


# COMPUTER SECURITY



**Malware: the difference between computer viruses,  
worms, Trojans, ransomware and spyware**

## Lecture 7

4<sup>th</sup> stage – (2020-2021)

Dr. Moceheb Lazam Shuwandy

# OUTLINE

- Malware
- Computer Viruses
- Worms
- Trojans
- Ransomware
- Spyware



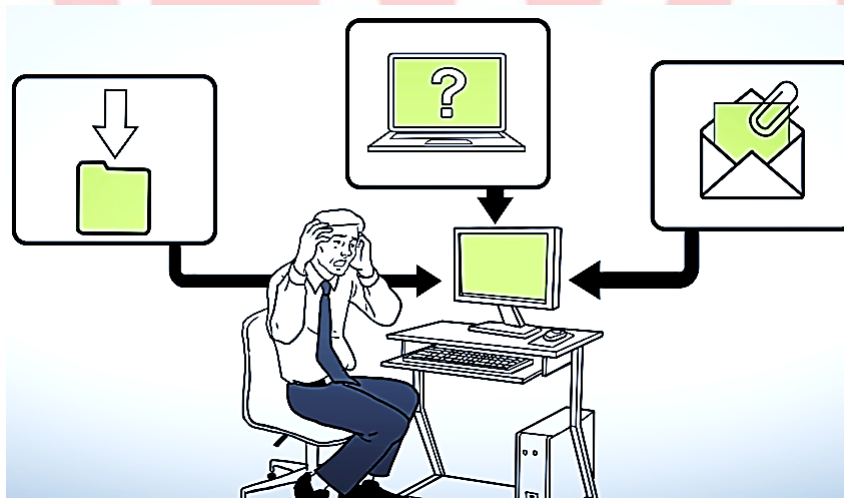


# MALWARE

- Viruses, worms, trojans and bots are all part of a class of software called Malware.
- The overwhelming majority of malware is created to make money illegally often by stealing sensitive and confidential information from victims computers and mobile devices.
- Malware can also be used for cyber vandalism cyber espionage hactivism cyber warfare and various

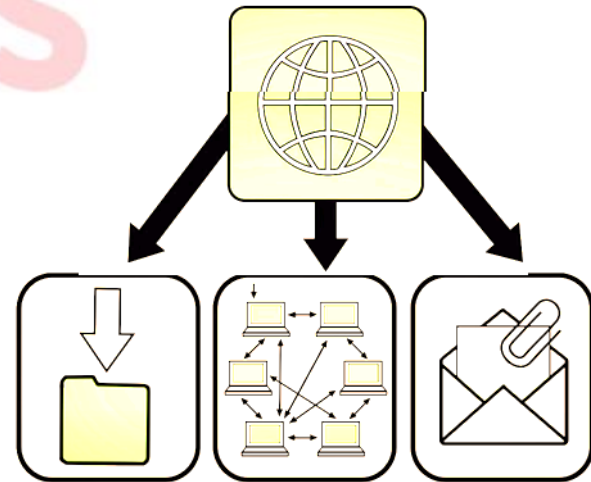
# MALWARE...CON.

- Other reasons, malware can make entry onto your computer via :
  - questionable file downloads
  - visiting infected websites
  - through email containing a seemingly benign link



# VIRUSES

- Attachment common types of malware: viruses
- almost all viruses are attached to an executable file
- which means the virus may exist on a system but will not spread until a user opens the infected program
- viruses often originate on the internet and spread when downloading a file infected with a virus



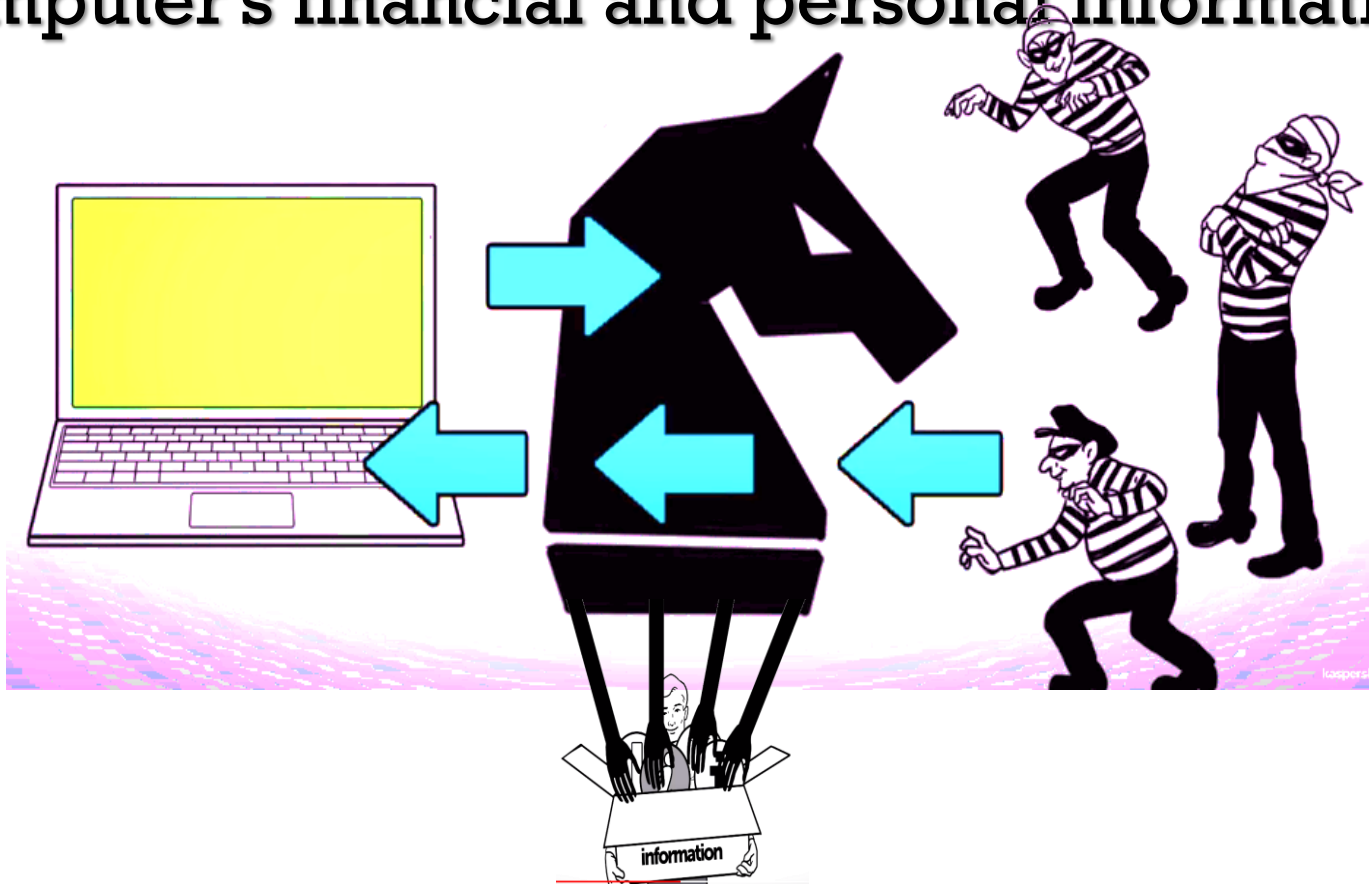
# TROJAN

- peer-to-peer file sharing or email attachment trojan
- a trojan is a harmful piece of software that looks legitimate
- users are typically tricked into leading and executing it on their systems
- trojans can not only steal your sensitive data they can also give cyber crooks access to your system



# TROJAN...CON.

- trojans are employed to gain access to your computer's financial and personal information



# RANSOMWARE

## RANSOMWARE

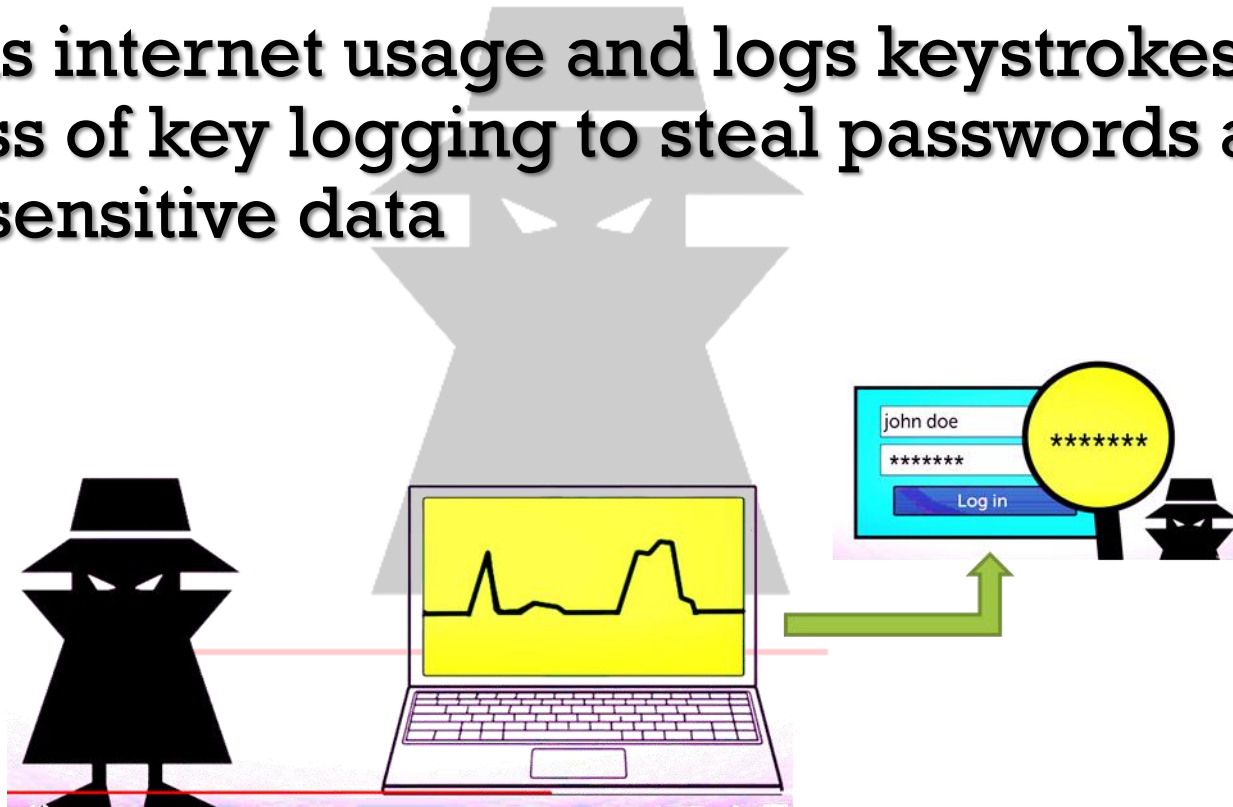
- Ransomware holds your pc hostage and demands money
- it locks up your computer threatening to destroy data demanding ransom or a payment for release of your data files or to regain the ability to use your computer again





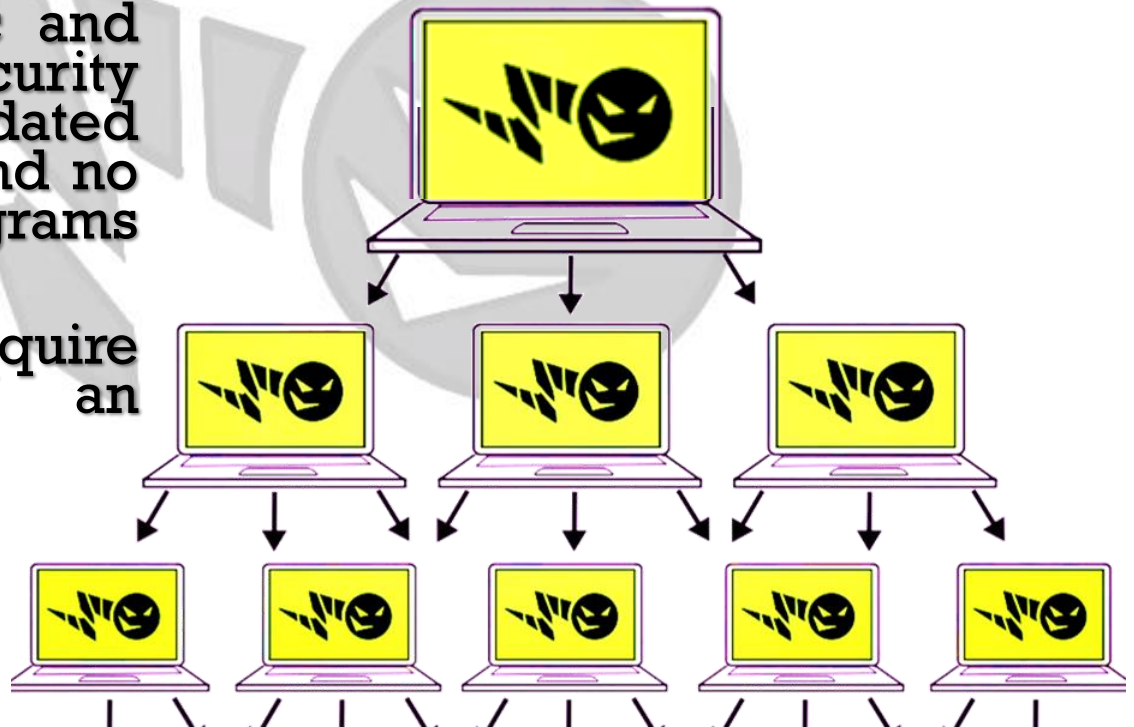
# SPYWARE

- Spyware secretly gathers private information about the user activity
- Such as internet usage and logs keystrokes via the process of key logging to steal passwords and other sensitive data



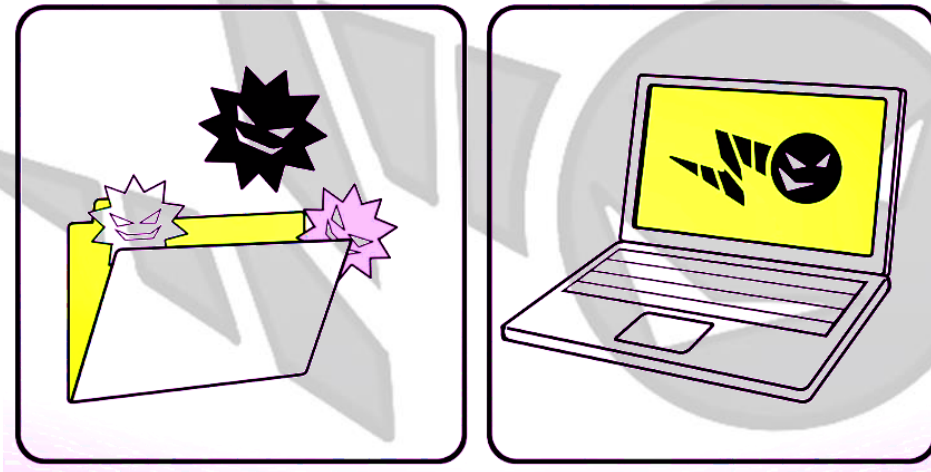
# WORMS

- Worms can replicate themselves and infect multiple computers on a network causing major damage network
- worms often use computer networks to spread slowing down traffic and relying on security failures such as outdated operating systems and no anti-virus programs installed.
- in contrast viruses require the spreading of an infected host file



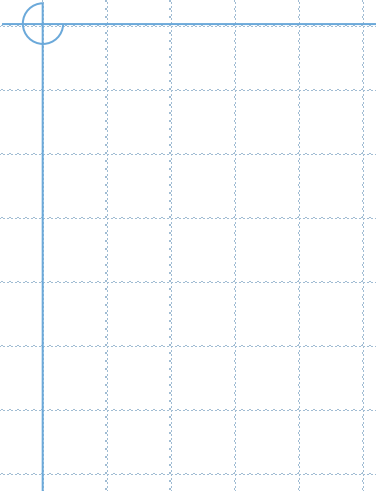
# WORMS... CON.

- worms are a stand-alone software and do not require a host or human help to spread.



# **PROTECT**

- The best way to protect your system from malware is
  - Keep your operating system clean by downloading regular patches updates
  - Making sure that your computer is protected by the latest antivirus software from a trusted vendor



# Q&A