



Computer Science

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Lessons in Computer Science

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Outline

- **Electronic intrusion**
- **Types of Electronic intrusion**
- **Damage caused by computer viruses**
- **The most important steps necessary to protect against hacking operations**



Electronic intrusion

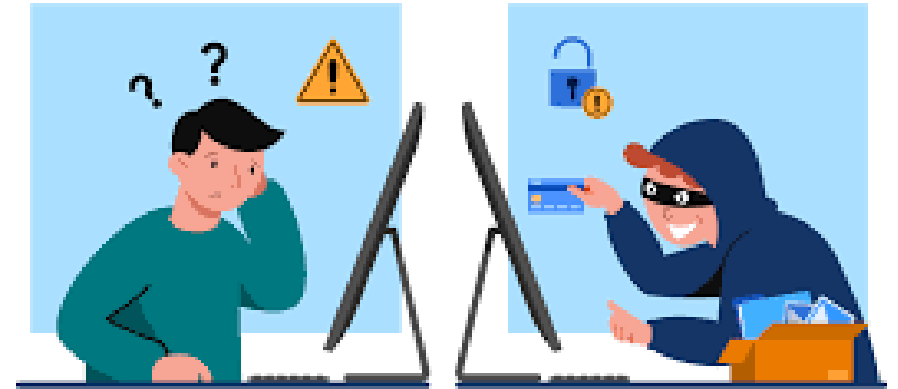
Electronic intrusion refers to unauthorized access to or interference with a computer system, network, or electronic device, typically with the intention of stealing, altering, or destroying data. This type of intrusion can take the form of hacking, malware infections and other malicious activities.



Types of Electronic intrusion

Phishing:

This is a type of electronic intrusion that involves tricking people into revealing sensitive information such as usernames, passwords, and credit card details. Phishing attacks are usually carried out through emails, social media, or instant messaging.



Types of Electronic intrusion

Malware:

Malware, short for malicious software, is any software that is intentionally designed to cause harm to computer systems, networks.

Using software, such as viruses and Remote Access Trojans, ransomware, spyware, and adware to damage or control a computer system.



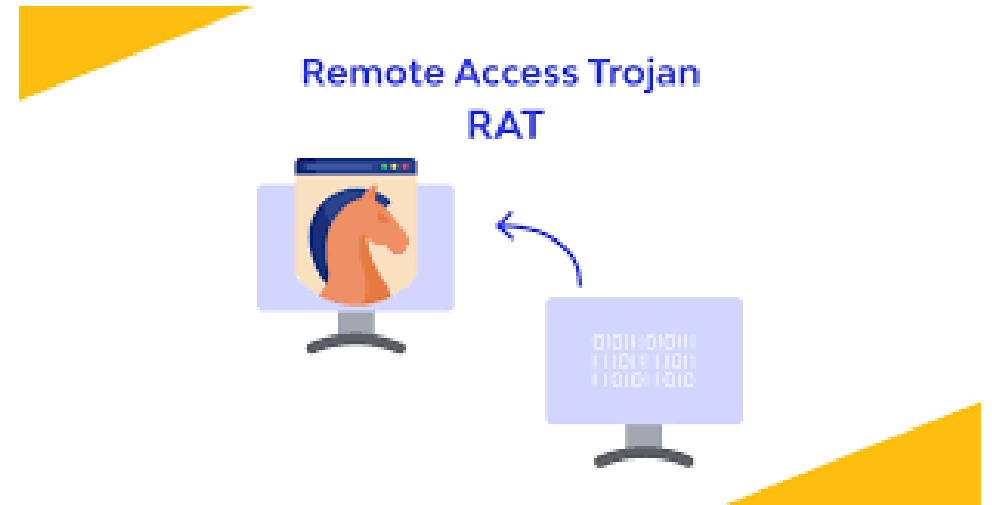
Types of Electronic intrusion

Computer viruses: are small, external programs designed deliberately to change the properties of the files they infect and execute some commands either by deletion, modification or sabotage according to the goals for which they are designed. And it has the ability to hide



Types of Electronic intrusion

Remote Access Trojans (RATs): A type of malware that allow an attacker to gain remote control over a victim's computer. RATs are often disguised as legitimate software and are installed on a victim's computer without their knowledge. Once installed, a RAT gives the attacker access to sensitive information, such as files and personal data.



Types of Electronic intrusion

Password Attacks:

Password attacks are a type of electronic intrusion that aim to gain unauthorized access to protected systems, networks, or online accounts by cracking passwords.

Cracking passwords through some techniques or exploiting vulnerabilities in password storage systems.



Damage caused by computer viruses

- Data loss or corruption: Viruses can destroy or alter files and data, making them inaccessible or causing them to become corrupted.
- System crashes and slowdowns: Viruses can overload systems, causing them to crash or become sluggish and unresponsive.
- Network and device exploitation: Viruses can spread from one computer to another, infecting entire networks and compromising the security of connected devices.



Damage caused by computer viruses

- Information theft: Viruses can steal sensitive information, such as passwords, financial data, and personal information.
- Performance degradation: Viruses can consume system resources, causing performance degradation and reducing overall efficiency.



The most important steps necessary to protect against hacking operations:

- **Keep software and security systems up-to-date.** Regularly updating software and security systems helps to ensure that vulnerabilities are patched and that the latest security features are in place.
- **Use strong passwords and two-factor authentication.** Strong passwords and two-factor authentication help to prevent password-based attacks and unauthorized access to systems and accounts.



The most important steps necessary to protect against hacking operations:

- **Avoid downloading attachments or clicking links from unknown sources:** This can help to prevent the spread of malware and other malicious software.
- **Use anti-virus software and firewalls:** Anti-virus software and firewalls help to detect and prevent malicious activity, and can provide an additional layer of security.
- **Backup important data:** Regular backups help to ensure that important data can be recovered in the event of a breach or loss.



Thank you

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