**Note – Please choose any one Case Study!**

**Problem 1:**

**Inventory Management System**MyBooks is a Software as a Service providing accounting needs. It’s a global product. MyBooks has identified a key customer pain point for those who sell products online on one or more ecommerce sites. The customers currently use custom 3P solutions to crunch back sales and manage inventory in MyBooks. There is a need to automate and bring in data and have MyBooks as the source of truth for products while integrating with multiple ecommerce solutions. MyBooks customers may have m (m is just a number) different products and sell on n different sites. These products are  
Assembled using other products. (Assume it takes fixed days to create a product of type m and the same raw material can be used in more than one product)  
Bought from other sellers. (Assume it takes fixed days to deliver the product)  
For a customer to effectively manage inventory without any manual intervention, MyBooks should sync with orders from ecommerce as realtime as possible. For MyBooks customers to be successful, MyBooks system could notify the customer everyday on inventory status and also provide options to reorder products needed for assembly and sale well in advance.   
Managing payments to vendor and from ecommerce, sending out invoices to customers is out of scope. We want to solely focus on inventory management and making the customer efficient and successful.

**Problem 2:**

A council would like to try new way of elections in a city and adopt it to other cities if it is successful. They want us to build a E-Board for managing elections with following capabilities.  
Citizens can nominate themselves for the elections as contenders.  
Contender can post their manifesto on the board. Each manifesto may contain a maximum of 3 ideas.  
Citizens should be able to see the list of contenders and their respective manifesto.  
Citizen can rate the ideas on the scale of 0 (bad) to 10 (excellent).  
Board should allow a citizen to delete his/her rating.  
If the rating is more than 5, then citizen is added as a follower of the contender.   
Anytime a contender posts an idea, an email should be sent out (just do a console.log and not the real mail integration) to his/her followers and even to the followers of recipient (if any).  
A contender is removed from the election if he/she has at least 1 idea which is rated less than 5 by more than 3 voters.   
A contender who has maximum sum of avg.ratings / idea is decided as the winner.   
Average Rating Per Idea = Sum of all ratings / No of voters.  
Final rating = AvgRating of Idea 1 + Avg Rating of Idea 2 + Avg Rating of Idea 3.   
Build this system considering space and time efficiency along with OOP principles. [User interface is not mandatory. Running program in a terminal is sufficient]  
You should consider writing code that you would be comfortable submitting for a PR. Please state any assumptions or areas you could not complete due to time pressure.