

Concurrency Stock Application

Functional requirements

- A user can log in/out on the app.
 - A user can create an account for the app.
 - A user can place a request to sell/buy stocks at a certain price.
 - A user can see the current price of the stock they're looking for.
-
- A company can set the price/quantity of stocks available.
 - A company can create an account.
 - A company can also log in/out on the app.
 - A company can't buy stocks.
 - A company can modify the price for the stocks at any given time.
 - A company cannot refuse a request for buying/selling back stocks.

Non-functional requirements

1. Our service needs to be available 24/7.
2. It needs to be able to process requests as fast as possible because these influences the prices and difference in prices between price at request time and price at processing/buy time should be as small as possible.
3. Prices should be updated fast as stocks are bought or sold.
4. Out of stock or unavailability are possible problems unless a large capacity of stocks are considered (minimum amount set for companies).

High-level component design

