

NIELIT Gorakhpur

Course Name: O Level (2nd Sem)

Topic: Antivirus

Subject: ICT

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Chapter 2nd [Utilities]

Virus:- A computer virus is malicious code that replicates by copying itself to another program, computer boot sector or document and changes how a computer works. In contrast, a computer worm is stand-alone programming that does not need to copy itself to host program or require human interaction to spread. Viruses and worms may also be referred to as malware.

A virus can be spread by opening an email attachment, clicking on an executable file, visiting an infected website or viewing an infected website advertisement. It can also be spread through infected removable storage devices, such USB drives. Once a virus has infected the host, it can infect other system software or resources, modify or disable core functions or applications, as well as copy, delete or encrypt data. Some viruses begin replicating as soon as they infect the host, while other viruses will lie dormant until a specific trigger causes malicious code to be executed by the device or system.

Worm :-A worm is like a virus in such a way that it can replicate itself on system. In fact, worms are considered to be a sub-class of the virus. However, unlike the virus, a worm does not need human interaction to be activated. It has the capability to replicate itself on system on its own, therefore consuming too much system memory or network bandwidth causing web servers, network servers, and individual computers to stop responding.

Trojan :-The Trojan Horse, or simply Trojan, is named after the mythological creature. Trojan Horses appear to be useful at first but will actually do damage once installed or run on your computer. Some Trojans are designed to be more annoying than dangerous while some may actually cause serious damage by deleting files and destroying information on your system. Trojans are also known to create a backdoor on your computer that gives malicious users access to your system, possibly allowing confidential or personal information to be compromised.

Compare of Virus, Worm and Torjan :-

Basis of compression	Virus	Worm	Torjan
Meaning	A computer program that connects itself to another program to cause harm to the computer system or network.	it eats resources of a system to bring it down rather than destructive actions.	It permits to intruder to obtain some confidential information about a computer network

Execution	Depends on the transfer of a file.	Replicates itself without any human interaction.	Downloads as software and executed.
Replication	Yes	Yes	No
Infection	Initiates by attending a virus to an executable file.	Utilize system or application weakness.	Attach itself to a program and interpret as useful software.
Remotely Controlled	No	Yes	Yes
Purpose	Modification of the information	Halt the CPU & memory	Steal the user information

Antivirus:- Antivirus software is a type of utility used for scanning and removing viruses from our computer. The primary purpose is to protect computers from viruses and remove any viruses that are found. Most antivirus programs include both automatic and manual scanning capabilities. The automatic scan may check files that are downloaded from the Internet, files that are created by software installers. The automatic scan may also scan the entire hard drive on a regular basis. The manual scan option allows you to scan individual files or your entire system whenever you feel it is necessary.

Since new viruses are frequently distributed, it is important to keep your software's virus database up-to-date. Fortunately, most antivirus programs automatically update the virus database on a regular basis.

While antivirus software is primarily designed to protect computers against viruses, many antivirus programs now protect against other types of malware, such as spyware, adware, and rootkits as well. Antivirus software may also be bundled with firewall features, which helps prevent unauthorized access to your computer. Utilities that include both antivirus and firewall capabilities are typically branded "Internet Security" software or something similar. Examples of common antivirus programs include Norton Antivirus, Kaspersky Anti-Virus, and ZoneAlarm Antivirus.

Assignment:-

- 1- Write difference between Virus, Trojan & worm.
- 2- What is the application of antivirus in computer?