DATABASE - Informatics

In everyday practice, the terms "data" and "information" are often used interchangeably: in fact, it is not immediately clear how to distinguish them. A piece of data is the measure of a phenomenon that we are interested in observing. A **data** is the measure of a phenomenon that we are interested in observing. Information **is** what is obtained from the processing of a set ofdata and which increases the state of knowledge relating to a phenomenon. From a purely disciplinary point of view intuitively it is possible to say that the greater the amount of data available compared to a phenomenon to be analyzed the better the quality of the information. A database (in English database) is a collection of organized data stored and accessible electronically. Small databases can be stored on a file system, while larger databases I am hosted on computer cluster or on cloud storage.

A **system Of management from the banks data** , known Also as database management system (DBMS), is the software that interacts with end users, applications and the database itself to take and analyze data. In addition, the management software includes basic functionality necessary to administer the database. The database as a whole, the management system and the applications associated can to be called a database system. The basics Of data relational became predominant in the 1980s. These model data as rows and columns in a series of tables, and the vast majority use SQL as the language to write and query the data. In the years 2000, they took foot Also models Not relational, collectively called NoSQL , Why they use languages Of interrogation different.

Database can also indicate simultaneously: the archive at the physical level (hardware) i.e. the system with storage media (e.g. hard disks) that contain the data itself and the processor for processing these (database server); the logical level archive, i.e. the data structured, and the software part, i.e. the database management system (DBMS). In most databases modern ones, i.e. those based on the relational model, the data is divided into specific tables by topics and these topics are divided into categories. This division makes the basics Of data significantly more efficient, at least for management Of complex data.

THE main points That qualify The appeal to the approach founded on DBMS I am the following:

1. **Integration:** a base Of data And a Together integrated Of data structured And permanent stored without unnecessary redundancies and organized in such a way that they can be used by applications different without to depend from any Of they.
2. **Independence logic:** the data I am defined independently from procedures That there

manage, in this way the logical structure of the database can be expanded without the need for modify the application programs.

3. **Independence physics:** describes there structure of the data abstracting from that That And there They physical implementation (storage organization, access methods, etc.) in so that the latter can be modified without modifying the logical structure of the data and Of consequence the programs applications.
4. **Integrity:** It is the database management system and not the management procedures that must be provide mechanisms to check that the data entered or modified satisfy the constraints specified integrity.

AND possible to classify the user Of a system of management from the bases of data in the following way:

1. **Programmers Of applications,** or users professional That they have The task Of develop applications software.
2. **Users finals,** Meaning what users Not professional That they interact with there base Of data exclusively through application programs (for example : post office or bank clerks, warehousemen, users web, etc.) without knowing the structure of the data with which interact.
3. **Advanced users,** i.e. users who know the data structure and are able to operateactivity Of investigation using a language Of interrogation of the database without alter it.
4. **Administrator users (DBA, *Data Base Administrator*),** i.e. professional users who are requested there maintenance from the base Of data in the time.