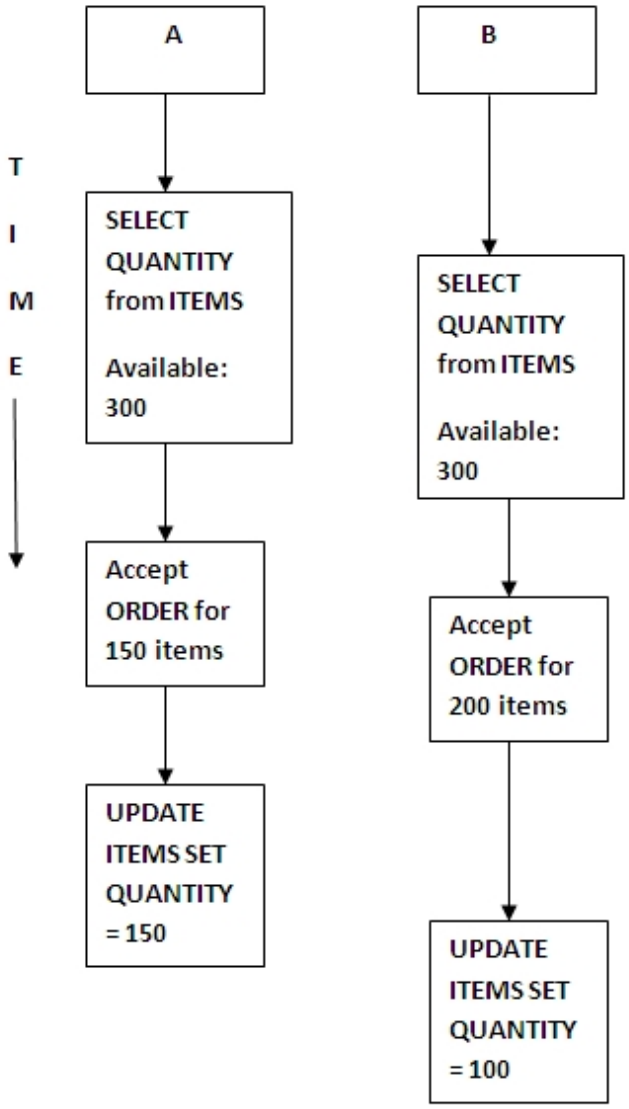
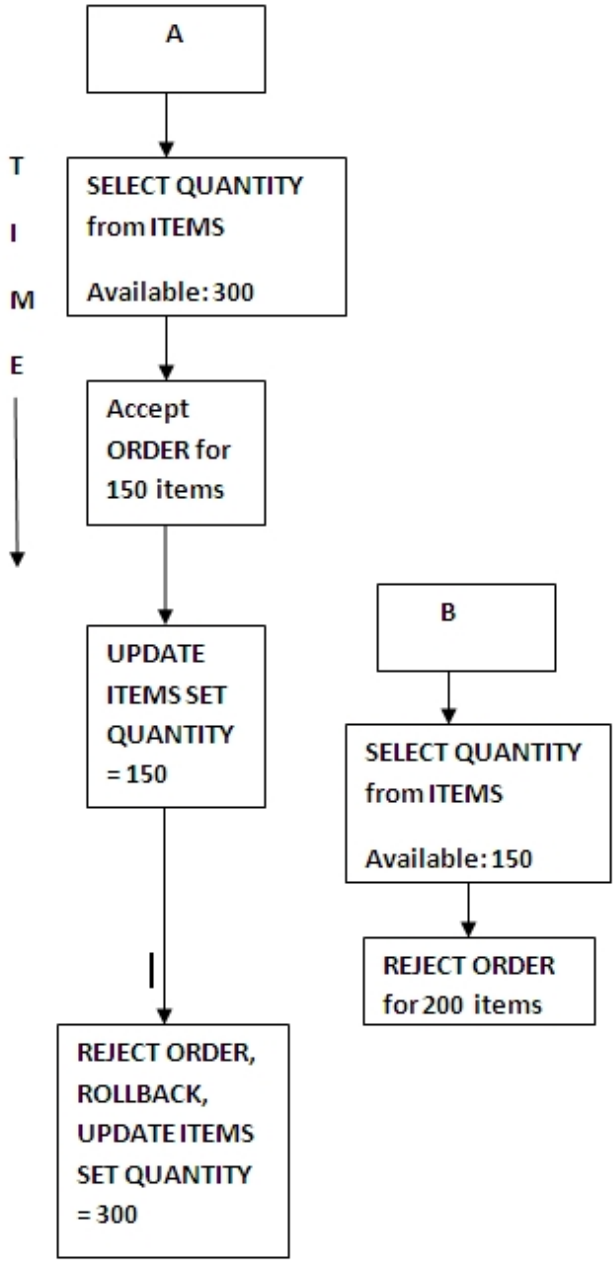
Lost update, uncommitted data, dirty read problem in transaction processing in SQL

March 14, 2013 by **Admin** — **Leave a Comment**

Lost update problem: A lost update is a typical problem in transaction processing in SQL. It happens when two queries access and update the same data from a database. This problem can be understood by the below given diagram. Here, A is processing an order for a client for 150 items. He checks from the ITEMS table that there are 300 available items. So he starts placing the order. After few seconds B gets an order for 200 items. He also checks the items table and finds that there are 300 items available. So he also starts placing an order. Meanwhile A confirms the order for 150 items and updates the ITEMS table and sets the quantity to 150. A few seconds later B confirms the order and updates the ITEMS table and sets the quantity to 100. This problem is known as lost update problem because both the orders of the users A and B have been accepted, but there is not enough items available. Hence, the updates are lost.



Uncommitted data or dirty read problem: In a dirty read problem, A is processing an order for a client for 150 items. He checks from the ITEMS table that there are 300 available items. So he starts placing the order. A confirms the order for 150 items and updates the ITEMS table and sets the quantity to 150. Now, B receives an order for 200 items. He checks the ITEMS table to find that there is not enough inventories (150 available) and rejects the order. By using business rules and transactions a note is sent informing that more items are required. Now, due to some reason client asks A to cancel the order, so A cancels the order, rolls back and updates the ITEMS table back to 300 items. This problem is known as dirty read because B saw the uncommitted update of A.



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