

## **EJERCICIO N°9**

### **Ejercicio A**

#### **Computer security**

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Computer security, cybersecurity (cyber security), or information technology security (IT security) is the protection of [computer systems](#) and [networks](#) from information disclosure, theft of, or damage to their [hardware](#), [software](#), or [electronic data](#), as well as from the [disruption](#) or misdirection of the services they provide.

The field has become significant due to the expanded reliance on [computer systems](#), the [Internet](#), and [wireless network](#) standards such as [Bluetooth](#) and [Wi-Fi](#), and due to the growth of "[smart](#)" devices, including [smartphones](#), [televisions](#), and the various devices that constitute the [Internet of things](#) (IoT). Cybersecurity is also one of the significant challenges in the contemporary world, due to its complexity, both in terms of political usage and technology. Its primary goal is to ensure the system's dependability, integrity, and data privacy.

#### **Vulnerabilities and attacks**

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A vulnerability is a weakness in design, implementation, operation, or internal control. Most of the vulnerabilities that have been discovered are documented in the Common Vulnerabilities and Exposures (CVE) database. An exploitable vulnerability is one for which at least one working attack or exploit exists. Vulnerabilities can be researched, reverse-engineered, hunted, or exploited using automated tools or customized scripts. To secure a computer system, it is important to understand the attacks that can be made against it, and these threats can typically be classified .

#### **Backdoor**

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A backdoor in a computer system, a cryptosystem or an algorithm, is any secret method of bypassing normal authentication or security controls. They may exist for many reasons, including by original design or poor configuration. They may have been added by an authorized party to allow some legitimate access, or by an attacker for malicious reasons; but regardless of the motives for their existence, they create a vulnerability. Backdoors can be very hard to detect, and detection of backdoors is usually discovered by someone who has access to application source code or intimate knowledge of the operating system of the computer.

**Según lo interpretado en el párrafo conteste las siguientes preguntas en CASTELLANO:**

1. What is computer security?
2. What is the objective of computer security?
3. What is vulnerability?
4. What can you do with the vulnerability?
5. What is a back door?
6. Who detects the back doors?

## **Ejercicio B**

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### **Artificial intelligence**

Artificial intelligence (AI) is intelligence demonstrated by machines, as opposed to the natural intelligence displayed by animals including humans. AI research has been defined as the field of study of intelligent agents, which refers to any system that perceives its environment and takes actions that maximize its chance of achieving its goals.

The term "artificial intelligence" had previously been used to describe machines that mimic and display "human" cognitive skills that are associated with the human mind, such as "learning" and "problem-solving".

Artificial intelligence was founded as an academic discipline in 1956, and in the years since has experienced several waves of optimism, followed by disappointment and the loss of funding (known as an "AI winter"), followed by new approaches, success and renewed funding. AI research has tried and discarded many different approaches since its founding, including simulating the brain, modeling human problem solving, formal logic, large databases of knowledge and imitating animal behavior. In the first decades of the 21st century, highly mathematical-statistical machine learning has dominated the field, and this technique has proved highly successful, helping to solve many challenging problems throughout industry and academia.

The various sub-fields of AI research are centered around particular goals and the use of particular tools. The traditional goals of AI research include reasoning, knowledge representation, planning, learning, natural language processing, perception, and the ability to move and manipulate objects. General intelligence (the ability to solve an arbitrary problem) is among the field's long-term goals.

### **Perception**

Machine perception is the ability to use input from sensors (such as cameras, microphones, wireless signals, and active lidar, sonar, radar, and tactile sensors) to deduce aspects of the world. Applications include speech recognition, facial recognition, and object recognition.

**Según lo interpretado en el párrafo conteste las siguientes preguntas en CASTELLANO:**

1. How has A.I. research been defined?
2. How had the term "artificial intelligence" been previously used?
3. What has A.I. research tried and discarded since its founding?
4. What do the traditional objectives of A.I. research include?
5. What is machine perception?