Views

Defining and Using Views
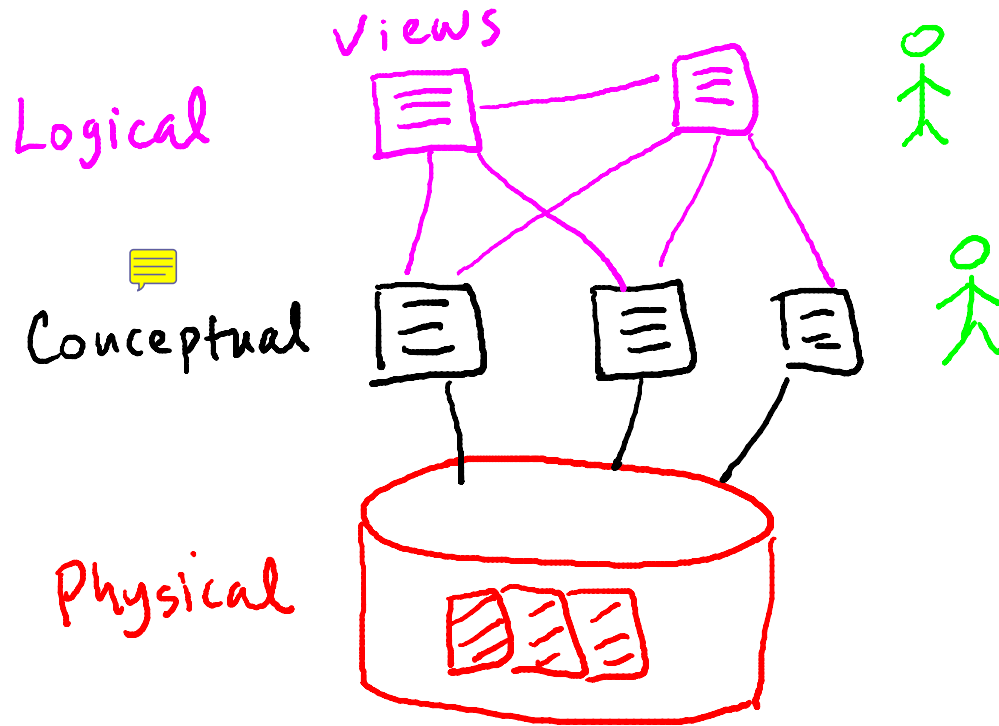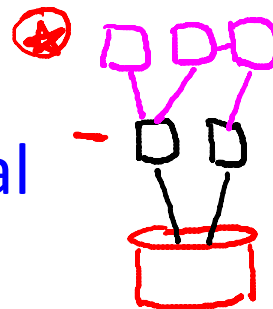
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Three-level vision of database

Physical – Conceptual – Logical

Why use views?

- Hide some data from some users
- Make some queries easier / more natural
- Modularity of database access

> Real applications tend to use lots and lots (and lots and lots!) of views

Defining and using views

- View V = ViewQuery(R_1, R_2, ..., R_n)

- Schema of V is schema of query result

- Query Q involving V, conceptually:

  ```
  V := ViewQuery(R₁,R₂,…,Rₙ)
  Evaluate Q
  ```

- In reality, Q rewritten to use R_1,...,R_n instead of V

- Note: R_i could itself be a view

SQL Syntax

```
Create View Vname As
<Query>
```

SQL

SQL Syntax

```
Create View Vname(A₁,A₂,…,Aₙ) As
<Query>
```

Demo: simple college admissions database

College(<u>cName</u>,state,enrollment)

Student(<u>sID</u>,sName,GPA,sizeHS)

Apply(<u>sID</u>,<u>cName</u>,<u>major</u>,decision)