



Data Warehouse

——Review the Basic Concepts of Database——

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1

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

2



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

ID	Date of birth	Consultant	Surname
1	12/03/45	Mr Smith	Johnson
2	03/10/55	Dr Jones	Purves
3	23/12/61	Dr Anderson	Bull
4	30/05/70	Mr Smith	Brind
5	05/01/75	Dr Jones	Green

Diagram annotations: A dashed box around the ID column is labeled "A field". A dashed box around the entire table is labeled "A record". An arrow points from the text "A data item" to the cell containing "Bull".

3



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)**

4





Thanks !

