Ability Test : Software Engineer

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You can use one of these following programming languages (Java, C, Obj C, C++, Ruby, Python, …) to solve problems. If you have any questions, please feel free contact us at **hello@umbala.tv**

Problem #1:

Write an application to simulate elevators in a building. Let say, one building has N floors and M elevators. Each floor can request elevator to go to another floor. Make sure that your output (console log, any GUI or activity) can show that elevators can receive requests and process to respond to those requests. How do you design a system like that? How do you handle concurrency to make sure elevators are running parallel?

Problem #2:

You have an image as NxN matrix of pixel (each is number). Write a program to rotate 90 degree that image. Can you do that in place without using any temporary matrix?

Problem #3:

Write an application, that allows people to log in to their instagram account, list all their following and includes one button to unfollow all current following.