

2 Three-tier Architecture

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Explain the three tier architecture. Give examples.

Data Transfer Object

- Serializable
- Not remote
- Not necessarily a domain object (can take data from multiple classes, can mash multiple objects together)
- Getters for all fields (instance variables)

- More efficient to get all the data using a single remote call
- Likely immutable: once you get the data from the server, you throw the DTO away, and update the data using remote methods directly

Data Access Object

- Primary purpose: accesses the database
- Is remote
- Example of persistence logic

- Create objects (inserts rows) in DB
- Read objects (select rows) in DB
- Update objects in DB
- Delete objects
- === CRUD methods

Three-tiered systems

Tier 1: Client

- Changes every few months usually

Tier 2: Business Logic

- Usually changes with the business (i.e. years)
- E.g. game rules
- E.g. Hospital - operation can't happen without a diagnosis

Tier 3: Persistence Logic

- Changes very rarely (i.e. decade)

System Tiers

- The Operations perspective: only concerns the server-side

- DNS (internet)
- Load Balancer
- Cache
- Application tier(s)
- Database tier