

## Computer Viruses

A computer virus is a type of malicious software (malware) that replicates itself by attaching to other programs or files on a computer. Viruses can cause a range of problems, from slowing down system performance to deleting or corrupting data.

### Types of Computer Viruses:

- Trojan Horse: disguises itself as a legitimate program, but actually contains malicious code.
- Worms: self-replicating viruses that spread from system to system without user interaction.
- Rootkits: hide malware or viruses from the operating system, making them difficult to detect.
- Logic Bombs: viruses that remain dormant until triggered by a specific event or action.
- Ransomware viruses that encrypt files and demand payment in exchange for the decryption key.

### How Viruses Spread

- Email Attachments: viruses can be spread through email attachments or links.
- Infected Software: viruses can be embedded in software downloads or installations.
- Infected Websites: viruses can be spread through visiting infected websites or clicking on malicious links.
- USB Drives: viruses can be spread through infected USB drives or other external devices.

### Symptoms of a Virus Infection

- Slow System Performance: viruses can consume system resources, slowing down performance.
- Crashing or Freezing: viruses can cause system crashes or freezing.
- Pop-Ups or Ads: viruses can display unwanted pop-ups or ads.
- Data Loss or Corruption: viruses can delete or corrupt files and data.

## Prevention and Removal

- Install Antivirus Software: use reputable antivirus software to detect and remove viruses.
- Keep Software Up-to-Date: regularly update operating systems, software, and plugins to patch security vulnerabilities.
- Avoid Suspicious Emails and Links: be cautious when opening email attachments or clicking on links from unknown sources.
- Use Strong Passwords: use strong, unique passwords to prevent unauthorized access to systems and data.

## Examples

- What are the differences between a Trojan horse and a worm?
- How can you protect your computer from ransomware attacks?

## Tips for Preventing Virus Infections

- Be cautious when downloading software or files from the internet.
- Keep your operating system, software, and plugins up-to-date.
- Use strong antivirus software and regularly scan your system for viruses.
- Avoid using public computers or public Wi-Fi for sensitive activities.