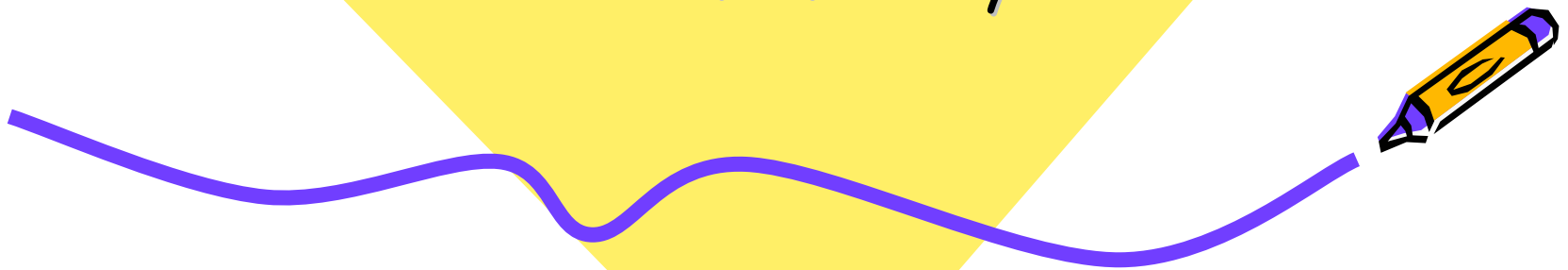


Final Review

Bina Ramamurthy



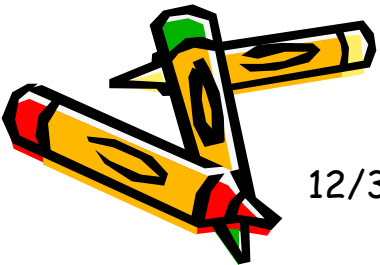
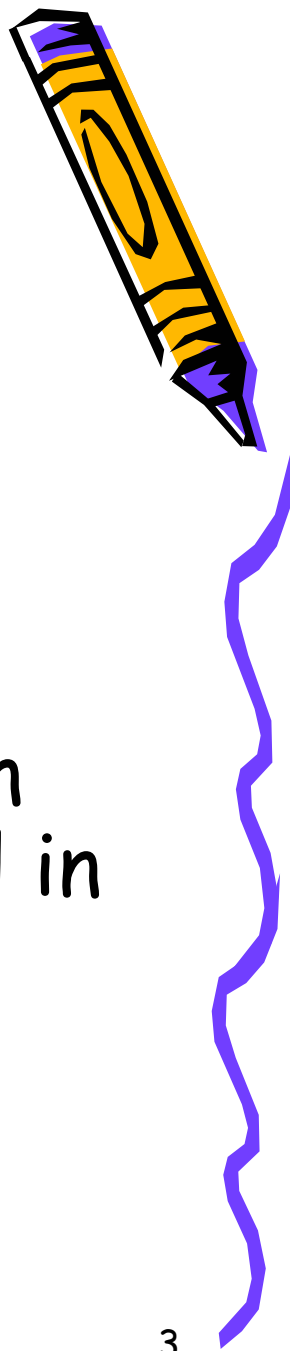
Summary of Topics Covered

- Client-server programming
- Request-response model
- Open database connectivity, Oracle 9i database
- Declarative vs programmatic specification of capabilities
- Webservices standard
- Grid: compute, data and service-oriented grid
- Grid services and their capabilities
- Open Grid Services Architecture (OGSA) and Open Grid Services Infrastructure (OGSI)
- Virtual Organization
- Condor grid and Globus grid
- Globus core services
- Grid higher level concepts such as virtualization and federation
- Sotomayor's tutorial
- Higher level services and application models (Ch.17 and Ch.18)
- Hands-on applications on Condor and Globus service



Final exam

- Date: December 14, 2004, Tuesday
- Time: 3.30-6.30pm
- Location: Knox 4
- Format: 4 sheets of an information you like; no sharing of any material in class; bring your own material
- Bring pencils, pens and erasers



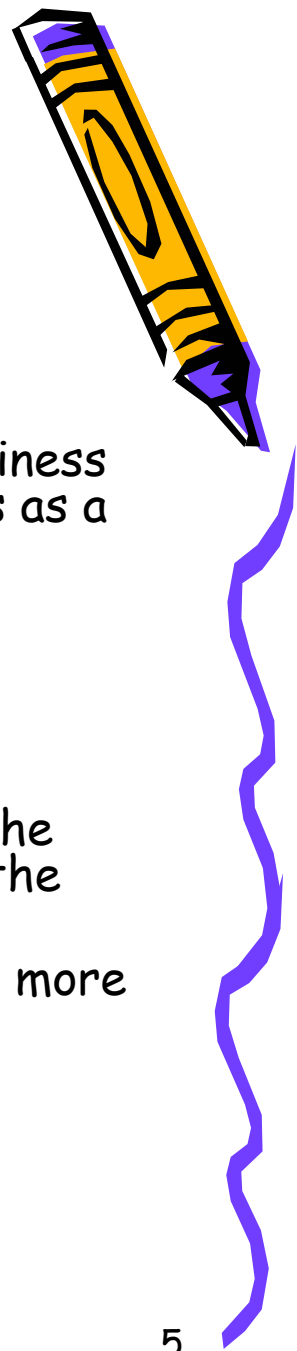
Exam Format



- One major question and several minor questions.
- Major question is a design question on grid service and grid application (30 points)
- 7 minor questions, 10 points each
 - Answer the minor questions using a figure and simple short sentences.
 - Example question: GSH and GSR relationship



Sample Major Question



- A business process is a fundamental component of a business system. In order for a grid service to be used to support business applications, it should be possible to model a business process as a grid service. Show the feasibility of this claim.
- Hints:
- Examples for business process: Inventory control, Order Management, and Billing.
- Define a business process, list its requirements.
- Then identify the grid services capabilities that will satisfy the requirements. The capabilities of a grid service discussed in the GT3 tutorial will help.
- Bring all these together as an application implementing one or more business processes.



Sample Minor Questions



1. What is meant by virtualization?
2. What is a virtual organization (VO)?
3. What is federation of information?
4. What are the two approaches to designing a grid service?
5. Describe a *Grid Service-based Application* model. Use a block diagram.
6. What is the difference between transient and persistent services?
7. What is a portType?
8. What is a service data? How can it be used by applications?
9. What is Notification? How can be used by applications?
10. What is a (i) Factory and (ii) Registry? How are they related?

