DBMS history

What is a Database?

In essence a database is nothing more than a collection of information that exists over a long period of time, often many years.

What is a DBMS?

A DBMS is characterized by the ability to support efficient access to large amounts of data, which persists over time. It is also characterized by support for powerful query languages and durable transactions that can execute concurrently in a manner that apears atomic and independent of other transaction

Early DBMS

The first commercial database management system appeared in 1960's. These systems evolved from file systems.

Some of applications of these systems was:

Airline systems, Banking systems, Corporate records.

DBMS

Ted Codd in 1970's changed significantly database systems. Codd proposed that database systems should present the user with a view of data organized as tables called relations.

SQL (Structured Query Language) is the most important query language based on relational model

DBMS

By 1990, relational database systems were the norm. Yet the database field continues to evolve, and the new issues and approaches to the management of data surface regularly

Outline of DBS studies

DESIGN OF DB

1. How does one develop a useful DB?
2. What kind of information go into the database?
3. How is the information structured
4. What assumptions are made about types or values of data items.
5. How do the data items connect?

Outline of DBS studies

DATABASE PROGRAMMING
1. How does one express queries and other operations on the DB?
2. How one use other capabilities of a DBMS such as transactions or constraints, in an application?
3. How is database programming combined with conventional progr.?

Outline of DBS studies

DATABASE SYSTEM IMPLEMENTATION

1. How does one build a DBMS, including such matters as query processing, transaction processing and organizing storage for efficient access?