



Cybersafety and Security

January 28, 2026

The Session talks about

- Introduction too Cyber Safety
- Introduction to Cyber Security
- Difference between Cyber Safety and Security
- Importance of Cyber Safety
- Common Threats and Attacks
- Real Life examples of Cyber Attacks
- Cyber Hygiene

Cyber Safety

Cyber safety is about safe and responsible use of the internet.

Example:

Teaching children not to talk to strangers online.



Cyber Security

- Cybersecurity means keeping computers, mobile phones, and the internet safe from misuse, theft, and damage.
- It is about protecting digital information so that it is available when needed, accurate, private, and used only by the right people.
- Example: Locking your phone with password or fingerprint.



Cyber Security v/s Cyber Safety

Cyber Security	Cyber Safety
Protects devices and data	Protects people
Uses passwords, antivirus	Uses awareness and rules

Terminologies in Cyber Security and Safety

Privacy

Privacy means keeping personal information safe.

Examples:

- Aadhaar number
- Phone number
- Photos

Security

Security means tools used to protect privacy.

Examples:

- Passwords
- OTP
- Fingerprint lock

Phishing

Fake messages pretending to be bank, school, or government.

Example:

'Your bank account will be blocked, click link.'

Scam

Cheating people to steal money or data.

Example:

Fake customer care asking for OTP.

Malware & Virus

Malware - It is a Harmful software.

Virus - A type of Malware that spreads

Hacking

Accessing accounts without permission.

Example:

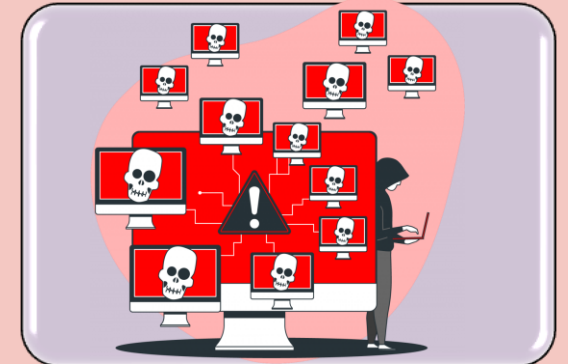
Guessing weak password and entering account.

Why Cyber Security Matters?

Cybersecurity matters now more than ever due to several critical factors:

- Increasing Frequency and Sophistication of Cyber Attacks:
 - According to the FBI Internet Crime Report, with over 800,000 reports of cybercrime and about \$7 billion in losses, cybersecurity is becoming increasingly important to modern consumers and organizations.
- High-Profile Cyber Incidents and Impact:
 - Instances like the Equifax data breach, SolarWinds cyberattack, or ransomware attacks on critical infrastructure demonstrate the wide-ranging impact on millions of individuals and organizations worldwide
- Financial, Reputational, and Personal Consequences:
 - Personal consequences such as identity theft, financial losses, loss of sensitive personal information, and emotional distress can deeply impact individuals affected by breaches

Common Threats and Attacks



Malware: Software intended to harm, interfere with, or obtain unapproved access to data or systems, comprises Trojan horses, worms, viruses, etc.

Phishing: Fraudulent attempts to pose as reliable organizations in emails, letters, and other correspondence to obtain sensitive information (financial data, login credentials, etc.).

Ransomware: Malicious software that encrypts files or systems, demanding payment (ransom) for decryption or data release.

DDoS Attacks: Distributed Denial of Service overload systems or networks with excessive traffic, making them unavailable to authorized users.

Real-life Examples Illustrating Various Cyber Attacks

WannaCry Ransomware:

- Globally, it infected hundreds of thousands of computers, impacting the government, banking, and healthcare industries.



Real-life Examples Illustrating Various Cyber Attacks

DDoS Attack on Dyn DNS Service:

- Temporarily disrupted major websites like Twitter, Netflix, and PayPal by targeting the DNS provider.



Image source: Woolf, N. (2016, October 26). DDoS attack that disrupted internet was largest of its kind in history, experts say. The Guardian. <http://www.theguardian.com/technology/2016/oct/26/ddos-attack-dyn-mirai-botnet>

Hence maintaining good cyber hygiene practices is vital in safeguarding against cyber threats.

Let us briefly find out how in the next few slides.

Protecting Yourself: Cyber Hygiene

- Strong Passwords and Multi-Factor Authentication

(MFA):

- Emphasize how important it is to give each account a strong, one-of-a-kind password
- Multi-Factor Authentication (MFA), which adds an extra layer of protection by requiring several forms of verification (e.g., password + SMS code, fingerprint, or authentication app), should be encouraged to be used with passphrases that combine letters, numbers, and symbols



Protecting Yourself: Cyber Hygiene

- Safe Internet Practices:
 - Educate users about secure browsing habits, such as checking for HTTPS in URLs, avoiding unsecured public Wi-Fi networks, and being cautious with downloads from untrusted sources
 - Highlight the dangers of clicking on suspicious links or attachments in emails, emphasizing the importance of verifying the sender's legitimacy



Protecting Yourself: Cyber Hygiene

- Regular Software Updates and Antivirus Protection:
 - Stress the significance of keeping operating systems, software, and applications up-to-date by enabling automatic updates
 - Encourage using reputable antivirus and anti-malware software, regularly updating virus definitions to defend against evolving threats



Key Message for Parents

- Digital safety is as important as road safety.
- Awareness is the best protection.