The Learning House

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Louisville KY 40202

Java Object-Oriented Concepts

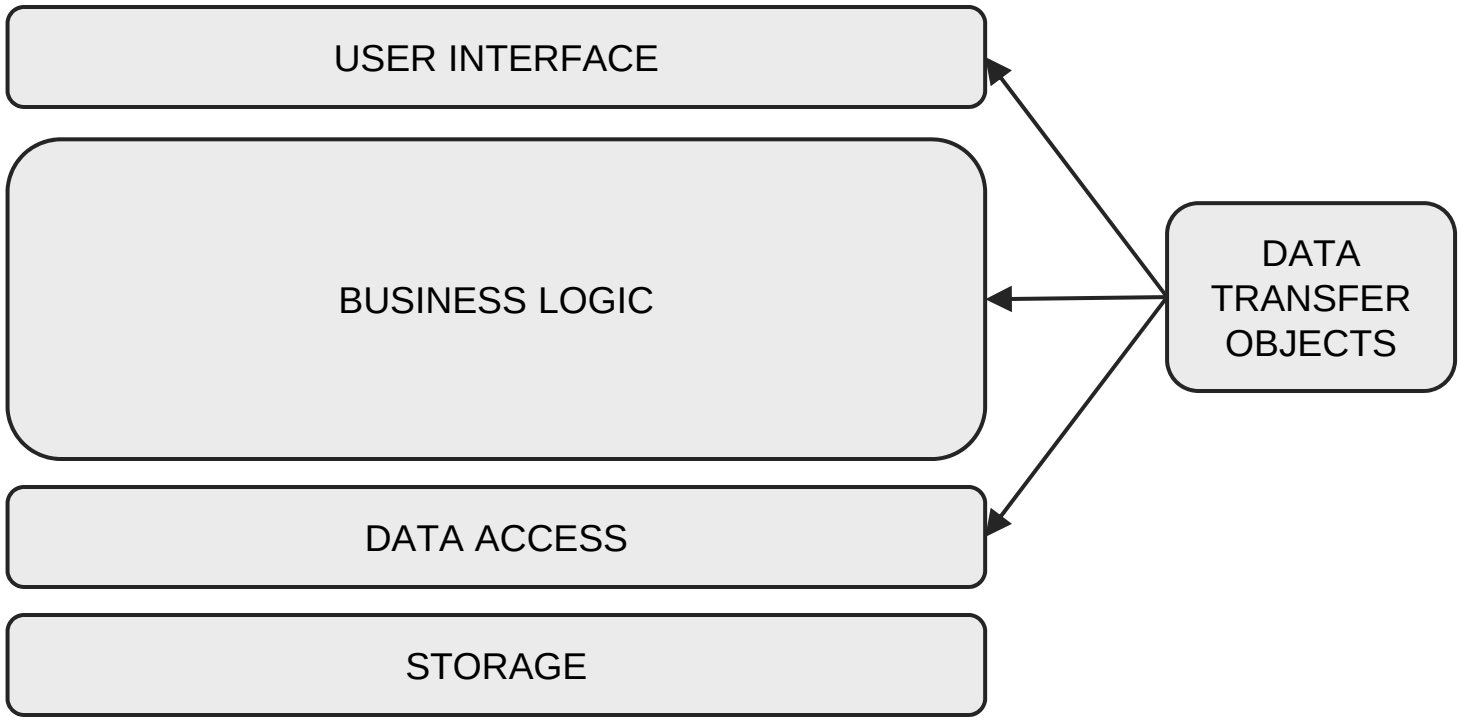
Lesson 7 - Tiered Application Design Concepts

SOFTWARE GUILD

Why Tiers?

- We want to keep business logic and data access logic separate from UI logic
- This allows us to reuse these components for several platforms (web, mobile, B2B)
- Without, we would have to duplicate code for each platform

Tiered Design



Tiered Design

- **Storage**: files, database, or other persistent storage
- **Data Access**: classes that handle retrieving and storing data (think VendingMachine or AddressBook)
- **Business Logic**: classes that handle algorithms specific to your problem domain
- **User Interface**: interaction with the user

Packages

- Each of the major areas in the tiered model usually gets its own package
- For example:
  - Data Transfer objects — domain or dto package
  - Data Access objects — persistence or dao package
  - Business Logic objects — operations package
  - User Interface objects — ui package

Tiered Design and Web

- In our labs so far, tiered design is complete overkill
- We will use this design approach as we move into web applications
- We will use a framework called Model-View-Controller (MVC)
- MVC will seem familiar because we already use this approach