



COIMBATORE INSTITUTE OF TECHNOLOGY

(GOVERNMENT AIDED AUTONOMOUS INSTITUTION)

CIVIL AERODROME POST, COIMBATORE-641014.

PLACEMENT AND TRAINING CELL

PLACEMENT YEAR 2020-2021

NAME : HARIHARAN G

ROLL NUMBER : 1705076

DEPARTMENT : COMPUTER SCIENCE AND ENGINEERING

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CONTACT NUMBER : 8825715910

COMPANY NAME : ABCO

COMPANY TYPE : DREAM

JOB DESIGNATION : ASSOCIATE SOFTWARE ENGINEER

SALARY (CTC) : 11 LPA

INTERN OFFERED ? : YES

BOND : NONE

HAVE YOU PLACED ? : NO

(Please comment this section ***in detail*** to guide your juniors in bright way)

COMMENTS ON SELECTION PROCESS :

ROUND 1 : Online Assessment

This round was conducted in Hackerrank.

- The first round consists of 3 programming Questions and 3 SQL queries.
- The time limit was 2 hours.
- If SQL queries was mostly based on Joins.If we are strong in SQL joins we can easily solve it.

Have you cleared the round : YES

Details about Questions on 1st round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
Math	Given two numbers find whether the two numbers(say x and y) are friendly.If the two numbers were friendly return the total number of friendly numbers to x otherwise return the total number of friendly numbers to y. Condition: if both X and Y has same digits with no trailing zeros then they are Friendly numbers	Find the total number of permutation of the number will give the total number of friendly numbers.
Data Structures	Given a array consisting of Alien Attackers. Here the index of the array(Victims) will be attacked by the value corresponding to the index. Find the Total number of groups needed so that the attackers and victims are grouped separately.	Construct the given data as a graph and the find the Maximum depth of the graph using DFS or BFS.The maximum depth will give the total number of groups.

ROUND 2 : Competency Interview - Problem Solving and Coding

- This was a code pairing round.The Interviewer gave a problem statement and ask us to solve it with best complexity.
- There were 3 Questions in this round.
- The Interviewer asked me to code for all the problems.

Have you cleared the round : YES

Details about Questions on 2nd round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
Problem Solving	Write a program that, given an array A[] of n numbers and another number x, determines whether or not there exist two elements in S whose sum is exactly x.	This problem can be solved efficiently by using the technique of hashing. Use

	https://www.geeksforgeeks.org/given-an-array-a-and-a-number-x-check-for-pair-in-a-with-sum-as-x/	a hash_map to check for the current array value x(let) , if there exists a value target_sum-x which on adding to the former gives target_sum . This can be done in constant time
Problem Solving	Given a rotated sorted array and return minimum element from the array. https://www.geeksforgeeks.org/find-minimum-element-in-a-sorted-and-rotated-array/	I solved it using optimized binary search approach.
Problem solving	Given a integer find the nearest palindrome number.if the number itself is a palindrome then find the next nearest palindrome number. https://www.geeksforgeeks.org/closest-palindrome-number-whose-absolute-difference-min/	Replace the second half of the number with the first half to get the Nearest Palindrome. There are some exceptional cases where if the all the digits were '9' then add 2 to get the result. For Eg. $999 + 2 = 1001$

ROUND 3 : Competency Interview - Data Structures

- This round is also a code pairing round and 3 questions were asked.

Have you cleared the round : YES

Details about Questions on 3rd round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
Data Structures	Given an array with 0s 1s and 2s mixed.Sort the array with 0s comes first and then 2s and at last 1s. https://www.geeksforgeeks.org/sort-an-array-of-0s-1s-and-2s/	I followed the approach of segregate two numbers from a array in two iterations to sort the array.
Data Structures	Reverse the given Linked list. https://www.geeksforgeeks.org/reverse-a-linked-list/	Used three pointers to reverse the linked list.

Data Structures	<p>Given two nodes of a binary tree and find the lowest common ancestor to the both nodes.</p> <p>https://www.geeksforgeeks.org/lowest-common-ancestor-binary-tree-set-1/</p>	<p>The idea is to traverse the tree starting from root. If any of the given keys (n1 and n2) matches with root, then root is LCA (assuming that both keys are present). If root doesn't match with any of the keys, we recur for left and right subtree.</p>
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ROUND 4 : Competency Interview - Database

- In this round 3 questions were asked which were from SQL and Data Structures.
- The interviewer gave a table of records and asked me to retrieve the record with certain condition using a python program.
- The Second Question was a SQL query which requires self join of the table.

Have you cleared the round : YES

Details about Questions on 4th round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
Data Structure	<p>Spiral Level order Traversal of a tree.</p> <p>https://www.geeksforgeeks.org/level-order-traversal-in-spiral-form/</p>	Optimize the level order traversal to get the Spiral level order traversal.

ROUND 5 : Competency Interview - CS Fundamentals

In this round various CS Skills was tested.

The interviewer asked questions from C,Java,OOPS,OS,Networks,Design patterns,DBMS,Data Structures.

Have you cleared the round : YES

Details about Questions on 5th round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
OS	<ul style="list-style-type: none"> ● What is threading ? ● How to implement threads in Java. ● What is Deadlock? ● How to handle Deadlock? ● Explain Round robin scheduling algorithm. 	
Networks	<ul style="list-style-type: none"> ● Explain OSI layer and which layer is responsible for what. ● Explain any Routing algorithm. 	

	<ul style="list-style-type: none"> • How routers work. 	
C	<ul style="list-style-type: none"> • How garbage is collected in C. • At each step of Execution of a C program In which memory the program resides. • What is Inline methods in C. • How functions in c remember its parent. 	
Java	<ul style="list-style-type: none"> • How to achieve multiple inheritance in java. • What is the difference between Interface and class. • How to map data retrieved from a database to the class. 	
OOPS	<ul style="list-style-type: none"> • What is Classes and objects. • Explain Polymorphism , inheritance , Encapsulation and Abstraction. • Explain different types of polymorphism. • Explain Method overloading and Method Overriding. • What is a constructor. • Difference between stack and heap memory. 	
Design	The Interviewer gave a scenerio and asked to design classes and attributes for those classes.	

ROUND 6 : HR Interview

- In this Interview the Interviewer asked about my projects and we discussed some concepts in my projects.
- He asked me to implement Heap Tree and asked applications of heap.
- He gave Table of records of a hospital patients history and asked to find the patients who were visited the hospital within 30 days from their previous visit.
- I gave the Solution by cross joining the table with itself so that I can compare two values from different records of the same table.

AREAS TO PREPARE :

- Problem Solving
- Data Structures and Algorithms
- Database
- Core CS subjects

SITES / BOOKS YOU SUGGEST FOR PREPARATION FOR THE PROCESS :

1. Leetcode
2. GeeksForGeeks
3. Hackerrank
4. Hacker Earth
5. Logically Yours (Youtube)
6. Tech Dose (Youtube)

OVERALL EXPERIENCE :

The experience was Good. The Interviewers were friendly and helping whenever we stuck.

GENERAL TIPS :

- Be strong in what you know.
- Practice coding problems daily
- Discuss the brute force approach with the interviewer first before going to optimized solution.
- Try to cover all the Edge cases in a problem.



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PLACEMENT YEAR 2020-2021

NAME : Malveka R

ROLL NUMBER : 1705086

DEPARTMENT : Computer Science and Engineering

EMAIL ID : malvekarenga@gmail.com

CONTACT NUMBER : 7358824472

COMPANY NAME : Optum Insight (ABCO)

COMPANY TYPE : DREAM / CORE / NON-CORE

JOB DESIGNATION : Associate Software Engineer

SALARY (CTC) : 11 LPA

INTERN OFFERED ? : NO

BOND : None

HAVE YOU PLACED ? : NO

(Please comment this section **in detail** to guide your juniors in bright way)

COMMENTS ON SELECTION PROCESS :

ROUND 1 : There were 3 coding questions and 3 sql queries to be solved in 2 hours. Practice coding from leetcode, geeks for geeks and sql from hackerrank and interview bit to get an idea.

Have you cleared the round : YES

Details about Questions on 1st round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
Coding	<p>There are different alien species which has direct or indirect or even no attackers. Group those species such that no species are grouped with their attackers and find the number of groups that can be formed.</p> <p>Eg: 1-> null 2 ->1 3 ->2 4 ->3</p> <p>:[[1],[2],[3],[4]]</p> <p>*1 has no attacker, *2 has 1 attacker and 1 has none.(direct) *3 has attacker 2, and 2 is attacked by 1(1 indirect attacker) * similarly 4 has 2 indirect attackers.</p> <p>1+1+1+1=4 groups can be formed Soln: 4</p>	<p>The simple approach is to group aliens with no attackers,direct attackers, 1 indirect attacker, 2 indirect attackers and so on. If there are species with no or direct attackers the count will be 1 + 1=2.</p> <p>The species with 1 indirect attacker, 2 indirect attackers and so on had to be grouped separately which can be done using an hashmap or array.</p>

ROUND 2 : Competency Interview

The interviewer mainly concentrated on ds and dbms.

Have you cleared the round : YES

Details about Questions on 2nd round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
String	Check whether the given string is a valid email id	Traverse through each character in the string till "@", till "."
Ds	Given a tree, find distance between any 2 nodes.	DFS, inorder traversal

ROUND 3 : Competency Interview

The interviewer mainly concentrated on ds and time complexity.

Have you cleared the round : YES

Details about Questions on 3rd round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
DS	Given an array with 0s, 1s and 2s ,arrange them like 0s at first, 2s in the middle and 1s at the last.	* Brute force approach by running through the array thrice. * 3 pointer approach
DS	Given a Singly Linked list, reverse it.	2 pointer approach
DS	Given a Binary tree , print only the left nodes	DFS

ROUND 4 : Competency Interview

The interviewer asked questions on project , ds , dbms ,time complexity and ML since I mentioned that I have done project in ML.

Have you cleared the round : NO

Details about Questions on 4th round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
SQL	Given 2 tables and a query	Aggregate functions and joins
DBMS	Why Normalization	
DBMS	Difference between primary key and unique key	
Coding	How many elements are repeated in an array	HashMap

AREAS TO PREPARE : DS, DBMS

SITES / BOOKS YOU SUGGEST FOR PREPARATION FOR THE PROCESS :

Geeks for Geeks, Leetcode, hackerrank, Interview Bit

OVERALL EXPERIENCE : The questions asked were basic to medium

GENERAL TIPS : Be cool and answer the questions with confidence. Be strong in basics of DS, DBMS



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PLACEMENT YEAR 2020-2021

NAME : Joshikaa R

ROLL NUMBER : 1632014

DEPARTMENT : MSc Data Science

EMAIL ID : joshikaauma123@gmail.com

CONTACT NUMBER : 9952260888

COMPANY NAME : Optum insights

COMPANY TYPE : Health care

SALARY (IN LPA) : 11

INTERN OFFERED ?(YES / NO) : No

BOND : No

DESIGNATION : Associate Software engineer

PLACED? (YES/NO) : No

*(Please comment this section **in detail** to guide your juniors in bright way)*

COMMENTS ON SELECTION PROCESS :

ROUND 1: Total of 6 objective questions to be done in 2 hours. It had 3 SQL queries(complex) and 3 coding questions (data structure solution expected).

ROUND 2 : Live coding round to be done in one hour without using in-built libraries

- To print matrix in spiral form
(<https://www.geeksforgeeks.org/print-a-given-matrix-in-spiral-form/>)
- Sorting list of dates (<https://www.geeksforgeeks.org/python-sort-list-of-dates-given-as-strings/>)
- Check if email address valid or not
(<https://www.geeksforgeeks.org/check-if-email-address-valid-or-not-in-python/>)

ROUND 3 :

ROUND 4 :

AREAS TO PREPARE : Data Structures, DBMS

SITES / BOOKS YOU SUGGEST FOR PREPARATION FOR THE PROCESS : Hackerrank (for SQL), Geeks for geeks (for Coding)

OVERALL EXPERIENCE :

GENERAL TIPS :

