

INFORMATION TECHNOLOGY

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1. The architecture of a database

Information is currently an essential component of any activity because it influences the decision-making process; they must be better than those that would be taken in the absence of information. Therefore, it must be available in a timely manner, be fair, coherent, non-routine. How do we meet these requirements when the amount of data to be processed is continually increasing? Systems are therefore required to ensure their collection, storage, organization, retrieval and processing. These activities are now possible and in computer science they are directly related to the notion of databases.

Introduction

This course presents the fundamentals of the Information Technology IT. All exposures are general in nature and do not refer to any Relational Database Management System - RDBMS. At the same time, we will try to give a practical note to all exposures, to help future database designers find the best solutions for the problems they are facing. The structure of the course is as follows:

- 1) The architecture of a database;
- 2) Relational model: domain notions, attribute, relationship,

of ordered products (for each product, quantity ordered).

The attributes we continue to operate are:

CodS, NameS, Address, CodP, DenP, Price, NrC, DataC,
Quantity.

The basic functional dependencies we identified (we avoided any transient dependencies):

$\text{CodS} \rightarrow (\text{NameS}, \text{Address});$

$\text{CodP} \rightarrow \text{DenP};$

the price cannot appear here because it differs from one supplier to another;

$(\text{CodS}, \text{CodP}) \rightarrow \text{Price};$

$\text{NrC} \rightarrow (\text{CodS}, \text{DataC});$

$(\text{NrC}, \text{CodP}) \rightarrow \text{Quantity}.$

From these basic functional dependencies, the relationship schemas that will compose the database are immediately deduced.