

My Interview Experience with WellDev for a Trainee Software Engineer Position

5 minute read

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I recently had the opportunity to interview with **WellDev**, a renowned multinational software company based in Dhaka, for the role of **Trainee Software Engineer (ColdFusion)**. The interview process involved three rounds, each testing a variety of technical and problem-solving skills. Here's a breakdown of my experience and the lessons I learned.



MCQ Round: A Broad Range of Topics

The first round consisted of a multiple-choice questionnaire (MCQ) covering a broad range of topics. During the test, I had to share my screen with Quillgo and keep my camera on. The topics of MCQ include:

- **JavaScript fundamentals**
- **Object-Oriented Programming (OOP)**
- **Database Management Systems (DBMS)**
- **Software Engineering (SWE) principles**
- **Networking concepts (HTTP status codes, a math of subnetting etc.)**
- **Rest API knowledge**
- **Analytical and math reasoning**
- **Data Structures and Algorithms (DSA)**, including time complexity, sorting algorithms, binary trees, minimum spanning trees (MST), and greedy algorithms.

▶ [Click to view the MCQs](#)

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First Technical Round: Hands-On Problem Solving

In the first technical round, conducted by a junior software engineer, I was tested on my problem-solving skills, space complexity, OOP, and SQL queries. I believe one having good basics can overcome technical round easily. Here are some of the questions that I faced:

- **Q1:** Given an array, what will be the base address if we print the array name only (e.g., `printf(ara))?`
- **Q2:** Write a code to delete the middle element of a stack without using any additional data structure while preserving the original order. (only stack will be given, you can use additional variables but no extra array or something like that) **Input:** `[1, 2, 3, 4, 5]`
Output: `[1, 2, 4, 5]`
- **Q3:** Given a recursive function that calculates the sum of the first N consecutive numbers, provide an appropriate, readable name for the function.
(This checks the ability to provide meaningful names for functions.)
- **Q4:** What is the time complexity of the following code?

```
int fun(int n) {  
    if(n <= 1) return n;  
    int x = fun(n - 1);  
    int y = fun(n - 2);  
    return x + y;  
}
```

- **Q5:** Explain the order of SQL query execution (e.g., FROM, WHERE, GROUP BY, HAVING, SELECT).
- **Q6:** Given a table with redundant data in multiple columns, how would you optimize it? (Hint: Normalization)
- **Q7:** Given a Java Code and asked to Identify issues in a code that violated access modifiers.
- **Q8:** Asked almost all the basic concepts of Object-Oriented Programming (OOP).
- **Q9:** What is the ACID properties in DBMS?
- **Q10:** Asked a basic GRE like math question

- **Q11:** Write a SQL to show all the duplicate rows in a table
- **Q12:** Can we make stack with queue?

2nd Round Interview Questions

Two software engineer conducted the technical sessions. But before the technical round, there was a 20 minutes HR round asking questions like why you chose WellDev, what is your future plan, what are your biggest strength etc. In technical round, I faced several unconventional and practical questions:

- **Q1:** Write an API call to check whether the system is running properly and also write & explain a GET API call.
- **Q2:** Write a code to create a directory and a text file inside it with "Hello World" written.
(File handling question)
- **Q3:** What happens if two people try to reserve the same ticket simultaneously in a ticket reservation system? How would you solve this problem in a ticket management system? What will be your idea in this regard?
- **Q4:** How many APIs are required to solve the above ticket reservation problem?
- **Q5:** How can passwords be secured so that no one (even the administrator) cannot view them? How can password hashing be strengthened? What are several techniques you know?
(Hint: Salting and hashing techniques)
- **Q6:** What is a trigger in DBMS, and what does cascading mean?
- **Q7:** If we need to display a large amount of data on a website, what technique should be followed?
(Hint: Pagination)
- **Q8:** What happens when we browse a website? How are the contents rendered?
(Network-related question)
- **Q9:** What is the difference between SQL and NoSQL?
- **Q10:** For storing values from cache memory to RAM, should we use SQL or NoSQL?

- **Q11:** LeetCode problem – Find the maximum area of a histogram.
(Given an array, take a subarray, where the minimum value indicates the height and the number of elements taken is the width of the rectangle. Maximize the area.)
- **Q12:** A binary search-like question – You have a 100-story building, and two marbles. A marble will break if dropped from a certain height (from any floor). Find the highest floor you can lift by dropping or utilizing exactly two marbles.
- **Q13:** Given a table with `product_id`, `price`, and `product_name`, write a query to find products with the same price.
(SQL query)
- **Q14:** What is the difference between DELETE, TRUNCATE, and DROP in SQL?
- **Q15:** Explain threading in OOP.
- **Q16:** How do you check for changes in a database?
- **Q17:** Many questions from my CV (every questions were practical, not just asking what you have done and so)
- **Q18:** Zero Mover Code

A few Words

Although I did not make it past the second round, the main reasons were my lack of preparation and knowledge about what would be asked. The questions were quite unconventional for a fresher. However, this is how each company sets its own interview standards. Anyway the interviewer were friendly, even if you don't perform better they will say, "You did good and our next round will be like bla bla and if you get passed, you will be informed".
