

CHAPTER 8: FUNCTIONS OF DBMS

Introduction to DBMS functions

A software that handles the storage, retrieval, and updating of data in a computer system.

A database management system (DBMS) is a collection of programs that enables you to store, modify, and extract information from a database. There are many different types of DBMSs, ranging from small systems that run on personal computers to huge systems that run on mainframes. The following are examples of database applications:

- Computerized library systems
- Automated teller machines
- Flight reservation systems
- Computerized parts inventory systems

Importance of DBMS:

A database management system is important because it manages data efficiently and allows users to perform multiple tasks with ease.

A database management system stores, organizes and manages a large amount of information within a single software application. Use of this system increases efficiency of business operations and reduces overall costs.

Handling multiple types of data. Some of the data that are easily managed with this type of system include: employee records, student information, payroll, accounting, project management, inventory and library books. These systems are built to be extremely versatile.

DBMS Functions

There are several functions that a DBMS performs to ensure data integrity and consistency of data in the database. The ten functions in the DBMS are: data dictionary management, data storage management, data transformation and presentation, security management, multiuser access control, backup and recovery management, data integrity management, database access languages and application programming interfaces, database communication interfaces, and transaction management.

1. Data Dictionary Management

Data Dictionary is where the DBMS stores definitions of the data elements and their relationships (metadata). The DBMS uses this function to look up the required data component structures and relationships. When programs access data in a database they are basically going through the DBMS. This function removes structural and data dependency and provides the user with data abstraction. In turn, this makes things a lot easier on the end user. The Data Dictionary is often hidden from the user and is used by Database Administrators and Programmers. are u mad