Goldman Sachs

# Round 1

Q1. Find 2nd smallest element in an array

Q2. Trapping Snow On Hill (Trapping Rain Water)

expected time complexity: O(N)

expected space complexity: O(N)

with just one additional array

loop just 2 times

edge cases n < 3

# Round 2

Q1. Find longest subarray/subsequence with given sum Expected: better than O(N^2)

Q2. Stock buy sell - 1 transaction

followup:

2-transaction

expected: O(n) time & O(1) space

# Round 3

Q1. A method is called from another method, find out the number of times it is being called between two timestamps.

Q2. Job, timings, dependency, find minimum time to complete all jobs

What if we add some more jobs to this graph, how to recompute time?

Q3. Design an online movie booking system. How do we handle the scenario of multiple users trying to book the same seat?

# Round 4

Q1. Encode the array:

eg: [55, 1, 2, 28] > [4, 1, 2, 3]

[55, 2, 2, 28] > [4, 1, 2, 3]

Q2. Find all solutions to equation:

# Round 5

Q1. Design a system to convert one type of string to another type of string:

Eg: is\_this\_the\_real\_life > IsThisTheRealLife > is-this-the-real-life > isThisTheRealLife

Q2. Why change jobs now? What friction do you have with your current employer? Why join GS?

Q3. SDLC practices, how do you follow Agile, Normal code change vs bug fix code change, different types of testing you do and what extra types of testing can you do?

Q4. Architecture breakdown of current project