

### I) Coding Round

One logical question based on data structures and algorithms

Emma teaches n students eg. N1,N2,N3....Nn

her husband asks her the names of all the students in the order of their increasing ages

but she gives him a few hints eg.

N1 N2 -- it means  $N1 > N2$  i.e N1 is older than N2

N4 N5

use these hints to sort the students and after sorting print the number of students that were already at their correct positions in the array

input:

4 - number of students

P Q R S - students array

4 - number of hints

P R - hint 1-  $P > R$

Q R -  $Q > R$

P Q -  $P > Q$

S P -  $S > P$

after sorting R Q P S

output: 2 (Two students Q and S were already at their correct positions)

### II) Technical Round

1) Introduce yourself

2) Which languages are you comfortable in?

3) Explain your project?

4) Explain OOPS concepts how have u used them in your project

5) Design a class Hierarchy to show inheritance and polymorphism.

User

Admin

6) List the tables in your project and the relationship between them

- 7) Write the query to get the count of rooms that are vacant/booked in particular hotel. --Query related to the project
- 8) Create tables to show many to many relationship.  
Employee and Projects
- 9) Which data structures do you know
- 10) Difference between tree and Graph Data Structure
- 11) Different types of trees
- 12) Which are the traversal u can perform on a tree
- 13) Write the program for inorder traversal
- 14) How does HashMap work
- 15) how Equals and HaschCode methods work and in which class they are available
- 16) Write a program to count the number of occurances of each character in a String.
- 17) Static keyword in java

### III) TechnoManagerial Round

Puzzles:

1) If a giraffe has two eyes, a monkey has two eyes, and an elephant has two eyes, how many eyes do we have?

- A) 3   B) 4  
C) 1   D) 2

2) One rabbit saw 6 elephants while going towards River. Every elephant saw 2 monkeys are going towards river.

Every monkey holds one tortoise in their hands.

How many animals are going towards the river?

- A) 14   B) 11  
C) 8   D) 5

3) There are 3 boxes on a table, 1 box contains Gold, 2 are empty. A message is in each box. 1 message is true and 2 are lies .

The 1st box says 'Gold not here'. 2nd box says 'Gold not here'.  
The 3rd box says 'Gold in 2nd box'. Which box has the Gold?

(NOT the correct answers are expected but our approach towards the puzzle is seen, we should interact, ask questions and tell them why u thought that way)

4) Create a schema given that we need to store student information, and subject information  
where each student can study multiple subjects and each subject can be studied by multiple students.

Student table  
subject table-  
scores table

5) Insert data in all tables  
students - S1 S2..  
subjects - english, hindi marathi maths

s1 - english, hindi marathi maths  
60 65 70 50

s2 - english, hindi marathi maths  
50 45 80 70

6) Different queries on these tables were asked

get the scores of student s1 in each subject  
get the students scoring maximum marks in Maths  
get the subject for each student in which he/she has scored maximum marks

7) What is group by used for

8) Can you use where clause after group by. if no why?

9) Difference between stack and queue.

10) Implement Queue using stack(two stacks)

11) Program to swap two nodes in a linked list (do not swap the data, swap the nodes)

12) What happens when we enter for eg. [www.google.com](http://www.google.com) in the browser url.

13) How did u host your project(one of my previous projects)

#### IV) HR round

1) Introduce yourself.

2) Why did u decide to do CDAC?

3) Why do u want to work in IT industry(switch from non-IT)?

4) Why do u want to join JOSH?

5) Is there anything that you would like to ask me?