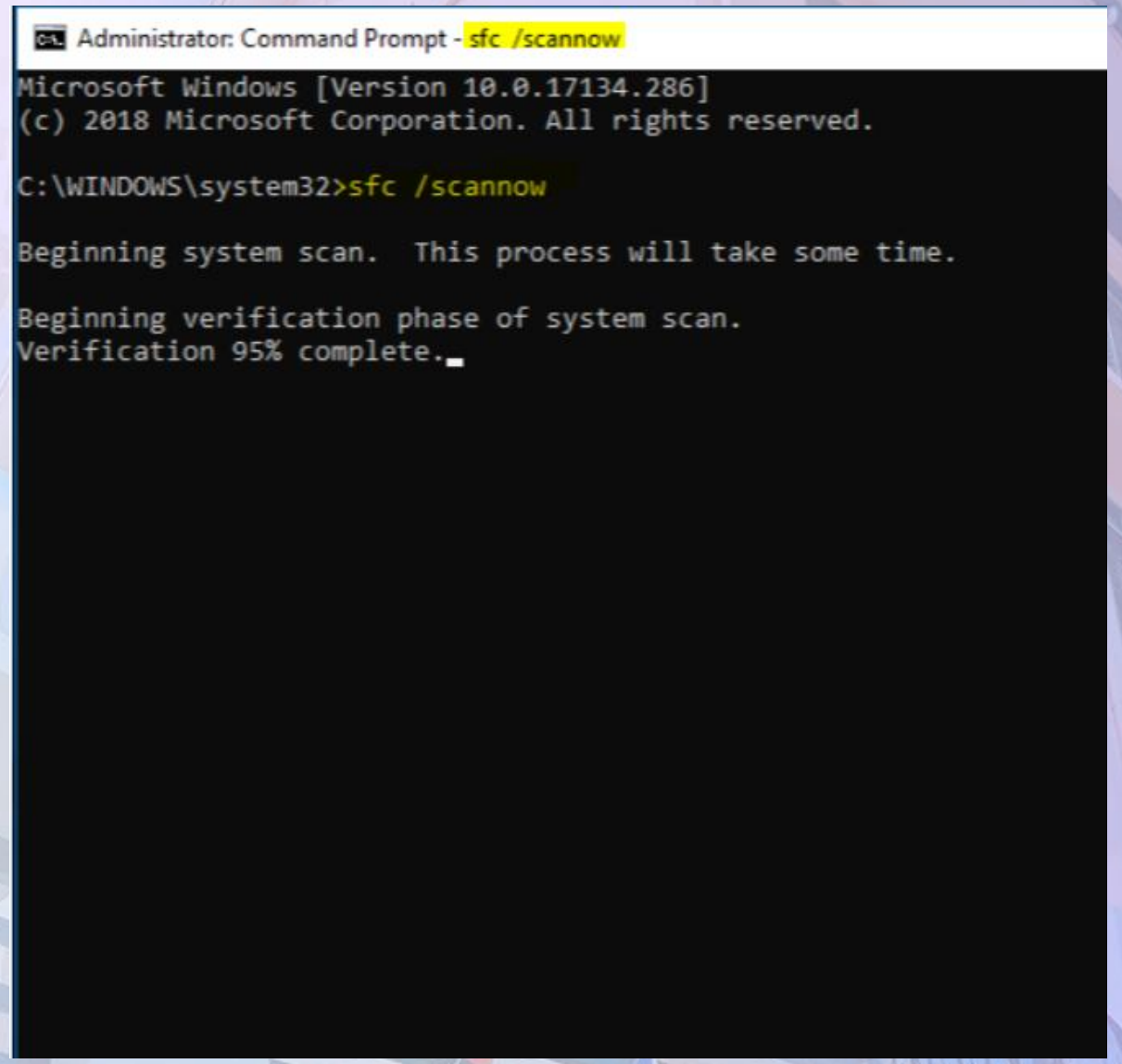
Disk Cleanup

A software utility for Windows that lets users remove files and speed up computer performance.



TOPIC 1: Software Tools/Disk Management Tools

System File Checker (SFC)
A tool in Microsoft Windows that allows users to scan and restore corrupt Windows system files. This is available in Windows 98 and later.



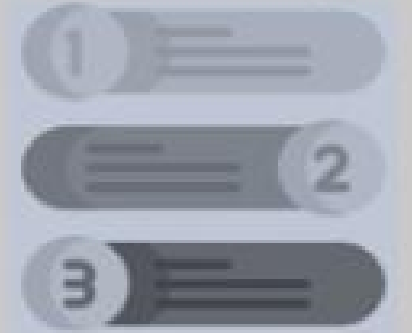
TOPIC 2: Testing Procedures

This is the basic testing procedure you will follow throughout.

1.Gathering test information.
2.Validating test information.
3.Responding to rest information.
4.Checking specification.

TOPIC 2: Testing Procedures
External Visual Inspection

- Basically, performing an **external visual inspection** involves quick visual observation of the exterior of the computer such as its devices and peripherals such as the monitor, keyboard, cables, etc.



TOPIC 2: Testing Procedures
External Visual Inspection

1 Turn off the computer, monitor, and other peripheral devices.

2 Check whether all cables are properly connected to the computer unit.

TOPIC 2: Testing Procedures
External Visual Inspection

3 Check whether peripherals and devices are properly connected or installed to the unit. Check whether it is properly connected to the power source.

4 Examine whether the keyboard and the mouse are firmly attached to the computer.

TOPIC 2: Testing Procedures
External Visual Inspection

5 If applicable, inspect whether network cables are properly linked to the computer

6 Check whether any devices connected to the serial and parallel port connectors are attached. The cables must be firmly attached to its appropriate connectors on the backs of the computer.

TOPIC 2: Testing Procedures
External Visual Inspection

7 Make sure that the video interface cable is firmly attached to the video connector on the back panel or to a video expansion card.

8 Check all external monitors whether there is need for repair or there are improper settings.

TOPIC 2: Testing Procedures
External Visual Inspection

9

Ensure that no keys on the keyboard are sticking.

10

Inspect all the controls and the indicators. Check the device for signs of physical damage.

TOPIC 2: Testing Procedures
External Visual Inspection

Does the inspection reveal any problems?

- If NOT, proceed to internal visual inspection.
- If YES, you should observe the boot routine.

TOPIC 2: Testing Procedures
Internal Visual Inspection

Before performing **Internal Visual Inspection**, make sure that all open files were saved and running application programs were closed.

1. Like in conducting external visual inspection, make sure that you have turned off the computer including its devices and peripherals. Disconnect all power cables and electrical outlets.
2. Remove the computer's right-side cover.
3. Examine whether all chips, expansion cards, and SEC cartridge and heat sink assembly or assemblies are fully seated in their sockets or connectors.
4. To ensure that chips are fully seated in their sockets, press firmly on the top of each chip.
5. Check whether all jumpers are set correctly.
6. Check whether all cable connectors inside the computer to verify that they are firmly attached to its right connection.
7. Reinstall the computer cover.

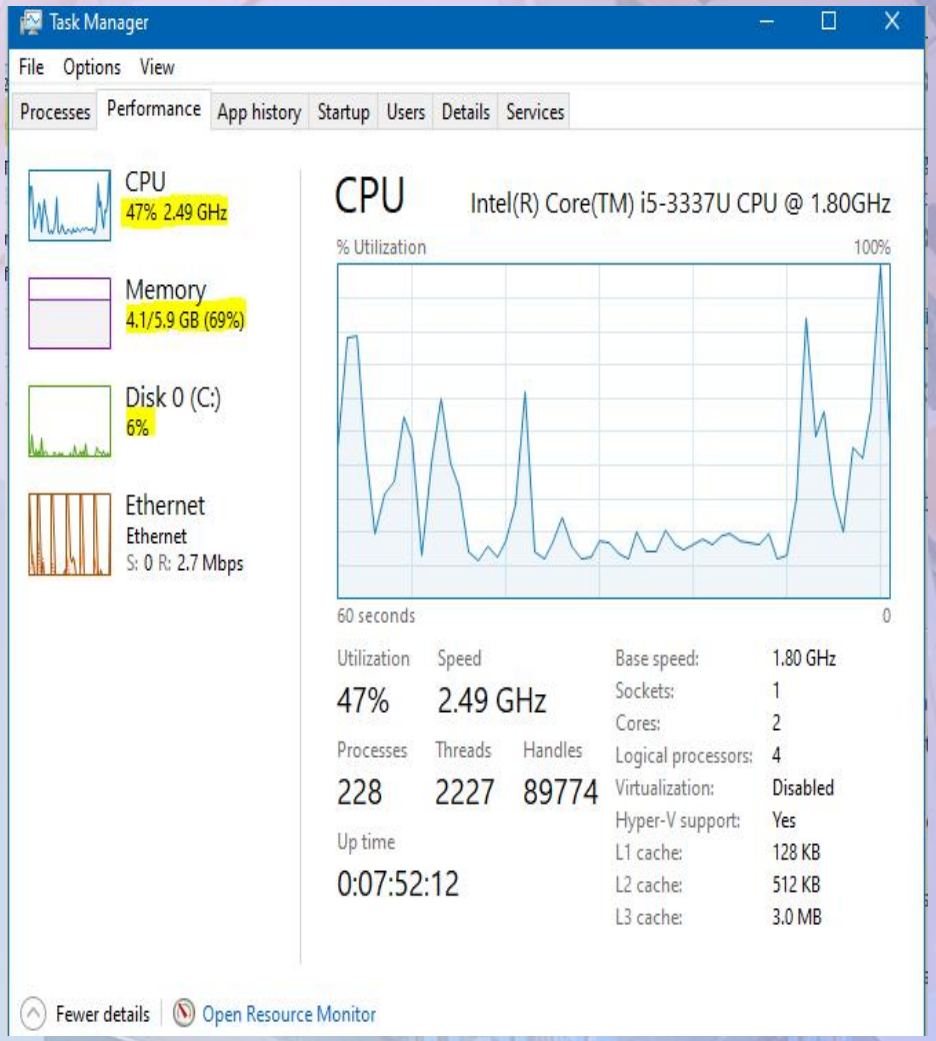
Reconnect the computer and any attached peripherals to their power sources, and turn them on.

TOPIC 3: Conducting Stress Test

Stress testing is a form of software testing that determines a system's stability, availability, and reliability.

It is used to determine the ***speed*** and ***effectiveness*** of a computer, network, software, or device.

Performance testing is checking the software whether it can cope up with the current system performance.



TOPIC 3: Conducting Stress Test

You can conduct stress test by monitoring your computer performance through the Task Manager (Just press CTRL + ALT + DEL keys to launch the Task Manager).

1. Close all open programs and launch the Task Manager.
2. Select "Performance" from the tabs.
3. Open as many applications as you can or perform many tasks.
4. Observe the computer's CPU Usage and Memory. The more RAM you have, the smoother it is to access programs.