

# Cybersecurity

## Malware

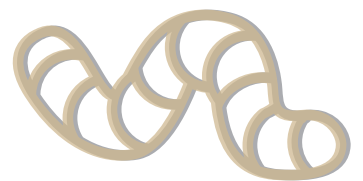
**Malware** is intrusive software that is designed to damage and destroy computers and computer systems. Malware is a contraction for “malicious software.” A slow computer that freezes or is invaded by strange programs, browsers, and pop-ups has likely been infected with one or more malware types.



### TYPES OF MALWARE

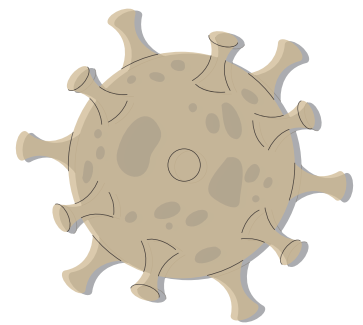
#### ① Computer Worm

- A worm is a malicious computer program that automatically replicates itself and spreads to other computers.
- Worms can severely disrupt the operations of a device and cause data loss.



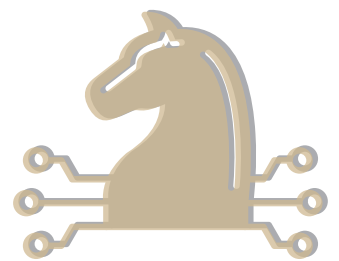
#### ② Virus

- Viruses are malicious codes or programs. When they are executed, they self-replicate and modify the codes of other computer programs.
- Viruses are designed to disrupt a system’s ability to operate and can cause significant operational issues and data loss.



#### ③ Trojan Horses

- Trojan horses are a type of malicious code designed to look like a legitimate program.
- Trojans can take control of computers in order to cause damage, disrupt processes and steal information.



#### ④ Ransomware

- Ransomware steals and makes sensitive information inaccessible. It requires monetary compensation to release the information.
- Ransomware is commonly part of a phishing scam and the attacker usually unlocks the data when receiving payments.



### PROTECTIVE MEASURES

**Use virus protection.** Install good anti-virus software and regularly scan devices.

**Back up data.** Always have a copy of important files, and keep programs and software updated.

**Be on guard for phishing.** Always double-check the source of information and don't open or download anything from suspicious sources.

**Use strong passwords.** Use a combination of letters, numbers, and characters for passwords with at least 8-10 characters.

**Safeguard your computer from physical attacks.** Be cautious of leaving devices unattended.

**REFLECTION**  
*In what ways can you strengthen your protection strategies when using electronic devices?*



#### References:

- Berkeley Extension (n.d.). *Cybersecurity in education: What teachers, parents, and students should know.* <https://bootcamp.berkeley.edu/blog/cybersecurity-in-education-what-teachers-parents-and-students-should-know/>
- Cisco. (n.d.). *What is malware?.* <https://www.cisco.com/c/en/us/products/security/advanced-malware-protection/what-is-malware.html>