

Microsoft Interview Experience | Set 75 (For SDE II)

- Difficulty Level : \nMedium
- Last Updated : \n19 Oct, 2015

I recently attended Microsoft Interview for their CRM team in Bangalore.

F2F Round 1:

Design and Implement: Producers and Consumer Problem. Producers produce different kind of messages and Consumers register themselves for different kind of messages. Need to design and implement Producer, Consumer and a Delegator which is responsible for storing and delivering the messages to appropriate listeners.

Changed the question to handle millions of messages.

Changed the question to handle different priority messages.

Threading model for Producer, Listener and Delegator.

In the end he asked me to code 2 methods of Delegator.

1: which adds the message from Producer to its internal queue.

2: Delegate, which delivers the message to appropriate listener.

My Opinion: There is no right or wrong answer for design question, in fact the interviewer also told the same thing. Start with something simple, a minimalist design and improve/change as requirement changes.

F2F Round 2:

1. A MxN matrix containing integers (positive, negative and zero). For every position containing 0, mark the corresponding row and column as 0.

Told him the queue approach. But he wanted with $O(1)$ space complexity in $O(n)$ time complexity.

2. Variation of <https://www.geeksforgeeks.org/find-the-k-most-frequent-words-from-a-file/>

F2F Round 3:

1. Implement Power(x,y) without loop. Interviewer wanted all test cases covered like Power(x,0) and most optimized solution.

2. Rotate MxN matrix by 90 degrees. This is where my luck ran out, The interviewer gave me hint, but still couldn't come up with solution.

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