Malware Assignment

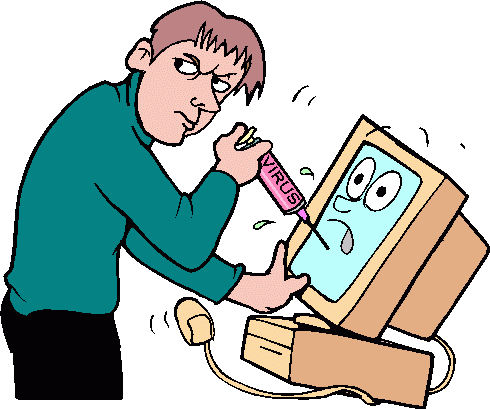


Name: Jihal Patel

Student Number: 765697

Course Code: ICS3U0A

Teacher: Mr. Veera

**What is a computer virus?**

A computer virus is a malicious code or program that enters your computer without the knowledge of the user. Computers often get infected with a virus through the internet (advertisements, pop-ups, e-mails, etc.), installation of software, or any external drives or disks inserted into the computer. A virus in a body can replicate itself through a host cell, similarly, viruses on computers can also replicate themselves through a host. Viruses can cause damage to the system by corrupting or damaging the data on the system. Some viruses are capable of replicating to another computer through the network.

**What is a computer Trojan?**

A Trojan is a malware is a malicious program that can allow hackers to spy, and access data on the computer. Computers usually get infected with Trojans when users are tricked into downloading and running a software that seems safe but is a Trojan. Trojans allow hackers to access, modify, delete, and copy data (this can include things such as credit card information) from the computer and as well as impact the performance of the computer.

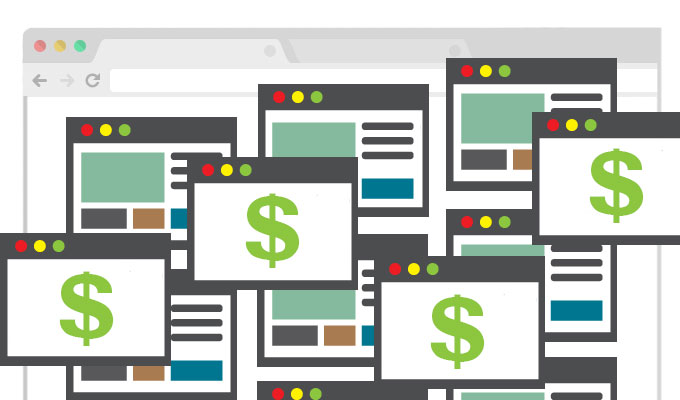
**What is a computer worm?**

A worm is similar to viruses but unlike viruses which require a host to replicate, worms do not need a host to be able to replicate. Computers are infected with worms similarly like viruses which infect the computer through the internet, installation of a software, etc. Worms can travel through the network by sending copies of the malicious code to different computers.

**What is a spyware?**

A spyware is a malicious software installed on a computer without the user knowing. Spywares perform actions such as advertising, obtaining person information, configuring the computer, etc. Spywares are installed on the computer with other software that the user downloads. Spywares can affect the computer by reducing connection speeds, changing internet browsers’ homepages, etc. Spywares can obtain confidential information such as credit card numbers, passwords, etc. by monitoring key presses on a computer.

**What is an adware?**

A malicious adware is a software that shows unwanted advertisements, collects user data, and other information without the user knowing. Adware that collects user information with the consent of the user are not considered as malicious. Adware usually infect the computer through infected websites, programs that the user downloads, etc.

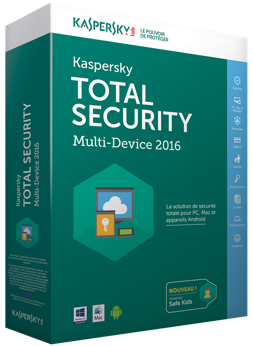
**How are viruses, Trojans, worms, spyware, and adware different from one another?**

Viruses can replicate after it hooks on to something on your system as opposed worms which can replicate without the needed of a host on the computer. Apart from both viruses and worms, Trojans cannot replicate themselves. Spyware and adware are malware actions (things that viruses, worms, and Trojans do). Spyware and adware are similar in the sense that they both collect and reveal information of the user but adware is a term more related to unwanted advertisement (pop-ups, etc.) while spyware is something that monitors the computer through things such as keyboard input, mouse clicks, webpages visited, etc.

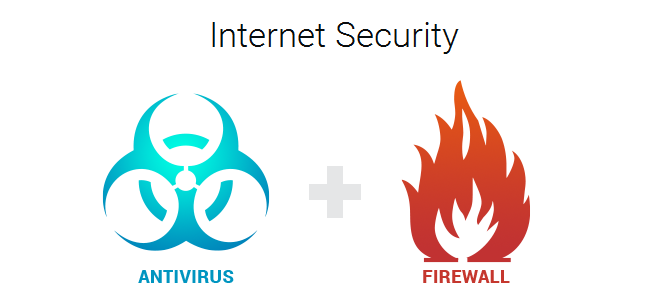
**What are anti-virus software and firewalls and how are they different from one another?**

Anti-virus software is a program that prevent, detect, and remove malwares on the computer like Trojans, worms, viruses, etc. There are paid and free anti-virus software which can vary in functions, however, they all perform some basic functions such as scanning files for malware, automatically scan the computer at certain times, scan external drives and CDs, remove any malware detected on the computer, etc. Firewall software is a program that prevents things such as viruses, and worms coming into the computer over the network. A firewall can reduce the damage caused by things such as spyware by blocking unauthorized access while an anti-virus software can detect and remove malware on the computer. A firewall can keep things such as worms, and viruses coming onto the computer using the network while an anti-virus software is not.

**What kind of protection against malware do I have on my computers?**

I have a well-known anti-virus software called Kaspersky and which also acts as a firewall. As it is a paid software my anti-virus software offers multiple things such as anti-malware, network attack blocker, privacy protection, etc. Kaspersky’s firewall acts as a two-way firewall which prevents hackers from accessing the computer and prevents malware from sending information outside the computer.

**Research the net to find the ratings of popular anti-virus software and firewalls. If you were to pick one for your personal use which one would you choose. Discuss the advantages and dis-advantages of your choice. (You may also look at software which is available for free).**

Well-known anti-virus software include Bitdefender, Kaspersky, Norton, Avast, AVG, etc. Well-known firewalls include Norton Internet Security, Kaspersky Internet Security, McAfee Internet Security, etc. If I were to pick one for my personal use I would use AVG anti-virus and Windows firewall. The reason for that is because AVG provides the basic needs as an anti-virus software and is free. Before I had Kaspersky, I used AVG as my anti-virus system which worked almost as well as Kaspersky. The advantages of AVG is that it automatically checks for updates, can be installed as a plugin in browsers like Mozilla Firefox, contains things such as anti-spyware, link-scanner, e-mail scanner, etc. The disadvantages of AVG include the detection multiple .exe files as malicious, hard to replace with another antivirus software, etc. The advantages of Windows firewall include its protection of things such as viruses and worms trying to enter over the network. The main disadvantage of Windows firewall that Kaspersky provides is that Windows firewall allows malware to send information outside of the computer. In conclusion, most free antivirus and firewall software perform the basic functions relatively well while paid antivirus and firewall software do the same but also include some more features.