What is Computer VIRUS ? Everything you need to know

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When I first read about computer virus, I was surprised to know it is not 'virus' – but VIRUS!

VIRUS is actually an acronym for ***Vital Information Resource Under Siege***!

Everyone says computer technology is changing every day – true – so are viruses changing and evolving every single day; thus it only makes sense we know a little about these mischief makers.

To help with the MCQs, I have italicized and bold-ended the proper terms.

Here we go:

What is a VIRUS?

It is actually a program, created by people who have knowledge to write software programs. In proper terms, it is called an '***executable program***', with bad intentions!

Viruses are a type of ***malware***, i.e., it is malicious software. You'll read about it some more later...

How does it work? (Or, how does it make out lives difficult!)

A come attached with another program, and once it is in our system and we execute our program- we run the virus too!

The virus ***replicates*** itself; that is multiplies when has attached itself to a computer through an infected program.

So, suppose we download an mp3 song from some suspicious looking website, and we do not have anti-virus software on our PC, in such a case a virus may get downloaded along with the mp3.

Once, the virus is in our computer, it then starts making copies of itself on our computer. So, you can imagine, once it replicates, it must need space, thus a virus uses up the hard disk space and that makes our PC/system slow and makes it *hang or crash*!

What other damages does it do? (-apart from crashing our PC and frustrating us?)

Depending on what the intention of the person programming the virus was, a virus can do many different types of damages, like :

(i) modification of data (*Transformers movie anyone?*)
(ii) files maybe overwritten with false information
(iii) files maybe damaged, so you can not open them anymore or work on them
(iv) it may even wipe out an entire drive!
(v) it may make your system to re-boot again and again
(vi) high threat viruses which target databases of big organizations and MNCs may

even leak top security information of the companies...

A Virus can be programmed to do anything, so its threat can be anything; it's a creepy virtual world out there!

Famous Viruses?

Yep, Viruses are sometimes accorded celebrity status too!

(i) First actual virus – ***Creeper*** (1970s), detected on ARPANET.
It displayed a message on the screen, "I am the creeper, catch me if
you can!"

(ii) First actual personal computer virus – ***Elk Cloner*** (1982), it affected Apple OS through a floppy and displayed a short poem!

(iii) First virus to hit Microsoft's DOS – ***Brain*** (1986)

(iv) Most destructive virus – ***MYDoom*** (January 2004)

(v) Most widespread and fast spreading virus – ***ILOVEYOU***, also known as the love letter! (2000)

Categories of Viruses?

Yes, Viruses are categorized based on what/where/how they affect.

(i)***File Virus/Parasitic Virus***: most of the viruses fall in this category. In this type the viruses come attached to a file, usually a file which is executable, i.e., it can be run.

(ii) ***Boot sector Virus***: these viruses, as the name suggest, affect the boot sector. Which means it will load before the operating system. It infects through floppy disks/ hard disks drives.

Imagine, a virus loading before the operating system does! This can only mean trouble!

(iii) ***Macro Viruses***: Macro programs consist of a set of commands which executes itself every time it is run. So, this type of virus affects a program/application/software's macros programming feature, to infect documents.

(iv) ***Multipartite Viruses***: spread and infect in multiple ways, they can effect the boot sector as well as infect documents/files. They can have multiple means of transmission and of infection.

6. What are worms, malware etc.?

(i) ***Malware*** – is the short for ***malicious software***, as the standard definition goes – is any software which can disrupt normal computer operation, gather sensitive information or gain access to private system.

It is also sometimes referred to as badware. Malwares are essentially of two types: (1) Viruses and (2) Worms.

(ii) ***Worms***: worms are like viruses in the sense that they do the same damages that viruses do, they also replicate themselves.

However the main difference being, it is a standalone malware – i.e., it does not need to attach itself to any host/executable file. It on its own actively transmits itself through a network and infects computers.

In other words for virus infection to happen, a user has to actually run the virus infected program, only then will the virus program run too. But worms spread by themselves!

(iii) ***Trojan horse***: This is my favorite malware as it is named on a very interesting piece of history which involves Achilles and his heel!

Also known as the Trojan, it is a malicious software which run without the knowledge of the user, to gather sensitive information.

Its specialty is it can run undetected, or when the system is shut down. It can encrypt/decrypt files and documents and transmit them to those who want it.

Trojan are disguised in the form of a legitimate and desirable program, that any user would without suspicion run. User thinks that the program it is running has nothing wrong with it, whereas the Trojan is secretly doing its work!

Trojan can also be called a '***Spyware***'; but it is NOT a virus. Why? Simply because Trojans do not replicate like viruses do!

(iv) ***Rootkits***: are programs that modify setting in the operating system to keep the malwares hidden from detection.

How can we keep viruses away?

By installing anti-virus softwares!

This is probably something every one you must have heard or seen or installed one yourself!

Anti-virus software protects your system by periodically scanning its files/documents/programs to check for hidden executable programs.

It works by searching for those which are a match to any pre-defined virus already stored in its virus definition file. When there is a match, the anti-virus tells you that your PC has been infected by 'so-and-so' virus, and will proceed to remove it.

If it finds that there exists a program which is suspicious, but the anti-virus does not know its name, then it'll ask you to take appropriate action.

Every other day new viruses are programmed and unleashed, and every other day thousands of e-mails are opened, movies/songs/files/softwares etc. are downloaded and these viruses find their way into out PCs.

That is why it is very essential for any PC to have an updated anti-virus all the time!

I hope this topic was informative and enjoyable!

Next time you run a virus scan on your PC, take some time and read the descriptions written alongside the viruses detected; some will be malwares, some worms and some Trojans!

Beware!

But keep learning and sharing knowledge and giving enthusiastic feedbacks!