



CYBER SECURITY

Topics

- ▶ Main Objective
 - ▶ What is cyber security
 - ▶ Need of Cyber Security
 - ▶ Major Security Problems and Solutions
 - ▶ Security Measures
 - ▶ Advantages of cyber security
 - ▶ Outcomes
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Main Objective

- ▶ The objective is to educate and create awareness amongst the students community on use of technology, internet media and its implication on possible cyber crimes.
 - ▶ Some of the possible prevention measures . One can take to avoid getting victimized for a cyber crime.
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CYBER SECURITY




What is Cyber Security

- ▶ Cyber security refers to the technologies and processes designed to protect computers, networks and data from unauthorized access and attacks delivered through the Internet by cyber criminals.
 - ▶ Protecting computer system and information from unauthorized access or destruction / abuse.
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What is Cyber Security

Security deal with three primary issues, called the CIA triad.

1. **Confidentiality** : Assurance that only authorized user may access a resource.
 2. **Integrity**: Assurance that resources has not been modified.
 3. **Availability** : Assurance that authorized user may access a resource when requested.
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Need of Cyber Security

- ▶ Protecting information in the digital age requires constant caution to deter thieves who would steal financial, proprietary, and personal identification data.
- ▶ Cyber security is necessary since it helps in securing data from threats such as data theft or misuse, also safeguards your system from viruses.
- ▶ Security measures provides full security services to balance the needs of providing information to those who need it with taking action to mitigate the dynamic threats posed by cyber thieves and cyber terrorists.



Need of Cyber Security


Home Computer Security

- ▶ Your home computer is the popular target for intruders.
- ▶ They look for credit card numbers, bank account information.
- ▶ Use your computers to attack other computers on the internet.

Why Intruder attack home computers?

- ▶ Not very secure
- ▶ Easy to break into

How do they attack your computers?

- ▶ They send you E- mail with a virus
 - ▶ They often install new programs that let them continue to use your computer (Back door).
 - ▶ Trojan horses are such programs which are used as the back doors.
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SECURITY PROBLEMS AND SOLUTIONS



Major Security Problems and Solutions

- **Virus and Worms**
- **Hacker**
- **Malware**
- **Trojan Horses**
- **Password Cracking**



Major Security Problems and Solutions

Virus and Worms:

- ▶ A Virus is a “program” that is loaded onto your computer without your knowledge and runs against your wishes.

Virus can reach to your computer in may ways

- ▶ CD- Rom
- ▶ E-mails
- ▶ Websites
- ▶ Downloaded Files

Check each of the above for viruses before using it.



Major Security Problems and Solutions

Solution:

- ▶ Install a security suite that protects the computer against threats such as viruses and worms.
- ▶ Handle E- mail attachments carefully.




Major Security Problems and Solutions

Hackers:

- ▶ A person who secretly gets access to a computer system in order to get information, cause damage, etc.
- ▶ Hackers attack where they see weakness. A system that hasn't been updated recently has flaws in it that can be taken advantage of by hackers.

Solution:

- ▶ It may be impossible to prevent computer hacking, however effective security controls including strong passwords, and the use of firewalls can help.
 - ▶ Regularly update your operating system
 - ▶ Install Anti virus software's.
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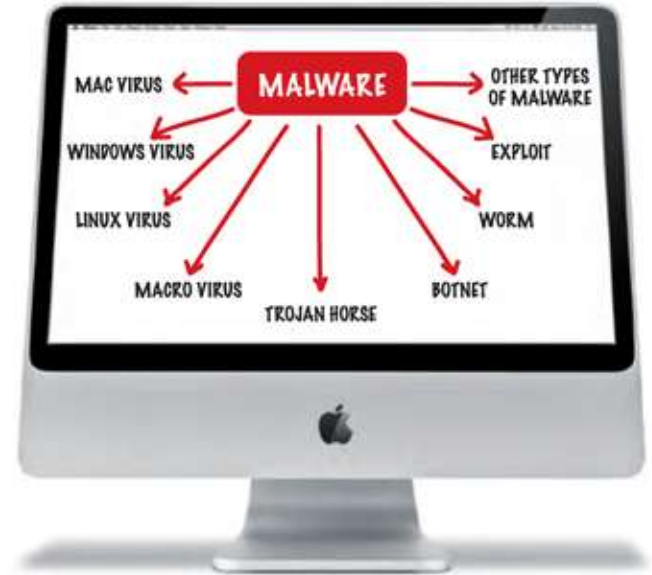
Major Security Problems and Solutions

Malware:

- The word "malware" comes from the term "Malicious software."
- Malware is any software that infects and damages a computer system without the owner's knowledge or permission.

Solution:

- Download an anti-malware program that also helps prevent infections.
- Activate Network Threat Protection, Firewall, Antivirus.



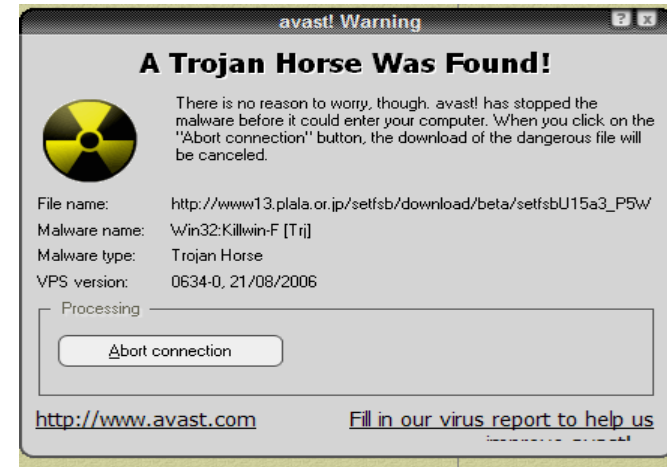
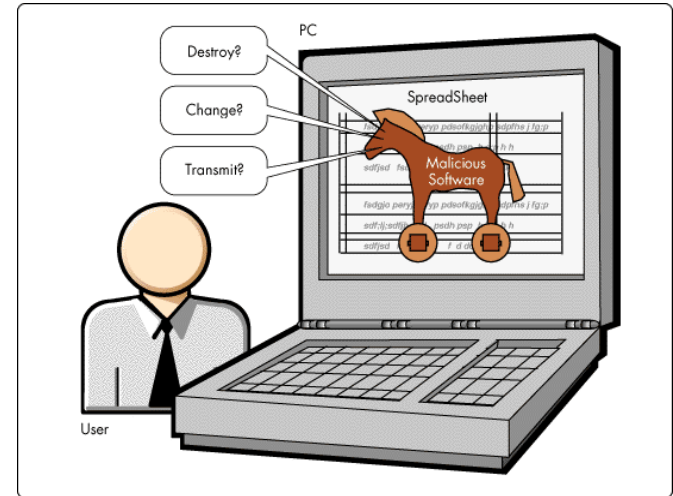
Major Security Problems and Solutions

Trojan Horse:

- Trojan horses are email viruses that can duplicate themselves, steal information, or harm the computer system.
- These viruses are the most serious threats to computers

Solution:

- Security suites, such as Avast Internet Security, will prevent you from downloading Trojan Horses.



Major Security Problems and Solutions



Password Cracking:

- ▶ Password attacks are attacks by hackers that are able to determine passwords or find passwords to different protected electronic areas and social network sites.

Solution:

- ▶ Use always Strong password.
- ▶ Never use same password for two different sites.

SECURITY MEASURES

Things to do for Protecting your Computer

- ▶ Use security software.
- ▶ Maintain current software and updates.
- ▶ Never share passwords .
- ▶ Do not click random links.
- ▶ Do not download unfamiliar software off the Internet.
- ▶ Log out or lock your computer.
- ▶ Remove unnecessary programs or services.
- ▶ Frequently back up important documents and files.



ADVANTAGES OF CYBER SECURITY



Advantages of Cyber Security



1. Protects system against viruses, worms, spyware and other unwanted programs.
2. Protection against data from theft.
3. Protects the computer from being hacked.
4. Minimizes computer freezing and crashes.
5. Gives privacy to users.

Outcomes

Improve the knowledge about cyber security and to overcome several security loopholes , Also it helps to spread awareness among normal people about emerging security threats. Simple and practical prevention methods are explained in the lesson to prevent PCs from infection.

