Placements is all about luck.

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MCA

- ## Arcesium :- (SDE)
  Round 1 (80 min):
  Total 32 Questions were there and duration 80 min.
  1. Aptitude : Hard level with 25% negative marking (20 min)
  2. CS fundamental : Moderate level also with 25% negative marking (15 min)
  3. Coding: Moderate to hard level (45 min)

     Questions in Coding part : (No change in Ques)
     1) Maximize Toys
     2) Corona Test (only language is different but ques is same)

O/P :- 18 Candidate selected for interview round.

➔ I did around 6 in aptitude questions and 8 in CS fundamentals
➔ Submitted both code with all test cases passed.

Round 2 (50min) :

Interview was offline. There was only one guy and he asked to introduce myself. Then he asked coding ques of Run length encoding decoding which was very easy for me. But the tricky part he added to decode that output to original string also, and give me approax. 6-7 edge cases. I gave him 4 different approaches but he already knows the test cases which fails all the approach one by one…………

Finally I gave him another approach which passes all the test cases as well as edge cases, but due to decoding part it took T.C :- $O(n^2)$ and S.C :- $O(1)$.

O/P :- Rejected from Round 2.

- ## DP World :- (SDE)

Round 1 (2 hr):
Total 14 Questions were asked :
1. 2 SQL queries (1 related to joins, other date() & month()).
2. 2 coding ques.
3. 10 ques (React, Node, API, Authentication & Cryptography).

Questions in Coding part :-
Both the ques were new I searched them but not found anywhere. The ques were very lengthy, took approx.. 10 min to read and understand what they asked to do. Both ques were logically tough. The ques were like:
1. There was a vector and some queries were given in another vector and we have to perform the action as per given in other vector.
   T.C. :- O(n^2), constant space.
2. Encryption Validity :- given instruction Count, Validity, Hijacker, and a vector. Basically, a hacker wanted to hack our database and we have some keys in vector by using this keys we have to secure our database and then return pair of {0/1,N}, 0 for failure and 1 for success, N=No. of encryption we formed by using keys in the given vector.

O/P :- 41 Candidate selected for interview round.

➔ I did both queries right, both ques right with 100% tc passed
➔ I am clueless regarding React, Node part (Bhagwan Bharose).

Round 2 (70 min) :
First, he introduced himself and then asked about my intro. He started with OS, DBMS, OOPS, Project, then Coding part. Ques were :
1. What is Thrashing ? Explain with any scenario (I used virtual memory concept for explaining this)
2. What is deadlock ? what are its condition ? (Easy for me)
3. What is indexing ? its types ? (I told him both)

4. He gave me a query and asked about what would be the flow of data. The had Name, Department in end ? (first name then department)
5. What is Normalization and its all types ? (I told him 6 types) ->1NF,2NF,3NF,BCNF,4NF,5NF.
6. What is API ? (I just started working on Node so I still have to learn about it.)-> This was the only ques I stucked on.
7. Then tell me REST API and difference between API and REST API? (I have to work on it too.)
8. How you handle the new request coming from the user, What is the end part of it and what is the flow of data.
9. Coding 1 :- Easy type :
   - Detect Cycle in Linked List ? (I gave slow and fast approach)
   - How you get this approach, How you know it works, Give the logical Proof of it. (I gave the derivation of Floyd's Algo)
10. Coding 2 :- Hard type : (Leetcode)
    - Maximum Sliding Window ? (first Brute force then Deque Approach)

    I gave solution of first ques very easily but panic in second one as I already knew that ques, just relaxed myself and asked for test case then first give brute force and then Deque Approach after analyzing the test case. The interviewer was trying to bluff me time to time by questioning and giving wrong hints (it also happened sometime) but I ignored it. Finally give approach and then went to GDB compiler, he erased everything and told me to write code from scratch. I typed whole code and its passes all cases. So I did both code, query, OOPS, OS, DBMS. Finally Rejected.

- ## <u>Quick Sell</u> :- (SDE)

  Round 1 (1 hr): (For Backend Role)
  1. There was only one ques of CPP which was very easy. It took 5 min to solve it.
  2. 15 Ques from SQL query where you have to select the right query for the given ques.
  3. 20 ques from Nodejs (for Backend only) where the snippets and conditions were given you have to choose the correct answer from given options.

  Round 2 (0 Hr): (Mtech Guy experience)
  1. I waited for 2 days but they don't took my interview. My PR also tried his best but this company is very unprofessional.
  2. They only took interviews of 5/10 interviews and selected 2 out of 5.
  3. I asked to Mtech guy about his experience, he said they asked to open his project and told to add any functionality in it in 1 hour (suppose forget password functionality). They selected those who did it successfully and rejected the remaining one.
  4. When their requirements were fulfilled they refused to take interview of other candidates.

  O/P :- 2 Selected.

- ## Deutsche Bank :- (Graduate Analyst)

Round 1 (1 hr):
1. Modification of Platform Min Jumps ques with mixture of DP.
2. Modification of find median of an array.
3. The calculation game (tag :- Math).

Round 2 (1 hr):
1. First he introduced himself and asked my introduction.
2. He started ques about my project like what tech you used in it, What is the purpose and principle of making it. We had very deep discussion about it, he also asked many ques related to MongoDB and Nodejs.
3. Then he asked 2 wire puzzle (very easy).
4. Then 2 DSA Ques :-
   a. Move all zeroes in the end. I gave him two approaches, discussed about their time complexities and how to reduce it.
   b. Merge two sorted array. At first the array was unsorted I gave brute force then 2 set approach, he was satisfied and then change the ques to sorted array and asked me reduce the complexity then I gave 2 pointers approach and then discussed about TC and SC.

Round 3 (45 min): (he was in very hurry ig 😊) :
1. He asked for introduction, and started ques about the project. It was rapid fire round and the ques were:
   a. What is Data structure. (gave definition and types)
   b. Describe every type.
   c. So basically you are saying linked list is non- linear data structure (No it's a liner one).
   d. Gave definition of linear DS. (gave definition).
   e. So according to it linked list is non linear .(No sir we use pointer here which connects its node).
   f. But you said continuous memory allocation in linear DS.(yes, node of LL is not in continuous memory but we use pointers to make it).

g. So at the end I conclude linked list is non linear DS. (At this point I also said yes sir you are absolutely right LL is non linear DS).

h. And then we had discussion about LL, at the end he said LL is non-linear but we make it linear by using pointers (I was like…..am I speaking in urdu).

2. Do you any sorting algorithms (yes sir, Quick, Insertion, Selection, Heap, Merge Sort).

    a. Do you know about radix sort. (Not much)

    b. Can you code it for me. Then he gave me an array and asked to code radix sort for it. And he started asking ques related to project in middle of this.

    c. So you worked on PHP (about 2 yrs ago it was my first backend language now I worked in Nodejs).

    d. So you have the idea about PHP.(I am still doing the radix sort).

    e. What are common uses of PHP. ([Edureka](#))

    f. What is PEAR in PHP?

    g. Is PHP case sensitive?

    h. What are characteristics of PHP variables?

    i. What are different types of PHP variables?

    j. What are the data types in PHP?

    k. What are constructor and destructor in PHP?

    At that time i said I made the code then asked me to open notepad write all code there. I opened and write code, then I said its done. He asked once again "are you sure its correct?". I said yes sir , I used count sort in this algorithm. He said paste it in any editor and I copied and pasted in GDB. Then asked to run it. It runs successfully then again round started.

    a. Are you sure that count sort is use in radix sort (yes sir we use count sort as helper for radix sort).

    b. So how its working (gave the explanation of count sort then radix sort).

    c. Then we discussed about TC and SC.

    d. At the end he said, "you are wrong, first learn concept then appear for the interview. Radix sort uses bucket sort not count sort.".

    e. Then he wished me for the future and asked me to leave.

O/P :- rejected from round 3.

Note :- Radix sort uses [count sort](#) as helper .

- ## <u>Genpact</u> :- (Data Analyst)

Round 1:
1. I don't want this company so I just logged in and then logged out.

Round 2 (1 hr): (still selected, may be by CGPA)
1. There were three interviewers and asked me to introduce myself. I gave introduction and then he asked to gave brief information about my project. As I have to ruin interview (pre-decided) so I gave most of the answer as I don't know. Some of them are:
2. What is Frontend ? (What we see on computer screen is frontend)
3. What is Backend ? (The work behind the screen is backend)
4. What is hypertext ? (The text we use to write on HTML file is hypertext)
5. What is your role in the project ? (work as backend developer)
6. What is javascript ? (It's a frontend part I don't have much idea)
7. How you rate yourself in OOPS on 5? (3.5 to 4)
8. So you know the OOPS let's move to next part?
9. You were cricket player why you left cricket ? (injury in hand)
10. What is moto of N.C.C ? (unity and discipline)-(he was also in N.C.C)
11. What topic you have interest ? (Politics)
12. How you rate the work of Govt. ? (it's going good but can be great)
13. You have very less pointer (7.76) ? (As you know curriculum of Warangal is very tough as compare to rest of the NITs so getting 7 here is equal to 9 in others).
14. In your project CR has all the power, if he is mis-leading all class and giving wrong info then what can we do ? (In Warangal we don't have direct contact with teachers so whatever the CR said we just believe that.)?
15. Where you leave ? (Dewas)
16. What is special about it ? (Maa Chamunda Tekri)
17. How much distance it has from Jabalpur ? (About 400 km)-(even I don't know about it just give random number).

Round 3 (HR round):
1. You want to say something ? (I don't want this role if you have any other role then it would be more beneficial for me and company.)

O/P :- rejected after HR.

- # Druva :- (SDE)

Round 1 (1 hr):
1. Finding the third largest string in a given array
2. Find the missing digit x from the given expression
3. Fizz Buzz

Round 2 (1 hr):
1. He asked for the introduction and then we discuss about the curriculum and other stuff related to my intro.
2. Then he asked the ques like:
    a. What is the principle of the project?
    b. Why you use MERN stack? (want to learn new tech)
    c. Why you switched from PHP to Nodejs? (gave advantages of NJ)
    d. What is Multiprogramming and Multitasking? (gave definition)
    e. What is IP socket? (gave definition)
3. Then he asked me to code for how we send the data packet from sender to receiver in computer networks in CPP ? (we didn't do practical for that) (But I know it was in 4 sem CCN lab assignments).
4. So you don't know how its works ? (No sir I know the theory of it)
5. Give data flow in all layers of TCP/IP? (Explained working of all layers in TCP/IP and data flow in it).
6. DSA :- find the Missing number in the array ? (I gave to brute force then optimized approach).
7. I used unordered map so we had a discussion about it like complexity and some basic stuffs related to map and unordered map.
8. What is virtual memory concept ? (Gave full explanation)
9. Any ques ? (I asked about the tech he is currently working).

    O/P :- 3 candidates selected for next round . I got rejected.

Note :- Actually he was not here to select anyone he took 2 of us interviews and rejected both of us by asking tough ques. Like the second candidate also he asked internal implementation of map (red black tree). He knows how to reject candidates…….😉.

- ## PayU :- (Data Engineer)

Round 1 (1 hr):
1. 50 ques of MCQ types related to DBMS, DS, ML, AI, data mining, IOT etc.
   - 11 from Btech and 1 from MCA selected.

Round 2 (1 hr):

1. First he introduced himself and then asked about my intro.
2. Then we discuss about the project about the need of the project and tech I used in it.
3. Then he asked some Nodejs ques like:
   a. What is Nodejs?
   b. What is event loop?
   c. Why you choose Nodejs?
4. Do you know about sparks? (No sir I have to still explore it)
5. Have any idea about kafka and snowflake ? (No sir)
6. DSA:-you have to find unique elements in given array ?
   - I gave brute force first then he told me to optimize it.
   - Then gave XOR method . he said there are more than one unique elements. (1,1,2,3,3,4,5) -> (4,5)
   - Then I gave unordered map approach. TC-O(n), SC-O(n).
   - But he wanted more optimized approach and I said this is the most optimized approach if there are more than one unique element.
   - Then he said I have an approach, take odd and even in different one and put XOR method on it and it'll be like :- (1,1,3,3,5) (2,2,4) now it gives 5 and 4.
   - At this point I know his approach is completely wrong because its fails the tc (1,1,2,2,3,3,4,6) -> (4,6) but gives (4). But I don't bother him and said, "you are right."
   - Next ques is detect loop in the linked list :- (I gave slow and fast approach)
   - How you get this approach, How you know it works, Give the logical Proof of it. (I gave the derivation of Floyd's Algo)
7. Then he said, "There is a guy who recently join PayU as data engineer and he is stuck on some assignments so can you help him out with queries." (Yes, Sir).

8. Then he gave me 6-7 medium level queries. They were very complex and I have to join two or more than two function as well as tables to create a single query. I did only 3 of them and he helped me for finding out 2 queries (he was very supportive) and about the last query it was very difficult, we had discussion over it and but we both were not be able to find the answer. Therefore, we mutually decided to leave this query and carry on the interview.
9. Any ques ? (what tech. you currently used and what are the requirements of PayU).
10. Then he told me about he was working on Docker, Big data tools, Sparks, AWS and such ML related tech. (I forgot some of them) and we have requirement for the same.

O/P :- at the end 1 candidate is selected, and again rejected.

- ## Samsung :- (R&D)

Round 1 (1 hr):
1. There were only three questions.
2. [Next Palindrome Greater than N.](#)
3. [Relative Sort.](#)
4. [Kth largest element in BST.](#)

   O/P :- only 1 girl and 2 boys are selected for software role.

Round 2 (1 Hr):
1. First he introduced himself and asked for my introduction.
2. Then he asked for the principle and purpose of making of my all three projects.
3. We had lots of discussion about the tech and techniques with its pros and cons. Then some ques related to projects.
4. Then he asked difference between array and linked list.
5. Give real life implementation of linked list.
6. Some ques from the OS.
7. What is your favorite subject ? (DS)
8. So Prabhat you have to design a router. This router has K number of data set which consist of IP address and PORT address and you have to maintain its memory space $O(K)$, accessing time complexity $O(1)$, retrieving time complexity $O(1)$, also this router should be able to handle 100 or 1000 request at a time (he was talking about scalability.)
   - Basically this ques was related to System Design and he wanted very low level code for it.
   - I gave the unordered map approach and completed the coding part then we had discussion about the requirements and how this code is working.
   - Then he asked about the unordered map? (gave briefing)
   - Then explained him difference between map and unordered map?
   - What is the internal implementation of both of them ?
   - I said, "we use AVL tree or Red Black tree for implementation of map."
   - What is AVL tree ? (gave briefing about it)
   - Then what is red black tree ? (told about it)

- Then we discussed about the TC of AVL and Red black tree.
- And what about unordered map ? (it uses hash table behind the scenes).
- How ? (we use array to make this hash table and explained all stuffs).
- I used online sketch board for explaining all the things.
- He :- But using array waste the memory, suppose maximum number of people is N who access this router but we need only K memory. (me :- we can use vector instead for array because it allocates dynamic memory.)
- Then I gave how vector is working and allocate memory by using size() and capacity().
- Then are you able to implement this whole ques without using unordered map? (yes sir, I asked for some time.)
- Then first I used array for implementing it. But then
- He asked, " is not using N space.". (yes sir in that case we have to use vector instead of array.)
- Then again I gave implementation using vector in this I used indexing (1,2,3…) as key and store value inside it.
- After this all implement code was executed successfully and gave all the desired output and then I explained all the code line by line what its doing and all the specifications of memory space O(K), accessing time complexity O(1), retrieving time complexity O(1).
- He was satisfied with and explain his experience.
- He said, "When we write the code we are not thinking about what is going on behind the process but in Samsung when we designing something we have the correct and full knowledge of the process and the tools and tech we use, it's not like apple pie when we design any system. Your logical ability is quite good, start learning the concepts in deep."
- Bye.

O/P :- only 1 candidate selected for next round.

Round 3 (1 Hr 40 min):
1. She asked for the introduction.
2. Then she asked very deep ques related to my projects.
3. Why MERN?

4. Why MongoDB?
5. What is difference between NoSQL and SQL?
6. She was digging projects very deep and make chain of ques related to my previous answers but I gave all the answer as all the projects are my own so don't face any issue regarding this.
7. Principle and Purposes of the projects ? what is the need to make it if there is already an alternate is available for it?
8. Then she asked DSA ques :-
    - 1. Rotation of array.
    - First I gave the brute force then optimal then most optimized.
    - 2. Shortest distance in binary maze.
    - I gave recursive approach for this and after discussing about the TC she asked to optimize it. As this question is related to connected component of graph so we can use BFS here and in the new approach I used a queue for the BFS traversal and executed the code for all TC successfully. This ques took more time to solved as I expected.
    - 3. Permutations of string.
    - Gave the recursive solution and she was ok with that then we discussed about the time and space complexity.
    - 4.Arithmetic operations (Not found anywhere).
    - The ques was like you have given an arithmetic ques like (a*q/r*s-g+d) and you have to find its value without converting it to prefix, infix or postfix expression by simply using BODMAS rule. First I was little bit confused and thinking, first division should be performed then multiply so I used unordered map for tracking the indexing of +, -, /, * then use three pointer approach two for the operands and one for the operator then put conditions for '/' first then '*' and so on by taking index from the map.
    - She was satisfied by the approach and asked about the time and space complexity which was O(n) for traversing string one time and O(n) for using unordered map respectively.
9. Then she asked about array and then linked list?
10. Types of linked list?
11. If you have to use linked list in OS where you use them ? (As the main memory of the 'virtual memory' concept).
12. Use of circular linked list in OS ? (In scheduling algorithms).

O/P :- SPOC told me to ready for the HR round.

Round 4 (14 min) : (Telephonic interview)

1. After half hour I got a call from HR.
2. He asked about family background.
3. We had a deep discussion over the project like just basic idea and purpose of making the projects. (All three).
4. Any ques ? (Can you tell me when I will join the Samsung what the pre-requirement I can learn for the better performance.)
5. He refused to tell about the techs and advised me to ask any NITW alumni who is currently working in Samsung.

O/P :- After some time SPOC said that all the three pre-selected candidates will receive the call for HR. (Bhagwan Bharose hiring ho rhi h).
After waiting for 2 days finally they selected other girl candidate and rejected me. (#SamsungGoals😉).

- ## Amdocs :- (SDE)

Round 1 (2 hr):
1. 50 MCQ related to Quanta aptitude, DBMS, OS, OOPS, code snippets.
2. 3 coding ques.

Round 2 (1 Hr):
1. Gave his intro and asked for mine.
2. After that we discussed about the projects. He asked about the techs and most ques related to this only like.
   - What is MongoDB? (gave definition)
   - What is difference between MongoDB and MySQL? (told difference).
   - What is the reason of preferring NoSQL over SQL? (told him)
   - How you store data in MongoDB? (BSON format)
   - What is your role in the project? (Backend)
   - Principle and purpose ?
3. What is difference between C and CPP?
4. What is OOPS ? Pillars of OOPS ?
5. Real life examples of all of them?
6. What is difference Array and list (STL not linked list) ?
7. What is STL with some examples ?
8. What is difference between pointers and reference ?
9. What is difference between runtime and compile time polymorphism?
10. What is encapsulation with example?
11. What is normalization and its types?
12. What is virtual memory ?
13. What is multiprogramming and some briefing of scheduling algo.
14. DSA :- 1. To check string is palindrome or not ? (gave optimal one)
15. DSA :- 2. Swapping of two numbers without using third ? (😊)
16. DSA :- 3. Fibonacci series ? (gave three approaches for this)
17. Any ques ? (Tell me about the tech you used currently).

Round 3 (15 min):
1. Introduction.
2. Family background.

3. Any gap? (No)
4. Details of 10, 12, grad, master.

Tips :-

1. Just clear your base don't study to get placement but study to gain the knowledge.
2. Have deep knowledge of what you are doing and how its gonna work.
3. You are the programmer not typists so don't just learn any approach and paste in front of the interviewer. You should also have knowledge of why you use that approach and how it is working in backend.
4. There is minimal contribution of your skills and talent in placements and its all about luck whichever the company you will get. So don't demotivate yourself by thinking stupid things and create more hunger to grab the bigger opportunity.
5. Plan your day as you want, don't listen to anyone just do whatever you want to do, make your own strategies.
6. Everything is pre-decided and we all are the part of a process, so just follow the process you will reach to your destination.
7. Just keep focusing on learning and growing your skills and logical ability so that you will perform well when get into the companies (either big or small).
8. If you need any help ask to your corresponding sr.

Thank You !!!