

RUBiS Design Review

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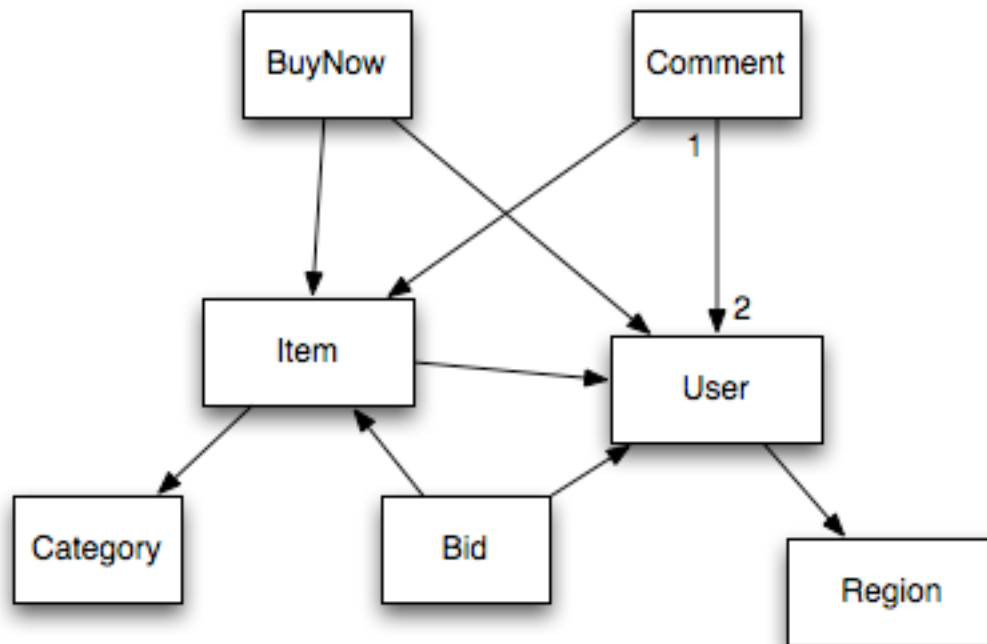
Boy this sucks

- Papers show that EJB has much worse performance than JDBC or PHP
- Don't know why
 - need to get their experiments up and running
- But, boy, does their EJB implementation suck
- Only looked at the EJB 2.0 local interface implementation

Design

- Uses Entity beans to represent persistent state
- Use SessionFacade to access entity beans
- Uses:
 - bean managed transactions
 - no container-managed relationships
 - manual authentication in each session bean

Entity Beans



No homes cached

- multiple JNDI lookups performed for most business method
 - 6 JNDI lookups performed for `SB_AboutMe.getAboutMe(...)`
- How should we do it?
 - do in `ejbPostCreate/ejbActivate`?
 - Static Singleton?
 - hard to make this work in EJB world

Transactions

- Transactions used for lots of read-only business methods
 - SearchItemsByCategory
 - SearchItemsByRegion
 - BrowseCategories
 - BrowseRegions
 - AboutMe

Transaction Collapse

- In paper, JBoss falls down when transactions start timing out
 - presumably, system was slowing down to the point where transactions were taking too long
 - What was the transaction timeout?
 - How to handle overload in transaction environment?
 - timeout and rollback obviously don't work
 - better to just immediately fail some transactions

Transaction Collapse

- Before collapse, most operations pretty fast
- After collapse, three operations are never fast
 - BrowseCategories
 - BrowseCategoriesInRegion
 - SelectCategoryToSellItem