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Amazon Interview Experience for 6-months Internship | On-Campus 2020

- Difficulty Level :\nHard
- Last Updated :\n18 Jan, 2021

There were no eligibility criteria. But, only CSE, ECE, and EEE branches were allowed to sit for this.

First Round (Online Assessment:) This was held in AMCAT environment. The assessment consisted of four sections. You couldn\xe2\x80\x99t switch between different sections. After the end of any section, you can take your time to move to the next section. Also, you have to do these in order. Even if you complete any round earlier, the leftover time won\xe2\x80\x99t be added to the next round.

1. First, a code debugging section (20 minutes) which consists of 6 codes with some logical or syntactical errors, you have to make sure all the test cases pass for each of these 6 questions. \xc2\xa0
2. Secondly, there was a coding test (70 minutes) which had two problems:

    - Clone a linked list with next and random pointer.

    - Find Critical connections in the given graph

    You can switch between these two questions. You will have the option to run and test the code before submitting it. I don\xe2\x80\x99t know if there were more sets than two, but some of my friends also got this question:

    - Merge two sorted linked lists

A workstyles assessment (20 minutes) and a reasoning ability section (35 minutes).

Browser usage was logged, so do not open new tabs or switch to any existing one. During the reasoning section, I wasn\xe2\x80\x99t able to skip and return to questions. The exam wasn\xe2\x80\x99t proctored with webcam/microphone access.

A total of 20 students were selected for the next round. Most of the students completed both of the coding questions, so don\xe2\x80\x99t take the other sections lightly.

Second Round (Video interview): This was a video interview round. I had to install Amazon Chime software for the call and I had to share my screen. I was also given a link where the interviewers would type in the questions and I could edit the code. There were two interviewers in this round for me.

First, they said how the interview would go and started with their own introduction first. They said I would be given 2 questions and I would have to explain my approach before coding. I was asked to introduce myself and some questions were related to my introduction.

Then I was given 2 questions:

1. Find the first non-repeating character from a stream of characters.
2. Minimum time required to rot all oranges, and just a little change in the 2nd question, there were also obstacles in the 2D grid.

For the first question, I asked what to return if there would be no nonrepeating characters. For the second, I asked if the obstacles blocked the smell of orange entirely from leaving, what should I return.

This round took 1 hrs and 30 mins. I spoke out my approach and if they were satisfied, I was asked to code it. During my explanation, he also gave me hints where I was stuck. But left me to arrive at the answer myself. I was allowed to work with pen and paper. Before coding, I was asked about the time complexity of my approach. Both the questions went almost similarly. \xc2\xa0I was also reminded of the remaining time allotted for the given question. The code wasn\xe2\x80\x99t being run against any test cases, but he verified my code manually.

I don\xe2\x80\x99t exactly know how many students qualified for the next round as the meeting link for the next round were mailed personally.

Third Round: Happened in the evening same day. This round went pretty much the same as the second round except I had to solve 1 coding question this round and the next half was about the project. The interviewer introduced himself and asked me to introduce myself. He was interested in one of the activities I did as a member of a technical team.

We then moved on to my coding question.

1. Previous greater element. Just instead of the previous greater element, it was a previous greatest element.

In this question, I was given two cases, one where the queries were run offline and one where the queries were online. For the

offline queries, the fastest method would be to sort the queries and return the answer for each query as and when I went up the height of the beam.

And in the case of online test cases, we have to examine each query individually. So, my logic was to traverse the heights of the building array from left to right and keep on saving the max height of the beam corresponding to the indices of the building where the beam would hit before processing any query.

For e.g.

```
building height array - 5, 2, 5, 7, 5, 8, 10\r\nmy array will be - {5,0}, {7,3}, {8,5}, {10,7}
```

So for every query from 0-5 answers will be 0, 5-7 answers will be 3, 7-8 answers will be 5, 8-10 answers will be 7, etc.

Now, for every query, I will just use the binary search (as the resultant array will be sorted a/c to the 1st element) to find a number from the array\xe2\x80\x99s first number which is greater than or equal to the query and return the corresponding second number.

I asked what will happen if the beam\xe2\x80\x99s height will be exactly a building\xe2\x80\x99s height.

We then moved on to the project, I was free to describe any recent project that I took up. I explained to him about the one I did in my internship. The sir asked no questions related to Machine Learning instead of the approach that I took for the project if I could\xe2\x80\x99ve used something else. I very briefly described the whole project and along with it the problems I faced, the change I did in my approach, some already existing systems, and the disadvantages, and some others with better advantages but why I didn\xe2\x80\x99t use that. What libraries I used and any alternatives to those. If the project you described was made solely by you, you will find it really easy to answer.

The same night results came in and I along with 2 others were selected for the six months internship (PPO based on performance).

My advice would be to remain calm and confident, interact with the interviewers well.

And these points will be really helpful as far as Amazon is concerned:

- Never assume anything from the question, always ask him for any condition you find not covered in the question. The interviewer will definitely say That is a good question and answer it.
- Write clean code, which the interviewer can read and understand easily without you even explaining it.
- Take appropriate variable names
- Always speak out what you are thinking regarding the approach.
- Time complexity will be one of the most considered factors in your approach.
- In your introduction, be very confident, don\xe2\x80\x99t just mug up the script, and don\xe2\x80\x99t keep it too technical.
- If you have done the project yourself, you will go through the project related questions pretty easily.

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