

Database Technology

Topic 1: Fundamental Concepts

Olaf Hartig

olaf.hartig@liu.se

Quizzes

Databases vs. File-based Data Management

Quiz (The Database Approach)

Which of these statements is *not* correct?

- 1) In a database approach, applications don't have their own data files; instead, all applications access the same version of the data by interfacing with the DBMS.
- 2) In a database approach, the data definitions or metadata are stored in the applications accessing the data.
- 3) In a database approach, maintenance of data and metadata is easier.
- 4) In a file approach to data management, different applications could be using older and newer versions of the same data.

Quizzes

Database Languages

Quiz (Database Languages)

Which of these statements is *not* correct?

- 1) In a file-based approach, every application has its own query and access procedures, even if they wanted to access the same data.
- 2) SQL is a database language that allows different applications to access different subsets of the data necessary for each application.
- 3) SQL is a database language that focuses on how to access and retrieve the data.
- 4) SQL is a database language to interact with DBMSs without having to write a substantial amount of programming code.

Quizzes

Three-layer architecture,
data independence, and
data models

Quiz (Three-Layer Architecture)

Complete this sentence:

In the three-layer architecture, between the external layer and the conceptual/logical layer, there is...

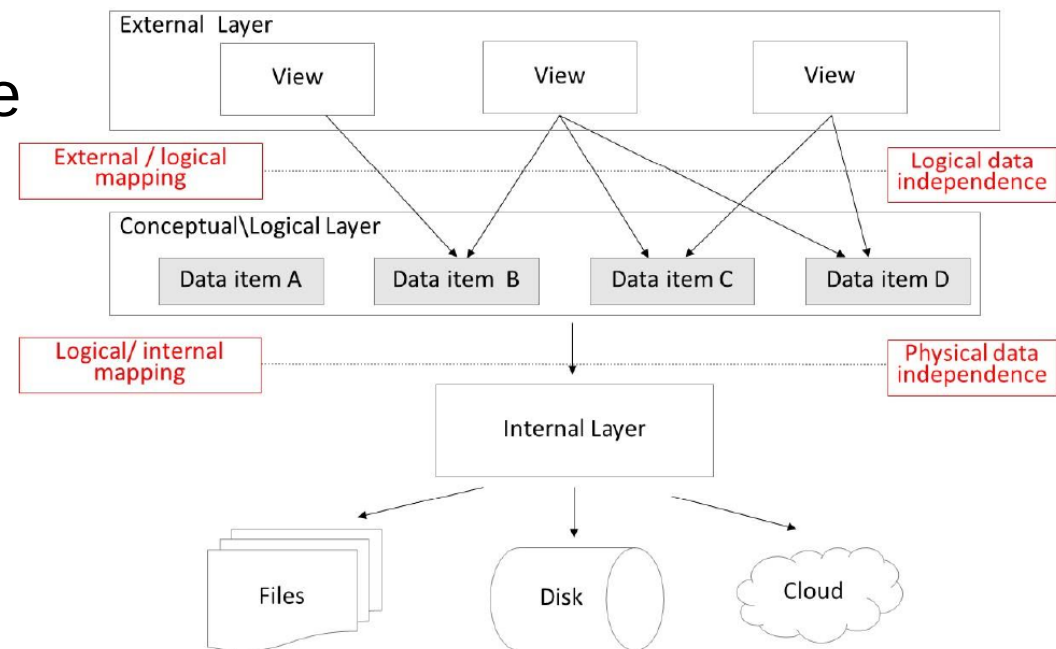
- 1) No independence, they are basically the same thing
- 2) The internal layer
- 3) Logical data independence
- 4) Physical data independence

Quiz (Three-Layer Architecture)

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- 3) Logical data independence
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Quiz (Data Models)

Which of these statements is *not* correct?

- 1) A logical data model represents the conceptual data model translated to a specific implementation environment.
- 2) In a conceptual data model, the data requirements from the business should be captured and modeled.
- 3) Examples of implementations of logical data models are hierarchical, CODASYL, relational or object-oriented models.
- 4) A conceptual data model is implementation dependent.

Quiz (Database State and Catalog)

Which of these statements *is correct*?

- 1) The database is stored in the catalog.
- 2) The database state specifies the various data items, their characteristics and relationships and is specified during the database design.
- 3) The database state changes when data is updated or removed.
- 4) The database state represents the data in the database when the database is first created.

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