

Cyber Security

Mehul Goyal (2023UCP1834)

December 11, 2024

Table of Contents

- ▶ 1. Introduction
- ▶ 2. What is Cyber Security?
- ▶ 3. Why does Cyber Security Matter?
- ▶ 4. Security and Privacy
- ▶ 5. Categories of Cyber Crime
- ▶ 6. Types of Cyber Crime
- ▶ 7. Types of Cyber Attack by Percentage
- ▶ 8. Advantages of Cyber Security
- ▶ 9. Safety Tips to Cyber Crime
- ▶ 10. Financial Cost of Security Breaches
- ▶ 11. Conclusion
- ▶ 12. References

logopic.png

border.png

Introduction

- ▶ The Internet in India is growing rapidly. There are two sides to a coin. The internet also has its own disadvantages. Cyber crime – illegal activity is committed on the internet.
- ▶ Crime committed using a computer and the internet to steal a person's identity or illegal imports or malicious programs. Cyber crime is an activity done using computers and the internet.

img3.png

logopic.png

border.png

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 via the internet by cyber criminals. Though cyber security is important for network, data, and application security.
- ▶ Cybersecurity is the protection of internet-connected systems, including hardware, software, and data, from cyberattacks.
- ▶ In a computing context, security comprises cybersecurity and physical security – both are used by enterprises to protect against unauthorized access to data centers and other computerized systems.

logopic.png

border.png

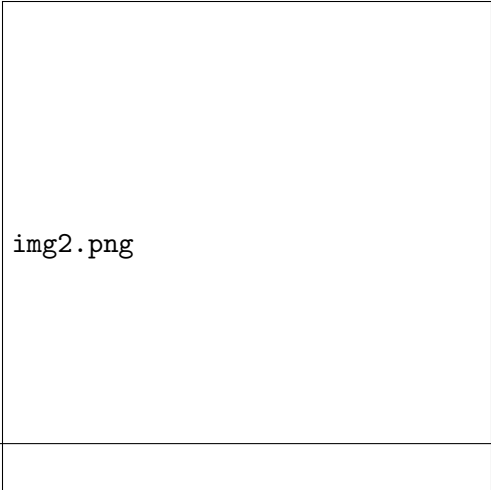
img1.png

logopic.png

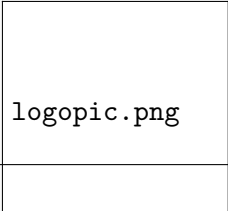
border.png

Why does Cyber Security Matter?

- ▶ Cyber Security is involved every time we touch a computer or a computing device.
- ▶ Your cyber hygiene affects others.
- ▶ Cyber Security is a shared responsibility.



img2.png

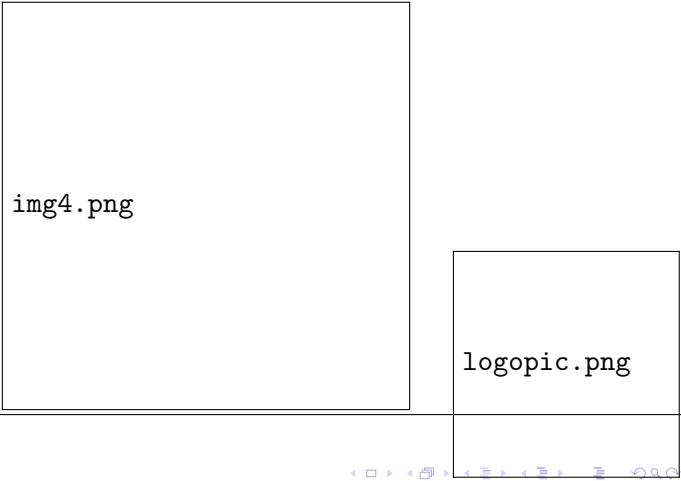


logopic.png

border.png

Security and Privacy

- ▶ Privacy relates to any rights you have to control your personal information and how it's used.
- ▶ Security refers to how your personal information is protected.



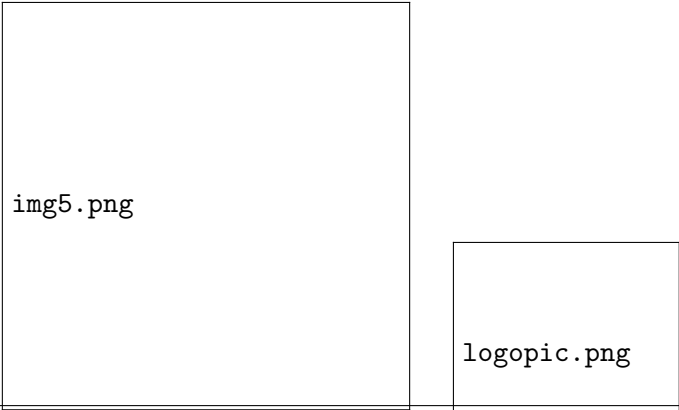
img4.png

logopic.png

border.png

Categories of Cyber Crime

- ▶ **The computer as a target:** Using a computer to attack other computers, e.g. Hacking, Virus/Worms attacks, DoS attack, etc.
- ▶ **The computer as a weapon:** Using a computer to commit real world crime, e.g. credit card fraud, etc.



img5.png

logopic.png

border.png

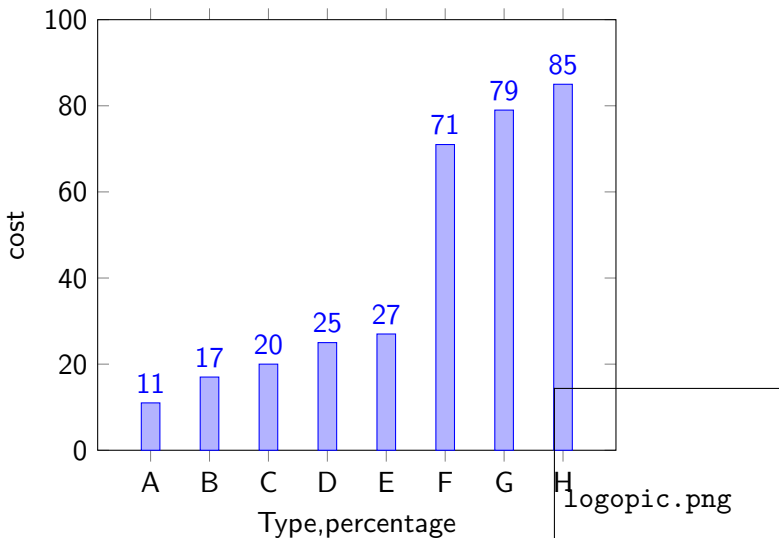
Types of Cyber Crime

- ▶ Hacking
- ▶ Phishing
- ▶ Denial of Service
- ▶ Spam Email
- ▶ Spyware, Adware
- ▶ Malware (Trojan, Virus, Worms, etc.)
- ▶ ATM Skimming and Point of Sale Crimes
- ▶ Ransomware

logopic.png

border.png

Types of Cyber Attack by Percentage (Source - FBI)



border.png

- ▶ A: Financial fraud
- ▶ B: Sabotage of data/networks
- ▶ C: Theft of proprietary information
- ▶ D: System penetration from the outside
- ▶ E: Denial of Service
- ▶ F: Unauthorised access by insiders
- ▶ G: Employee abuse of internet privileges
- ▶ H: Viruses

logopic.png

border.png

Advantages of Cyber Security

- ▶ It will defend us from hacks and virus. It helps us to browse the internet safely.
- ▶ Internet Security processes all the incoming and outgoing data on your computer.
- ▶ The cyber security will defend us from critical attacks.
- ▶ The application of cyber security used in our PC needs update every week.
- ▶ The security developers will update their database every week. Hence, the new viruses are detected.

logopic.png

border.png

Safety Tips to Cyber Crime

- ▶ Use antivirus software.
- ▶ Insert firewalls.
- ▶ Uninstall unnecessary softwares.
- ▶ Maintain backup.
- ▶ Check security settings.
- ▶ Never give your full name and address to strangers.
- ▶ Learn more about the internet privacy.

logopic.png


border.png

Financial Cost of Security Breaches

- ▶ Financial cost of security breaches Serious financial damage has been caused by security breaches, but because there is no standard model for estimating the cost of an incident, the only data available is that which is made public by the organizations involved. Several computer security consulting firms produce estimates of total worldwide losses attributable to virus and worm attacks and to hostile digital acts in general.
- ▶ Insecurities in operating systems have led to a massive black market for rogue software. An attacker can use a security hole to install software that tricks the user into buying a product.


logopic.png

border.png



img6.png

Figure: Security Breach



logopic.png

border.png

Conclusion

- ▶ In today's digital age, cyber security is a critical component of protecting our personal and professional information. By understanding the risks and taking proactive measures, we can safeguard ourselves and our organizations from cyber threats.
- ▶ Cyber security is not just a technical issue; it's a fundamental responsibility for everyone. By working together, we can create a safer and more secure digital world.

logopic.png

border.png

References

- ▶ <https://www.cisa.gov/>
- ▶ <https://www.nist.gov/cyberframework>
- ▶ <https://www.sans.org/>
- ▶ <https://krebsonsecurity.com/>
- ▶ <https://www.mitre.org/>
- ▶ <https://cybersecurityventures.com/>
- ▶ <https://owasp.org/>
- ▶ <https://www.isaca.org/>

logopic.png

border.png

endpic.png

titleb.png