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# What is Cyber Security?



- Cybersecurity refers to the practice of protecting internet-connected systems, including hardware, software, and data, from theft, damage, unauthorized access, or other digital attacks. It involves the use of technologies, processes, and practices designed to safeguard networks, devices, and electronic information from cyber threats.
  - Cybersecurity encompasses a wide range of activities, including the identification and assessment of potential risks and vulnerabilities, the development of security policies and procedures, the implementation of security controls and technologies, the monitoring and analysis of system activity, and the response to and recovery from security incidents.
  - Effective cybersecurity is critical for businesses, governments, and individuals alike, as cyber threats can cause significant financial losses, damage to reputations, and even harm to public safety. With the increasing interconnectedness of our digital world, the importance of cybersecurity is only likely to grow in the years to come.
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# Concept of Cyber security?

- A. Confidentiality: Refers to protecting sensitive information from unauthorized access or disclosure.
  - B. Integrity: Refers to maintaining the accuracy and consistency of data and ensuring that it is not tampered with or modified in an unauthorized manner.
  - C. Availability: Refers to ensuring that systems, data, and resources are available and accessible to authorized users when needed.
  - D. Authentication: The process of verifying the identity of a user, device, or system attempting to access a network or resource.
  - E. Authorization: The process of granting access to specific resources or information based on a user's identity, role, or privileges.
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# Concept of Cyber security?

- F. **Encryption**: The process of converting information into a coded language to prevent unauthorized access or interception.
  - G. **Firewall**: A security system designed to prevent unauthorized access to a network or device by filtering incoming and outgoing traffic.
  - H. **Malware**: Malicious software designed to harm, disrupt, or gain unauthorized access to a computer system or network.
  - I. **Phishing**: An attempt to trick a user into revealing sensitive information, such as login credentials or financial data, by posing as a trustworthy entity.
  - J. **Vulnerability**: A weakness or flaw in a system or software that could be exploited by a threat actor to gain unauthorized access or cause harm.
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# Conclusion

These concepts are critical for understanding and implementing effective security measures, whether for personal or professional use. By incorporating these concepts into their security practices, individuals and organizations can help protect themselves against cyber threats and keep their information and assets secure.



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# History of cyber Security

The history of cybersecurity can be traced back to the early days of computing, when the first computer viruses and malware were developed. Here are some key milestones in the history of cybersecurity:



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# History Of Cyber Security

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- 1970s: The first computer viruses were developed, including the Creeper virus, which spread through ARPANET, a precursor to the internet.
  - 1980s: The first antivirus software was developed, and the first known cyber espionage case occurred, when French intelligence agents hacked into a computer system at the Lawrence Berkeley National Laboratory.
  - 1990s: Cyber attacks became more frequent and sophisticated, including the first recorded ransomware attack in 1989, and the first distributed denial-of-service (DDoS) attack in 1996. The first cybersecurity certifications and professional organizations were established in the 1990s as well.
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# History Of Cyber Security

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- 2000s: The rise of the internet and widespread use of computers and mobile devices led to an increase in cyber attacks, including the infamous Love Bug virus and the Stuxnet worm, which targeted industrial control systems.
  - 2010s: High-profile data breaches at major companies and organizations, such as Target and the U.S. Office of Personnel Management, drew attention to the need for stronger cybersecurity measures. Cybersecurity laws and regulations, such as the General Data Protection Regulation (GDPR) and the Cybersecurity Information Sharing Act (CISA), were enacted in this decade.
  - Present day: Cyber threats continue to evolve and become more complex, including attacks on critical infrastructure and the use of artificial intelligence in cyber attacks. The field of cybersecurity is constantly evolving to keep up with these threats, with a focus on developing advanced technologies and building a skilled workforce to protect against cyber attacks.
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# Conclusion

Overall, the history of cybersecurity demonstrates the importance of proactive measures to protect against cyber threats, and the need for ongoing innovation and adaptation to keep up with the changing threat landscape.





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# Internet And Network



The internet and network are two related but distinct concepts in the world of technology.

**Internet:-** The internet is a global network of interconnected computers and servers that allows for the exchange of information and data across the world. It is a vast network that enables communication, commerce, research, and entertainment among many other things. The internet is made up of many smaller networks, including local networks, national networks, and global networks, all of which are connected through various means such as cables, wireless signals, and satellites.

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# Internet And Network



The internet and network are two related but distinct concepts in the world of technology.

**Network:-** A network, on the other hand, is a collection of computers or devices that are connected to each other in order to share resources and information. A network can be as simple as two computers connected by a cable or as complex as a large corporation with thousands of devices connected across multiple locations. Networks can be classified into different types based on their size, architecture, and purpose, such as LAN (Local Area Network), WAN (Wide Area Network), MAN (Metropolitan Area Network), and VPN (Virtual Private Network).

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# Internet And Network



- The internet is essentially a vast global network, and it relies on networks of various types to function. A user can connect to the internet through their personal device or computer, and then use the internet to access resources and communicate with others across the world. Networks are the underlying infrastructure that allows the internet to function, and they play a critical role in the speed, security, and reliability of internet communication.
  - Overall, the internet and network are closely related and interdependent concepts that have revolutionized the way we live, work, and communicate in the modern world.
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# History of Internet

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- The history of the internet dates back to the 1960s, when the United States Department of Defense started a research project called the ARPANET (Advanced Research Projects Agency Network). The ARPANET was designed to enable communication between researchers and scientists across the country, and it was the precursor to the modern internet.



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# Here are some key milestones in the history of the internet:

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- **1969:** The first message was sent over the ARPANET between computers at UCLA and the Stanford Research Institute.
  - **1971:** The first email was sent by computer engineer Ray Tomlinson.
  - **1983:** The Domain Name System (DNS) was developed, which made it easier to access websites by replacing numerical IP addresses with domain names.
  - **1989:** Tim Berners-Lee developed the World Wide Web, which allowed for the creation of web pages and the sharing of information on the internet.
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# Here are some key milestones in the history of the internet:

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- **1990s:** The commercialization of the internet led to the creation of web browsers, search engines, and e-commerce sites, transforming the internet into a global platform for communication, commerce, and entertainment.
  - **2000s:** The rise of social media platforms like Facebook and Twitter and the proliferation of mobile devices further expanded the reach and impact of the internet.
  - **Present day:** The internet has become an integral part of modern life, with billions of people around the world using it every day for work, entertainment, education, and communication.
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# Conclusion

The history of the internet is a story of innovation and collaboration, as researchers, engineers, and entrepreneurs around the world worked to develop and refine this revolutionary technology. Today, the internet continues to evolve and transform our lives, with new technologies and applications being developed all the time.

