



SNS COLLEGE OF ENGINEERING

Kurumbapalayam(Po), Coimbatore – 641 107

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Department of Information Technology

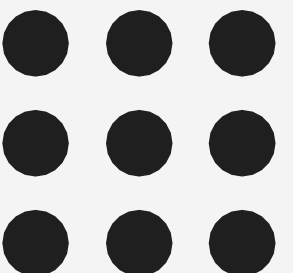
19IT602 CRYPTOGRAPHY AND CYBER SECURITY

III Year / VI Semester

CYBER SECURITY

5-Feb-25

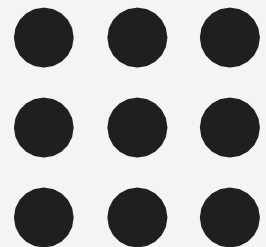
**SNSCE/CRYPTOGRAPHY AND CYBER SECURITY
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What is Cyber Security?

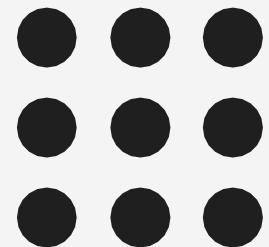
- Cyber Security is a process that's designed to protect networks and devices from external threats.
- Businesses typically employ Cyber Security Professionals to protect their confidential information, maintain employee productivity, and enhance customer confidence in products and services.
- The world of Cyber Security revolves around the industry standard of confidentiality, integrity, and availability, or CIA



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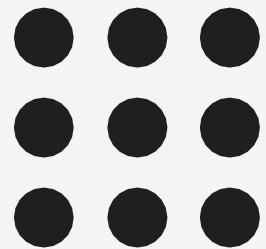
- Privacy means data can be accessed only by authorized parties; integrity means information can be added, altered, or removed only by authorized users; and availability means systems, functions, and data must be available on-demand according to agreed-upon parameters.
- The main element of Cyber Security is the use of authentication mechanisms.
- For example, a user name identifies an account that a user wants to access, while a password is a mechanism that proves the user is who he claims to be.



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- Governments around the world are focusing increased attention on cybercrimes.
- The General Data Protection Regulation (GDPR) is a great example of this.
- It has increased the reputational damage for data breaches by requiring all the organisations that operate in the EU to:
 - Communicate data breaches
 - Appoint a data protection officer
 - Obtain user consent to process information
 - Anonymise data for privacy

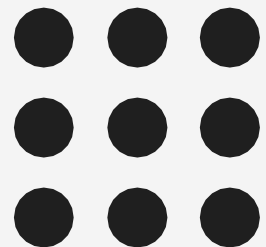




Cybercriminals

Cybercriminals are becoming more skilled with each passing day, changing what they target, how they affect organisations and their methods of attack for different security systems. Other factors that are driving the growth in cybercrime include:

- The distributed nature of the Internet
- The ability of cybercriminals to attack targets outside their jurisdiction, thus rendering policing extremely difficult
- The increasing profitability and ease of doing commerce on the dark web
- The rapid proliferation of mobile devices and the Internet of Things.

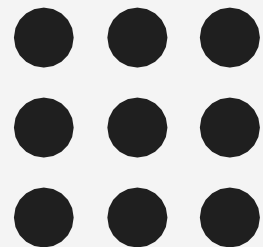




Applications of Cybersecurity

DDoS security: DDoS stands for Distributed Denial for Service attack. In this digital attack, the attacker uses multiple numbers of devices to keep the web server engaged in accepting the requests sent by him from the multiple devices.

Web Firewall: A web application server-based firewall gets applied on a large area network and it checks all the incoming and outgoing traffic on the server and it automatically tracks and removes fake and malicious website traffic





Bots: Nowadays, many hackers and attackers use bots to cause multiple device traffic on the server to make it crash.

Antivirus and Antimalware: Cybersecurity is used to develop Antivirus and Antimalware software for preventing all the digital attacks on the computer and protecting these devices from data breaches, digital attacks, and unauthorized attacks from hackers.

Critical systems: Cybersecurity helps to deal with the critical issue attacks that are carried out on large servers connected to wide-area networks.

