INTRODUCTION TO SECURITY -1-

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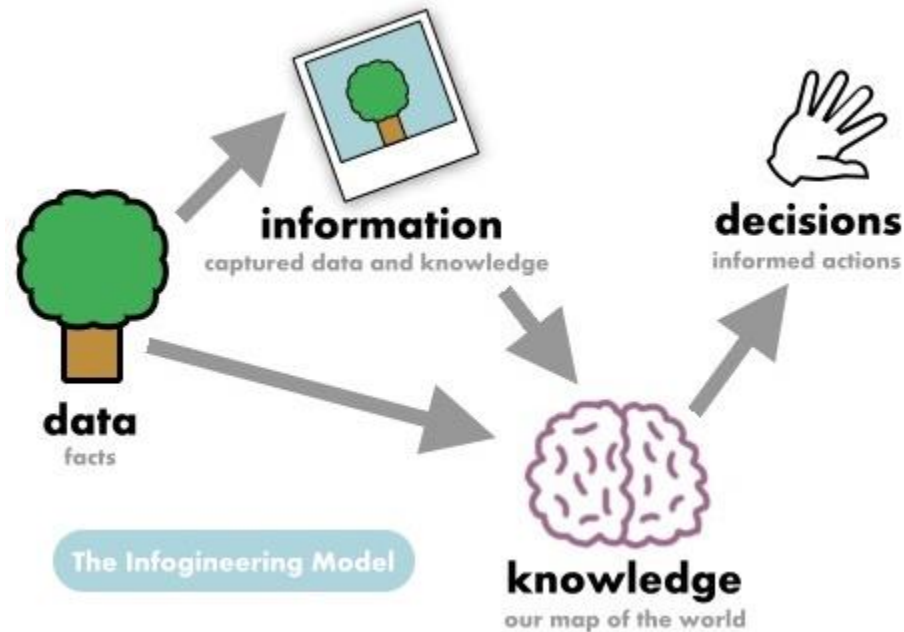Department of Information Technology 2018-2019

Outlines

- Infogineering Model
- OSI security architecture
- Security Attack
- Security Services
- Security Mechanism

Infogineering Model

The infogineering model explains how data, information, knowledge and decisions all relate to each other. For more details on what each of these terms means.

Data, Information, Knowledge

- Data : is unprocessed facts and figures without any added or analysis.

- Information : is a processed data that has been interpreted.(Processed data, Meaningful, May be presented in many ways as Picture, text, numbers, alphanumeric, bit, stream).

- Knowledge : is a combination of important information and experience .

Security

- Computer Security: The protection afforded to an automated information system in order to attain the applicable objectives of preserving the integrity, availability, and confidentiality of information system resources (includes hardware, software, firmware, information/data, and telecommunications).

- Information Security: Method of protecting digital information from an unauthorized access

Security Objectives

This definition introduces three key objectives that are at the heart of computer security that called CIA triad:

☐ Confidentiality: This term covers two related concepts:

➢ Data confidentiality: Assures that private or confidential information is not made available or disclosed to unauthorized individuals.

Security Objectives

➢ Privacy: Assures that individuals control or influence what information related to them may be collected and stored and by whom and to whom that information may be disclosed.

❑ Integrity: This term covers two related concepts:

➢ Data integrity: Assures that information and programs are changed only in a specified and authorized manner.
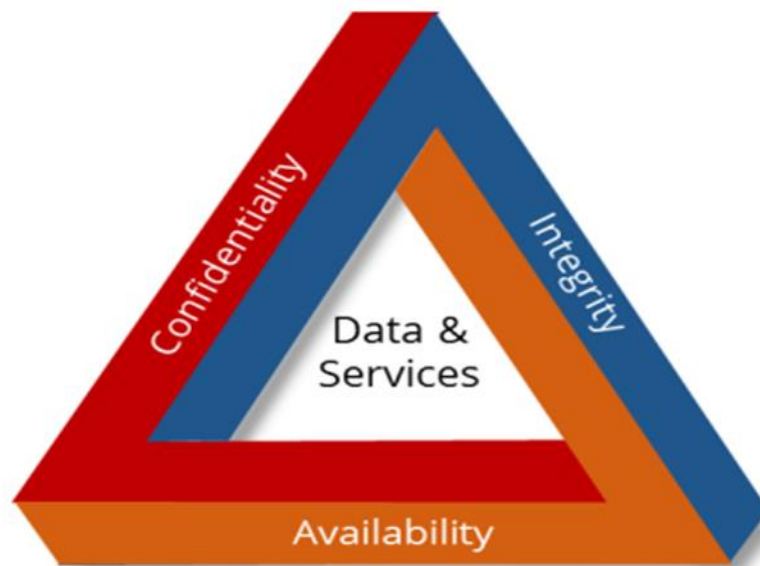
Security Objectives

➢ System integrity: Assures that a system performs its intended function in an unimpaired manner, free from deliberate or inadvertent unauthorized manipulation of the system.

☐ Availability: Assures that systems work promptly and service is not denied to authorized users.

Security Objectives

The Heart Of Computer Security CIA Triad