MASSON

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Lab 1

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Essay 1

In information technology, a data is the representation of information in a program or in the program text (source code) or in memory during execution. Data, often encoded, describe the software elements such that an entity (thing), an interaction, a transaction, an event, a subsystem, etc.

Data can be stored and classified in different forms: text (string), digital, images, sounds, etc. Variable data which make the flexibility of a program are generally read from a user input device (keyboard, mouse ...), file, or network. The process of recording data in a memory is called retention.

The data are, with the treatments, one of the two pillars of any method in computing.

Good practice strict independence between the data and treatments. This principle is to afford and facilitate the future development of applications: Thus any modification or redesign the data does not impact or very little the area of treatment, and vice versa.

Data should always be recorded, organized and documented so easily be (re-) discovered and manipulated by all potential users and the developer community.

From a functional standpoint, the people responsible to give an image of the data in the information system of more or less macroscopically in companies are planners of information systems and data architects. Persons with the responsibility of organising the data of a company are the DBAs (Database administrators).

The data must be stored on a medium which guarantees the best use we can make (consultation, archiving ...).
The problem of computer data storage is much more complex than storing data on paper. So what is sometimes called improperly "dematerialization" does not always simplifies the problem of accessibility to information. They may face problems of compatibility of files or databases.
Looking for the best information support is one of the key elements of the content management.

Essay 2

In computing, a data model is a model that describes how the abstract data are represented in a business organization, an information system or a database. In general, a theoretical data model describes the following:

Data structure defines how data is organized (hierarchical, network, relational, object-oriented). Data integrity provides a language or implicit rules for maintenance of the integrity of data in the instance data model. Data handling provides a language to create, update and delete data and Data Search provides a language to search the data.

XML is used to structure information in text files. typically it can be used as a configuration file for programs but also to record the results (measurements, address book, parts list, ...)

XML is becoming more and more because it helps to structure the information in a more robust form binary or tabular files. This form allows both to facilitate computer processing (internet, intranet, spreadsheet, database, ...) while maintaining a readable and editable text media without tools by humans.