BAL BHARATI PUBLIC SCHOOL, PITAMPURA, DELHI – 110034

SUBJECT: COMPUTER SCIENCE

CLASS - X

**CHAPTER - SOCIETAL IMPACTS OF IT
(VIRUS)**

Guidelines:

 Dear students, read the notes carefully and thereafter

Introduction:

In the last e-Lesson, we discussed about various ethical issues that threaten the safety of the cyber world. In this e-Lesson, we shall learn about one of the major threats, i.e VIRUS, in detail.

Subtopics

- VIRUS
- TYPES
- CHARACTERISTICS
- SYMPTOMS OF VIRUS ATTACK
- SPREAD OF VIRUS
- POSSIBLE DAMAGES

VIRUS

VIRUS stands for **Vital Information Resource Under Siege**. Virus is a harmful program, which enters a computer system and starts replicating itself and then corrupts the executable files and folders causing serious damage to the computer system. It may damage or corrupt data, change data or degrade the performance of your system by utilizing resources of computer such as memory or disk space.

The virus can also affect or attack any part of the computer software such as the boot block, operating system, system areas, files and application program.

Computer virus needs to be attached with some other programs or executable files to move from one computer to another. In other words, they need host to survive and an external action to activate itself. Thus, virus is a self-replicating computer program, which installs itself without user consent. E-mail attachments, games etc are examples of programs that generally carry viruses.
e.g. Bomber, Whale, OneHalf, KoKo, Eliza etc.
Elk Cloner is the first known computer virus.

TYPES OF VIRUS

Some common types of computer virus are as follows:

(i). Boot Sector Virus

It is also called Master Boot Record Virus. A boot sector virus is a computer virus that infects a storage device's Master Boot Record (MBR). A boot sector virus usually infects the computer by altering the boot sector program. In addition, boot sector mainly infects the hard disks. **e.g. Polyboot.B, AntiEXE etc.**

Watch this video for better understanding:
https://www.youtube.com/watch?v=J39j4SyRVt0

(ii). Macro Virus

It is a computer virus that infects applications or programs that contain macros like .doc, .xls, .pps etc and causes a sequence of actions to be performed automatically when application is started or something else triggers it. They hide in documents shared through E-mail and networks. **e.g. Melissa.A, Relax, Bablas etc.**

Watch this video for better understanding:
https://www.youtube.com/watch?v=zkpfUGgHXF0

(iii). File System Virus

It is also called Cluster Virus or Directory Virus. It infects the directory of your computer by changing the path that indicates the location of a file. It changes the directory, so that when you try to run a program, you first run the virus, e.g**. Dir-2.**

Watch this video for better understanding:
https://www.youtube.com/watch?v=Tdaqz7aqouo

CHARACTERISTICS OF A VIRUS

The characteristics of computer viruses are as follows:

- The ability to replicate itself.
- The ability to attach itself to another computer file.
- It requires a host program as a carrier.
- It is activated by external action

SYMPTOMS OF COMPUTER VIRUSES ATTACK

- Odd messages displayed on the screen.
- Some files are missing.
- System runs slower.
- PC (Personal Computer) crashes or restarts repeatedly.
- Drives are not accessible.

- Antivirus software will not run or installed.
- Unexpected sound or music plays.
- The mouse pointer changes its graphic.
- Receive strange E-mails containing odd attachments or viruses.
- PC starts performing functions like opening or closing windows, running programs on its own.

SPREAD OF COMPUTER VIRUSES

Computer viruses can spread through E-mail attachments, application programs on your computer or application programs installed from disk drives.
A computer virus spreads from one computer to another in the following ways:

- Using a local network to access infected files lying on other computer.
- Using infected external storage devices such as CD, floppy disk and pen drive.
- Surfing suspicious Websites on the Internet.
- Downloading infected files and gaming software from the Internet.
- Opening infected E-mail attachments.
- Executing an injected file on a computer.

POSSIBLE DAMAGES CAUSED BY VIRUS

The damages caused by a virus, which infect a home computer or a corporate network can be different from insignificant increase in outgoing traffic to the complete network breakdown or the loss of critical data. Depending on the types of virus, the damage caused to the system could be different.
Some viruses can:

- Monitor what you are doing on computer.
- Slow down your computer's performance. Also, can cause the system to hang.
- Download illegal files onto your computer without you being able to delete them.
- Destroy all data on your local disk, alter data in data files and can destroy specific executable files.
- Generates IP addresses randomly and sends those IP address automatically.
- Effects computer networks and the connection to Internet.
- Steal confidential information like password, account number, credit card information by random E-mailing.
- Destroys the file allocation table, which leads to the corruption of an entire file system. Thus, arising the need to reinstall the system.
- Reduces the available disk space or memory space by creating duplicate files.
- Creates bad sectors on the disk, destroying parts of programs and files.

ASSIGNMENT:-

Attempt this quiz to test your learning! The quiz can only be attempted if you are logged in with your official ID.

https://forms.gle/9Xsgvsqygn7jfdfr5