Database management system and data

Business, Management

Chapter 11: Review

Question: 1. Explain the main differences between a file processing system and a database system ANS: Some main differences between a database management system and a file processing system are:

- Both systems contain a collection of data and a set of programs which access that data. A DBMS coordinates both the physical and the logical access to the data, whereas a file-processing system coordinates only the physical access. A DBMS reduces the amount of data duplication by ensuring that a physical piece of data is available to all programs authorized to have access to it, whereas data written by one program in a file-processing system may not be readable by another program.
- A DBMS is designed to allow flexible access to data (i. e. , queries), whereas a file-processing system is designed to allow pre-determined access to data (i. e. , compiled programs).
- A DBMS is designed to coordinate multiple users accessing the same data at the same time.

A file-processing system is usually designed to allow one or more programs to access different data files at the same time. In a file-processing system, a file can be accessed by two programs concurrently only if both programs have read-only access to the file.

Discussion Topic:

2. Suggest three typical business situations where referential integrity avoids data problems. ANS:

- In an inventory order system, you don't want an order to be deleted if there are inventory order items, or those items will be orphaned. If you are assigning customers to a salesperson, referential integrity would make sure that a customer wasn't assigned to a salesperson that doesn't exist.
- Payments in an accounting system should only be applied to an account, and if that account number changes, you want entries on that account to be updated as well.

Project: 1. Search the Internet to find information about data storage formats. Also do the research on international date formats.

Determine whether the date formats used in the United States is the most common format. ANS: According to my research on the Programmers website, I think that we have many different ways to store a program data: plain text which the application has small size of simply structured data, and data are not modified concurrently by multiple users. XML is small size of structured data that are not modified concurrently or frequently. Database which is large structured data or concurrent access is needed.

Need for querying and search is a must in the application. Binary data use for streaming objects. Zipping is compression that may be added as another process for any of the above except databases on servers. The international format defined by ISO (ISO 8601) tries to address all these problems by defining a numerical date system as follows: YYYY-MM-DD where * YYYY is the year [all the digits, i. e. 2012] * MM is the month [01 (January) to 12 (December)] * DD is the day [01 to 31]

For example, " 3rd of April 2002", in this international format is written: 2002-04-03 In the United States, dates are traditionally written in the " month day, year" order. This is the most common format because it used in both traditional numeric date. This date format was commonly used alongside the small endian form in the United Kingdom until the early 20th Century and can be found in both defunct and modern print media such as the London Gazette and The Times, respectively.