Database Introduction

Database defined

A database is an organized collection of structured information, or data, typically stored electronically in a computer system. A database is usually controlled by a database management system (DBMS). Together, the data and the DBMS, along with the applications that are associated with them, are referred to as a database system, often shortened to just database.

Database benefits

- reduce the amount of time you spend managing data.
- analyse data in a variety of ways.
- promote a disciplined approach to data management.
- turn disparate information into a valuable resource.
- improve the quality and consistency of information.

The design process consists of the following steps:

1. Determine the purpose of your database. ...
2. Find and organize the information required. ...
3. Divide the information into tables. ...
4. Turn information items into columns. ...
5. Specify primary keys. ...
6. Set up the table relationships. ...
7. Refine your design. ...
8. Apply the normalization rules.

What is Structured Query Language (SQL)?

SQL is a programming language used by nearly all relational databases to query, manipulate, and define data, and to provide access control. SQL was first developed at IBM in the 1970s with Oracle as a major contributor, which led to implementation of the SQL ANSI standard, SQL has spurred many extensions from companies such as IBM, Oracle, and Microsoft. Although SQL is still widely used today, new programming languages are beginning to appear.