Chapter 5

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Part of the rationale

- Specialization:
  - Clients specialize in user interface
  - Servers specialize in managing data and application logic
- Sharing:
  - Many clients can be supported by few servers
  - Often data and logic are shared among applications and users

Distinctions

- Client-server
  - Asymmetric relationship
  - Client predominately makes requests, server makes replies
- Peer-to-peer
  - Symmetric relationship

Email application

- Client
- Server
- Client

Client sends email

Message is stored on POP server

Later, recipient’s email client retrieves message from server
Chat application

- Chat clients send user's typing to server
- Chat server aggregates typing from all users and sends to all clients
- Other user's clients display aggregated typing from chat server

Three-tier client/server

- Presentation
- Local-area network
- Application logic
- Shared data

Note: many clients per application server, several application servers per data server

Practice in defining tiers

- Online bookseller (e.g. amazon.com)
- Stock trading system (e.g. Schwab or E-trade)
**Question**

- What types of social applications would be appropriate for a client/server architecture?
Shortcomings of client/server

- Departmental solution
- Proliferates non-interoperable technologies and applications
- Hardwired applications lose flexibility

What are some goals and likely characteristics of future enterprise architectures?