# Amazon Interview experience | Set 330

- Difficulty Level :\nEasy
- Last Updated :\n09 Jul, 2019

I recently gave interview for Amazon SDE-I role in Bangalore for AppStore team.

#### Online Test (Hacker Earth):

- Given a number N, you have to print \xe2\x80\x9cPrime\xe2\x80\x9d if its a prime number or \xe2\x80\x9cNot Prime\xe2\x80\x9d if its not.
- 2. Given a string S, print the number of digits and number of english alphabets in it.

```
eg Input = a5$&45NdG"\r\nOutput = 3, 4
```

- 3. Given a list of words, print them in lexicographical order, given the following priorities.
  - a) If two words have same spelling, lowercase characters take higher priority.
  - b) The words can have spaces in them. A space takes higher priority over any alphabet.

```
eg : Input = ["funny" , "fun", "fuNny"] \r\nOutput = ["fun", "funny", \xe2\x80\x9cfuNny\xe2\x80\x9d]
```

I could not solve the third question fully. Got partial marks.

#### Round 1:

- 1. Given a large number (can contain upto 10<sup>5</sup> digits), find the number of substrings that are divisible by 8. A substring cannot start with a 0 except if it is just 0.
  - ex: Input = 10888, output = 9 {0, 8, 8, 8, 88, 88, 888, 1088, 10888}
  - Initially, I gave a brute force O(n<sup>2</sup>) solution iterating over all substrings and then came up with O(n) solution.
- 2. The question was a bit vague. It ultimately boils down to <u>finding the number of distinct elements in an array.</u>
  I gave the solution using HashMap and he was satisfied.

### Round 2:

1. Find the number of islands

I gave the solution using dfs and he asked me to implement it. I wrote the solution but did not keep track of visited cells and my solution was running into an infinite loop. He pointed it out to me and I corrected it.

2. Rearrange characters in a string such that no two adjacent are same

I gave him a solution where I start with empty string and in each step I pick the most frequent character and add it. I also check if the character I am adding is same as the previous character. He was satisfied with my approach and did\xe2\x80\x99t ask me to write code. He said this question is for testing problem solving skill.

3. Top View of Binary Tree

He asked whether I came across this question and I said no. I gave the solution using bfs but I used HashMap which was not necessary. He asked me to think on using a simpler data structure. I struggled a bit but finally came up with set to store elements.

# Round 3 (Managerial):

- 1. Tell me about yourself.
- 2. Tell me a situation where you had conflict with your manager.

And many more behavioral questions.

3. A DBMS question about Amazon\xe2\x80\x99s product catalogue. I had no clue how to approach this. She asked if I know any DBMS concepts and I said \xe2\x80\x9cNo\xe2\x80\x9d and told her that I am from a Non-CS background.

Overall I didn\xe2\x80\x99t feel good about this round and my confidence went low. Luckily, my first two rounds went well and they decided to give me another chance by taking another coding interview.

## Round 4:

1. http://stackoverflow.com/questions/2473114/how-to-find-sum-of-elements-from-given-index-interval-i-j-in-constant-time

At first I gave a solution using segment tree (overkill). He asked me to think of a simple solution. And then I remembered the solution where we keep an auxiliary array to store the cumulative sums. Then the queries can be answered in constant time.

2. Longest K unique characters substring

I already solved this problem previously and I immediately told him the solution using two-pointers.

# Round 5 (Managerial):

- 1. Tell me about yourself.
- 2. What was the hardest bug that you have encountered. How did you fix it.

And many more behavioral questions.

3. https://www.careercup.com/question?id=64946

This is an object oriented design question. I practiced these type of questions before going to the interview from \xe2\x80\x9cCracking the coding interview\xe2\x80\x9d book and felt comfortable during the interview.

Compared to the first managerial round, this went pretty smooth.

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All Practice Problems for Amazon !

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