



COIMBATORE INSTITUTE OF TECHNOLOGY

(GOVERNMENT AIDED AUTONOMOUS INSTITUTION)

CIVIL AERODROME POST, COIMBATORE-641014.

PLACEMENT AND TRAINING CELL

PLACEMENT YEAR 2020-2021

NAME	:	Jayanandhana. E
ROLL NUMBER	:	1705014
DEPARTMENT	:	Computer Science and Engineering
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CONTACT NUMBER	:	9443522772
COMPANY NAME	:	Mr.Cooper
COMPANY TYPE	:	CORE
JOB DESIGNATION	:	Software Engineering Trainee (Graduate Intern)
SALARY (CTC)	:	7.5
INTERN OFFERED ?	:	YES
BOND	:	None
HAVE YOU PLACED ?	:	YES

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

COMMENTS ON SELECTION PROCESS :

ROUND 1 : Aptitude Round (2 hours 30 minutes)

It had a few school level math problems which can be easily solved with enough practice/knowledge. Then it had “Guess the output” questions in C, Data Structures (code in C) and Java. One can solve them with ease, if he/she is strong in C, Data Structures and Java basics. It also had a some questions based on Time complexity analyses. One or two questions were of blood relation type. The remaining were testing the verbal knowledge. It had three programming questions.

Have you cleared the round : YES

Details about Questions on 1st round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
Mathematics	Given a number 'x', find the smallest number of steps to make 'x' a prime number.	All primes are of the form $6k+1$ or $6k-1$. Found the k from the given number and found $6k+1$ and $6k-1$. The minimum among these two is the answer.
Recursion / Combinatorics	Given a number 'n', Find the number of possible valid strings that can be made from { 'a', 'e', 'i', 'o', 'u' } with a length of 'n'. A string is said to be valid, if the characters in the string are in ascending order lexicographically. Repetition of characters is allowed. For example, “aa” is valid, “aeii” is valid, “uo” is not valid.	Found the number of possible strings for length 1 as the base case. Recursively called by reducing the length(n) of the string at each step.
Greedy approach	Find the best set of employees given their salaries and skills.	Normal greedy approach

ROUND 2 : Long programming (2 hours 30 minutes)

Have you cleared the round : YES

Details about Questions on 2nd round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
Design	Design a social networking application for a university	Designed a model and normalised the tables. Used Python and with OOP concepts, implemented the design
	9 features were asked. 7 of them are straightforward. Retrieve the posts by a user, Like a post, Bookmark a post, etc.,	Retrieved from the tables(maintained a list as an analogy for table here) and

	Retrive the comments and their replies.	Maintained a relation table between comment and reply table.
	Predict the number of followers for a user on a particular day.	From the day the user joined, all the followers' count is taken and found the average.

ROUND 3 : Technical Round (approximately 2 hours)

A few questions on the projects I had mentioned.

Have you cleared the round : YES

Details about Questions on 3rd round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
Projects mentioned	1. How does this maze solver work? 2. How did you find the best move for the Chess AI? What algorithms are used? Why did you use?	Told whatever I did technically.
Exception handling	Guess the output: try {throw exception} catch(){return catch1} catch(){return catch2} finally{return catch3}	First catch block will be executed and finally block will be executed
OOPs and C	How arrays are stored in memory? How structures are stored in memory? Difference between compile time and runtime, difference between structures in C and objects in Java, Can OOP concepts be applied in C? What exactly is happening when a file is opened in a C program? How is the file found in secondary memory? Why overloading can't be applied in C and what happens if we did?	Explained the concepts.
DBMS	What are the applications of views?, questions on normalisation and simple queries.	Explained the concepts.
DSA	which is the fastest sorting algorithm and what happens if we give a sorted array as an input to it?	Quicksort and mergesort.I told Quicksort considering a small array. It won't detect that the array is sorted. Runs completely.
Logical question	A typewriter is typing enormous number of words via the front end and the words are one-by-one given to the API in the backend for processing. This is not an efficient way because everytime a word is typed, it is pushed in and then the typewriter has to type and send and it goes on. What will you suggest to make this optimized?	First, I told,"Wait for a certain number of words and push them all at once". Then I told, "Wait for a gap of constant time, If no words are typed, Push them all"

ROUND 4 : HR round (15 to 20 minutes)

No technical questions at all. All the questions were focussed on getting to know me better.

Have you cleared the round : YES

Details about Questions on 4th round:

1. Tell us about yourself.
2. What is your favorite subject? Favorite Data structure? (this was asked because I told them my favorite subjects are maths and Data Structures) and Why do you like it?
3. Which is your native place? Is this your first time moving away from Home? How was the experience? Which one do you like better?
4. How do your friends portray you?
5. What is your aspiration?

AREAS TO PREPARE :

DBMS and OOPs are of high priority. A good understanding in DSA, networks.

SITES / BOOKS YOU SUGGEST FOR PREPARATION FOR THE PROCESS :

IndiaBix for aptitude.

Hackerrank for practicing competitive programming.

Geeksforgeeks for subjective knowledge.

OVERALL EXPERIENCE :

The interviewers were really friendly. There is no pressure at all through out the interview process. They focussed on making the candidates perform at their best with no anxiety.

GENERAL TIPS :

1. Don't solve the problem in silence. Speak as your thoughts flow. This will help, if you misunderstand the question or solving the problem with a wrong approach. Also this will lead to optimisations and improvements, as the interviewer will review and give suggestions on your idea.
2. Solve as many problems in competitive programming. Don't rely on only theoretical knowledge.

3. Be confident in what you are saying.
4. Don't panic, if you don't know the answer. Tell either "No" or say if you have any ideas about it. Pretending to know the answer will lead to deeper questions which would only make the situation worse.
5. It is okay, if you give a wrong answer to a question. Don't become anxious. The interviewer would sometimes try to make you understand why that is wrong and make you tell yourself what the right answer is by giving some analogies.
6. Ask for clarifications, if you are not sure about what the question/statement is trying to convey.



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PLACEMENT AND TRAINING CELL

PLACEMENT YEAR 2020-2021

NAME : ASWIN M

ROLL NUMBER : 1705069

DEPARTMENT : CSE

EMAIL ID : aswin3519@gmail.com

CONTACT NUMBER : 9994343398

COMPANY NAME : MR COOPER

COMPANY TYPE : CORE

JOB DESIGNATION : SOFTWARE ENGINEER TRAINEE

SALARY (CTC) : 7.5

INTERN OFFERED ? : YES

BOND : NO

HAVE YOU PLACED ? : YES

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

COMMENTS ON SELECTION PROCESS :

ROUND 1 :

ONLINE ASSESSMENT.

CONSISTED OF GENERAL AND TECHNICAL APTITUDE[25].

THERE WERE 3 PROGRAMMING QUESTIONS

Have you cleared the round : YES

Details about Questions on 1st round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
MATH	FIND NEAREST PRIME NUMBER	BRUTE FORCE – Optimised the function to find prime.
DYNAMIC PROGRAMMING	FIND COUNT OF PERMUTATIONS OF [A,E,I,O,U] GIVEN NUMBER OF CHARACTERS THAT CAN BE PRESENT.ORDER MUST BE DESCENDING	TABULATION – found repeating pattern.
GRAPH AND DP	KNAPSACK ON A DISJOINT GRAPH[Incomplete]	BRUTE FORCE - Memoisation

ROUND 2 :

LONG CODING:

DEVELOP A SOCIAL MEDIA APPLICATION FOR THE COLLEGE GIVEN A SET OF REQUIREMENTS.

DISCUSSED WITH THE INTERVIEWER AND PROCEEDED WITH A CLASS DIAGRAM OF THE STRUCTURE.STARTED OFF WITH A BASIC DESIGN WENT ON TO COVER ALL ASPECTS OF THE REQUIREMENTS.QUESTIONS ON POSSIBLE ADDITIONS TO THE SOFTWARE WAS ASKED.

DID AN INCOMPLETE DEVELOPMENT.

THE DESIGN IS PRIORTISED.

Have you cleared the round : YES

ROUND 3 :

TECHNICAL INTERVIEW.

Have you cleared the round : YES

Details about Questions on 3rd round:

QUESTION DOMAIN	QUESTION	SOLUTION / HOW DID YOU APPROACH
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DATA STRUCTURES	SORT A LINKED LIST INTO ODD AND EVEN NUMBERS	1. MAINTAINING TWO ADDITIONAL POINTERS 2. KEEP TRACK OF THE END OF THE LIST
NETWORKS	NAME THE LAYERS OF OSI AND SOME PROTOCOLS. HOW DO APIs WORK.	
DBMS	QUERIES AND CERTAIN STRUCTURES.	ANSWER PARTIALLY.
OS	SCHEDULING AND STARVATION	

ROUND 4 :

GENERAL HR.

THE VP AND THE HIRING MANAGER ARE PRESENT. CALMLY ANSWER QUESTIONS THAT THEY MIGHT ASK.

LEARN ABOUT THE COMPANY BEFORE YOU ATTEND THIS ROUND.

Have you cleared the round : YES

AREAS TO PREPARE :

DATA STRUCTURES

COMPUTER NETWORKS.

OPERATING SYSTEMS.

DBMS

SITES / BOOKS YOU SUGGEST FOR PREPARATION FOR THE PROCESS :

INTERVIEWBIT.COM

GEEKSFORGEEKS.

MIT OPENCOURSEWARE[YOUTUBE]

OVERALL EXPERIENCE :

IT WAS A GREAT EXPERIENCE AND WAS ABLE TO COLLABORATE WITH YOUR MENTOR IN THE SECOND ROUND. THE GENERAL HR IS FOCUSED A BIT ON PROJECTS AS IS THE TECHNICAL ROUND.

GENERAL TIPS :

BE CALM THROUGHOUT THE PROCESS.

BE OPEN TO SUGGESTIONS IN THE SECOND ROUND AND KEEP YOUR DESIGN EVOLVING.