

Distribution Technologies

- 1) Ad hoc network programming (IPC, Sockets)
- 2) Structured communication (e.g. RPC)
- 3) Middleware
 - a. Distributed Object Computing (e.g. RMI, CORBA)
 - b. Component Middleware (e.g. EJB, CCM: CORBA Component Model)
 - c. Message Oriented and Publish/Subscribe Middleware

Design Reuse Mechanisms

- 1) Libraries
 - 2) Frameworks
 - 3) Interfaces/Contracts
 - 4) Message formats/Protocols
 - 5) Patterns
- } How do these compare?
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Network Programming

- 1) RMI
 - 2) Servlets/JSP
 - 3) CORBA
- } Should have "hands on" familiarity with these.

Architectural Design Patterns

- 1) Domain Model
- 2) MVC
- 3) Layers
- 4) PAC
- 5) Microkernel
- 6) Reflection
- 7) Pipes and Filters
- 8) Shared Repository
- 9) Blackboard

Database Management Systems

- 1) SQL (Structured Query Language)
 - a. Simple statements (CREATE TABLE, INSERT, SELECT, DELETE, UPDATE)
 - b. Aggregate functions (MIN, MAX, SUM, AVG, COUNT)
 - c. Sorting and grouping (ORDER BY, GROUP BY, HAVING)
 - d. Joins
- 2) Database Design
 - a. Translating UML data models to relational schemas
 - b. Boyce-Codd Normal Form (BCNF)