

Exercises to the Lecture FSVT

Consider the following informal specification:

1. The subject is to invoice orders.
2. To invoice is to change the state of an order (to change it from the state "pending" to "invoiced")
3. On an order, we have one and one only reference to an ordered product of a certain quantity. The quantity can be different to other orders.
4. The same reference can be ordered on several different orders.
5. The state of the order will be changed into "invoiced" if the ordered quantity is either less or equal to the quantity in stock according to the reference of the ordered product.
6. You have to consider the following cases:

(a) Case 1:

All the ordered references are references in stock. The stock or the set of the orders may vary:

- due to the entry of new orders or cancelled orders;
- due to having a new entry of quantities of products in stock at the warehouse.

However, we do not have to take these entries into account. This means that you will not receive two entry flows (orders, entries in stock). The stock and the set of orders are always given to you in an up-to-date state.

(b) Case 2:

You have to take into account entries of:

- new orders;
- cancellations of orders; entries of quantities in stock.

Formal specifications (ASM and/or algebraic) for this scenario will be discussed in next week's lectures. Prepare this discussion by developing ideas of how such specifications might look like and by identifying potential problems.

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