Recently Viewed Items

[This problem may have been done in the class. Whatever the instructor taught you supersedes the following]

Design product view history feature for full-featured high-traffic eCommerce website like Amazon.com

Use case : user comes to Amazon, browses a number of products, users goes back to home page : display all N recently viewed items

* Define API/Object Model

* Backend service has to store all data in memory : no database available

* Write an efficient data structure/algorithm that is able to process updates in o(1) time and retrieve history in o(n) time, where n is number of recently viewed items