Distributed Design

Wednesday, August 11, 2010
10:54 AM

Schema:

BOOKS(book#, primary_author, topic, total_Stock, $price)
BOOKSTORE(strore#, city, state, zip, inventory_value)
STOCK(store, book#, city)

A. **Give 2 simple predicates that would be meaningful for the bookstore relation for horizontal partitioning. Use relational algebra operations or SQL statements**

P1 = δstore# = '1' (BOOKSTORE)
P2 = δstore# = '2' (BOOKSTORE)   *hindi pwede ung city kasi may dupilcate

1st possibility:
SELECT * FROM BOOKSTORE WHERE city = '?' AND state = '?';

2nd possibility:
SELECT * FROM BOOKSTORE WHERE store# = '?';

B. **How would a derived horizontal partitioning of STOCK be defined based on the partitioning of the bookstore?**

P1 = δstore# = '1' (STOCK)
P2 = δstore# = '2' (STOCK)

SELECT * FROM STOCK WHERE store# = '?';

C. **Show 2 predicates by which books may be horizontally partitioned by topic**

P1 = δtopic = 'history' (BOOKS)
P2 = δtopic = 'business'(BOOKS)

SELECT * FROM BOOKS WHERE topic = '?';

D. **Show how the stock may be further partitioned from the partitions in B by adding the predicates in C**

SELECT * FROM STOCK s, BOOKS b WHERE b.book# = s.book#;