

Diploma Project Academic Year 2023/2024

Project code: 202308

Project Title (English):

Cybersecurity for Enterprise Networks

Project Title (Arabic):

الأمن السيبراني لشبكات المؤسسات

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Abstract

Cybersecurity is all about protecting computer systems, networks, and data from unauthorized access, attacks, damage, or theft. It's a critical field given the increasing reliance on digital technologies in virtually every aspect of modern life. Network security is the branch of cybersecurity which focuses on protecting the integrity, confidentiality, and availability of computer networks and the data transmitted over them. Key aspects of network security include firewalls, Intrusion Detection and Prevention Systems (IDPS), Virtual Private Networks (VPNs), and Network Access Control (NAC). Moreover, Wi-Fi networks are often vulnerable to security threats if not properly secured. Implementing strong encryption, secure authentication methods, and network segmentation can help protect Wi-Fi networks from unauthorized access and attacks.

Project Objectives:

- 1- Investigating different attack scenarios that are likely to happen in enterprise networks.
- 2- Implementing defense mechanisms which help mitigate network threats.
- 3- Concluding best practice for assuring enterprise network security.