14/09/2021

INTERVIEW EXPERIENCE

How did you prepare?

Top topics you prepared?
Data Structures: Trees, Linked List, Graphs, Stack and Queue etc,
Operating System: Basic concepts(multiprocessing, multithreading, time-shared etc), Scheduling Algorithms, Memory management, Deadlocks,
Database Management System: ACID properties, Normalization, SQL queries ,
OOPs: Polymorphism, Inheritance, abstract class, virtual functions,
Machine Learning: classification and applications, supervised(regression and classification), unsupervised(clustering) etc.

Duration of preparation(in months):
2 months

Preparation Tips
Tip 1: Practice your coding skills on leetcode, codechef etc. Refer to geeksforgeeks Interview experience articles for types of coding questions to practice. Do not spend too much time on the same type of questions. And be regular.
Tip 2: Keep your basic concepts clear. Refer to most common asked interview questions so that you don't miss any important topic.

How did you apply?

Where did you apply?
On campus

Any eligibility criteria?
7 CGPA & Above in the current course

Resume Tips
Tip 1: Make your resume short and precise. Highlight your strong skills, projects or achievements..
Tip 2: Don't mention things in the resume that you don't have full command on. You should have complete knowledge of what you have mentioned in your resume.
Tip 3: Be Precise. Do not write the whole story on your projects, just mention the purpose of your project and the main algorithm or technology used.

Why do you think you were shortlisted?
I gave on-point answers, and if i didn't know the answer of any particular question, instead of giving the wrong answer I told the interviewer that I don't know about this particular question. For coding questions I explained to them my approach and then started coding. After running the solution with O(n) time complexity I also gave another approach with optimized time complexity of O(logn).

Number of Rounds

How many rounds were there?
4

First Round Details

Round Type: This was an MCQ round conducted on Oracle's Assessment Platform with 92 questions and for 107 minutes.

Date Of Round: 07-09-2021

Difficulty of round: Medium

Duration Of Round(in minutes): 107 minutes

Platform: https://oracle.proaptitude.com/

Location of round: Remote

Description Of Round: The test was active on (07 sep 2021) from 7:00 PM to 09:00 PM. The duration of the test is 107 minutes. The candidate should complete the test by 9:45 PM.
The camera and microphone were open all the time. There was allotted time for each section after completing one section you cannot switch to the previous section.If you go off the camera you will get a warning. The test contained several sections and all questions were MCQs.

Why were you passed/rejected for this round?
I passed in this round basically the major challenge was to manage time in aptitude section and solve questions quickly and i was able to do it

Number Of MCQs?

92

MCQs Description :
Software Engineering Aptitude: 39 Questions(47 minutes)
Coding Skills :16 Questions(25 minutes)
Computer Science Knowledge: 17 Questions(15 minutes)
Contextual Knowledge: 20 Questions(20 minutes)

Computer Science Knowledge was further divided into 3 sections :
OS Concepts and Data Structures: 6 Questions(5 minutes)

Big O notations and OOAD Fundamentals: 6 Questions(5 minutes)
DBMS and CODD's Fundamentals: 5 Questions(5 minutes)

Problems Data

Problem 1

Problem Type
 Data Structures

Problem Description
find the pre order traversal of a tree?
Complexity of merge sort
Questions based on radix sort

Tips/Answers for Solving these problem/Problems
Tip 1:Practice preorder,postorder and inorder traversal questions of a tree
Tip 2: Understand merge sort
Tip 3: Complete understanding of Radix sort

Second Round Details

Round Type: Video Call
Date Of Round: 13-09-2021
Difficulty Of Round Medium
Duration Of Round(in minutes): 30 minutes
Topic Of Round: Coding Round

Description of Round:

The Round started at 11:30 am and ended at 12:00 am approx. We waited in the breakout room and when the interviewer was free *we* entered in the zoom call with the interviewer both camera and microphone was on. The interviewer was really supportive and helped me in thinking about different approaches to a problem.

Medium Of Interview: Zoom and CodePen

Why were you passed/rejected for this round?
I was passed in this round as I answered each problem and kept on interacting with the interviewer and told him many different approaches by which we can solve a particular problem. And I didn't hesitate to ask for hints if I got stuck.

Problems Data

Problem 1

Problem Type: Coding Problem

Problem Statement: There are 'n' number of rectangles with width 'w' and height 'h'. Find the side of the smallest square which can accommodate all the rectangles? Example, n=10, w=2, h=3, output=9

Can you explain stepwise how you solved this problem?

Step 1: First i considered the worst case possible value of square with side 'a' as a=w>h?w*n:h*n; // if all the rectangles are arranged either in a single row or single column

Step 2: Then I used a while loop and decremented the value for 'a' and checked if the value of 'a' still satisfies the problem i.e. if it still accommodates all the rectangles using the if condition.
if(a/w * a/h <=n)

Step 3: Interviewer asked me if i can optimize my solution which had the complexity of O(n). I told him we can apply binary search instead of using a while loop which will optimize our solution to O(log n). Interviewer was happy with this approach.

Problem 2

Problem Type: Database Management System

Problem Description/s: Explain ACID properties

Tips/Answers for Solving these problems/Problems : Give examples to explain your point. Stick to the question. Go through all the basic concepts and refer to most commonly asked interview questions.

Problem 3

Problem Type: Project(mentioned in my resume)

Problem Description/s: Tell me about your project?

Tips/Answers for Solving these problems/Problems : Prepare your project well. First tell what is the purpose and the applications of your project. Then explain what

it does and how it solves the problem. What was your role, technologies/ algorithm used?

Third Round Details

Round Type: Video Call
Date Of Round: 13-09-2021
Difficulty Of Round Medium
Duration Of Round(in minutes): 30 minutes
Topic Of Round: Coding Round

Description of Round:

The Round started at 11:30 am and ended at 12:00 am approx. We waited in the breakout room and when the interviewer was free *we* entered in the zoom call with the interviewer both camera and microphone was on.

Medium Of Interview: Zoom and CodePen

Why were you passed/rejected for this round?
I passed this round as I answered each problem and kept on interacting with the interviewer and told him many different approaches by which w*e* can solve a particular problem.

Problems Data

Problem 1

Problem Type: Coding Problem

Problem Statement: Given a string str, find the length of the longest substring without repeating characters.
- For "ABDEFGABEF", the longest substring are "BDEFGA" and "DEFGAB", with length 6.
- For "BBBB" the longest substring is "B", with length 1.

Can you explain stepwise how you solved this problem?

Step 1: I solved this problem by traversing the string and storing the characters in a hashed map along with their frequency and maintained a max_current counter to

count the length of the substring uptil now.

Step 2: At every iteration we check if the character is present in the map or not. If not then we increment the value of max_current. Otherwise, if present we break out from the loop.

Step.3: Then I used another loop to repeat the above steps for n(length of string) number of times. And used one max_overall variable to store the maximum length of substring found till now.

Problem 2

Problem Type: Operating System

Problem Description/s: Explain OS and what it does?

Problem 3

Problem Type: Operating System

Problem Description/s: What is virtual memory? How is it useful?

Problem 4

Problem Type: Data Structures

Problem Description/s: What are LIFO and FIFO data structures?

Tips/Answers for Solving these problems/Problems : Keep your basics clear and try to explain in detail. Go through all the basic concepts and refer to most commonly asked interview questions.

Fourth Round Details

Round Type: Video Call
Date Of Round: 13-09-2021
Difficulty Of Round Medium
Duration Of Round(in minutes): 45 minutes

Topic Of Round: Technical + HR

Description of Round:

The Round started at 4:00 pm and ended at 4:45 am approx. We waited in the breakout room and when the interviewer was free *we* entered in the zoom call with the interviewer both camera and microphone was on. The interviewer was really supportive and helped me in thinking about different approaches to a problem.

Medium Of Interview: Zoom

Why were you passed/rejected for this round?
I passed this round as I answered the questions by listening and understanding the situation properly and came up with the solution by thinking out of the box.

Problems Data

Interviewer asked me about my day. What questions were asked in the first two rounds?

Problem 1

Problem Type: Situation based

Problem Statement: Suppose there is a distributed system with three servers hosted at different locations. How can you design a system in such a manner that if any server receives a request for the second time then it will change its state to perform differently and then goes back to its original state.

Can you explain stepwise how you solved this problem?

Step 1: First I said that for each incoming request we will notify all the servers that the request is made so that any update done is modified to all the servers and this will maintain the consistency of data. But my interviewer said that other servers are not aware about the request but he was happy that I considered that situation.

Step 2: Then I corrected my solution and said that at any server if a request is made for the first time then we can store the request made in the servers database.

So for the second time we will check the database if the request was made earlier or not and if yes then we can change the state of the server to respond accordingly and restore the state for that request.

Interviewer was satisfied with my solution.

Problem 3

Problem Type: System Design

Problem Description/s: What do you understand about distributed systems?

Problem 4

Problem Description/s: Do you have any experience with cloud computing?

Tips/Answers for Solving these problems/Problems : Give examples to explain your point. Stick to the question. Go through all the basic concepts and refer to most commonly asked interview questions.