

# **Data Warehouse**

——Review the Basic Concepts of Database——

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### **Data Warehouse**



- Review the basic concepts of database
- What is a data warehouse?
- A multi-dimensional data model
- Data warehouse architecture
- Data warehouse implementation
- From data warehousing to data mining

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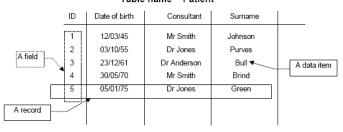
## Database (1)



- Database is a collection of information in a structured way or a collection of facts.
  - ◆ A shared collection of logically related (and a description of this data), designed to meet the information needs of an organization.
- Tables, records and fields:
  - A database consists of Tables, which consist of records which consist of fields.

A table containing five records each containing four fields

Table name = Patient



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#### Database (2)



- Database Management System (DBMS)
  - ◆ A software system that enables users to define, create, and maintain the database and provides controlled access to this database.
  - ◆ Typical DBMS: DB2, Oracle, MS SQL Server, MySQL, MS Access
  - ◆ Dead DBMS: Sybase, Informix
- Important functions of DBMS:
  - Data storage, retrieval (SQL), and update (Create/Insert, Read, Update, Delete)
  - Transaction support

Ensure that either all the updates corresponding to a given transaction are made or that none of them are made.

Concurrency control services

Ensure that the database is updated correctly when multiple users are updating the database concurrently.

Other functions (Refer to Database Textbook)

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