## **Amazon Interview Experience For Software Developer Intern**

Difficulty Level :\nMedium
Last Updated :\n12 Jan, 2021

Amazon visited our campus around late September to hire for the role of Software Developer Intern. There were 3 rounds involved in the process.

- An online test
- Two technical interviews.

The online test was organized on Mettl Platform and consisted of the following parts:

- Debugging: Had to apply some changes to a given code snippet to make it logically and syntactically correct.
- Psychometric Test: Situational questions.
- Reasoning: Was relatively easier than you would usually find in other placement tests.
- Two coding questions :\xc2\xa0
  - 1. Rewrite of **Search in a matrix:** <a href="https://www.geeksforgeeks.org/search-in-row-wise-and-column-wise-sorted-matrix/">https://www.geeksforgeeks.org/search-in-row-wise-and-column-wise-sorted-matrix/</a>
  - 2. Rewrite of **Bridges in a graph**: <a href="https://www.geeksforgeeks.org/bridge-in-a-graph/">https://www.geeksforgeeks.org/bridge-in-a-graph/</a>

## **Technical Round 1:**

- Started with the introduction.
- Then two coding questions were asked :
- Given the data of n buses in a bus station with their arrival and departure time, find the minimum number of platforms required so that none of the buses overlap: https://www.geeksforgeeks.org/minimum-number-platforms-required-railwaybus-station/
- Gave an O(nlogn) solution by sorting all the timings.
- Given a binary matrix, find the number of shapes and their parameter (length) present in the matrix. A shape is a sequence of consecutive ones, and we can move in all eight directions: <a href="https://www.geeksforgeeks.org/find-number-of-islands/">https://www.geeksforgeeks.org/find-number-of-islands/</a>
- Solved using BFS.
- · Discussion on time and space complexities of each problem.

## **Technical Round 2:**

- Again started with the introduction and simple questions related to one of my projects.
- Then 2 coding questions:
- Given the prices of n stocks find the maximum profit that can be made by doing at most k transactions: <a href="https://www.geeksforgeeks.org/maximum-profit-by-buying-and-selling-a-share-at-most-k-times/">https://www.geeksforgeeks.org/maximum-profit-by-buying-and-selling-a-share-at-most-k-times/</a>
- First I gave an O(n3) DP solution, then optimized it to O(n2).
- Given the heights of walls arranged from left to right find the volume of water that will be trapped between the walls: <a href="https://www.geeksforgeeks.org/trapping-rain-water/">https://www.geeksforgeeks.org/trapping-rain-water/</a>
- Gave an O(n) solution using the maximum wall to right and left for each wall.
- Discussion on time and space complexities for each problem.

\xc2\xa0After about a week, I got the news through my college that I have been selected and given an internship offer. A total of 4 students got selected.

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