Navigating the

TECHNICAL INTERVIEW

with Michael Watson, Software Engineer & Development Team Manager

Vermont Information Processing (VIP)





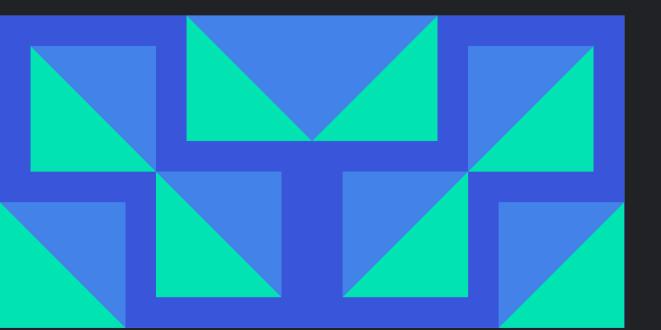
1. Introduction & Big Picture Overview

2. Tips for the Technical Interview

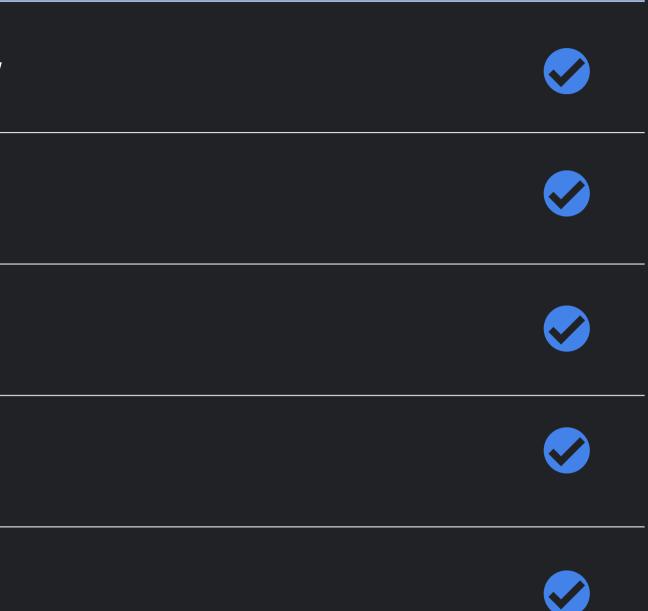
Dverview

3. Group Whiteboard Interview

4. Preparation



5. Questions



ABOUT ME & VIP

Michael Watson Software Development

VIP is the leading technology supplier for brewers, distributors, wineries, soda bottlers, and other companies in the beverage industry.





APPLICATION PROCESS

OVERVIEW

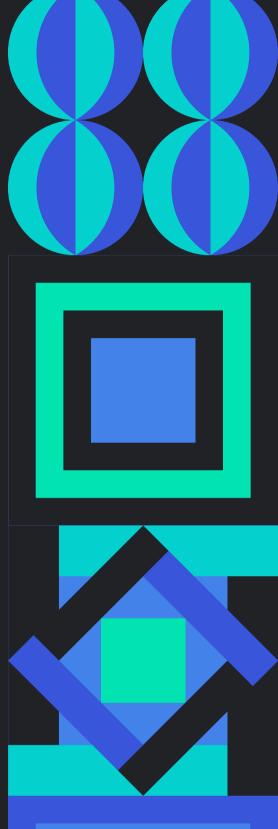


1. Job Application

- 2.Phone Screen w/ HR or Hiring Manager
- 3.Take-home programming exercise/onlinetest
- 4.Technical Interview with Hiring Manager(s)
- 5.Follow-up Interview with
 - Hiring Manager(s) and/or
 - Team Members(s)
- 6.Offer Letter

TECHNICAL INTERVIEW OUTLINE

Introductions (2-3 minutes)
 Resume review & get to know you (15-20 minutes)
 White board exercises/technical interview (20-30 minutes)
 Job description & company information (5-10 minutes)
 Open time for questions (5+ minutes)





TIPS FOR THE INTERVIEW

Research:

Know Stacks & Technologies Used

Brush Up:

Practice, Practice, Practice

Ask Questions: Be engaged, ask clarifications

Showcase Soft Skills: Understanding big picture, calmness, etc.

Showcase Problem Solving Skills: It's more than just getting the right answer

Think Out Loud:

Talk through so they can understand your thought process

PART 1: DATABASE DESIGN & BASIC QUERVING

Assume a database with the following tables:

EMPLOYEE:

- EmployeeID
- FirstName
- LastName
- HireDate

DEPARTMENT:

- DepartmentID
- DepartmentName

- Write or describe a query that returns the First Name and Last Name of all employees hired on or after January 1st, 2020
- Write or describe a query that returns the First Name and Last Name of all employees who belong to the Development department
- Describe how we could enhance the database to assign a Job Title to an employee
- Describe how we could enhance the database to define an Employee Manager for a given department

DEPARTMENT EMPLOYEE:

- DepartmentID
- EmployeeID



PART 2: APPLICATION DESIGN

Given the database in the previous step, can you design a web portal that allows an administrator to manage their list of employees and the departments they belong in?

The portal should allow the administrator to search for existing employees, add a new employee, update an employee, and assign an employee to one or more departments.

- Describe or draw an outline of what the application looks like from a UI/UX perspective, including its key features and components
- Describe the data flow and/or technology stack that powers this application. Include a big picture overview of the architecture as well as details about specific technologies and frameworks along the way



PART 3: CODE REVIEW

An employee has written the following snippet of code to help with a specific task in your application.

You have been assigned to code review. The original ticket was to "Define a method that finds all employees in a given department who were hired after a certain date."

public List<Employee> getResult(List<Employee> allEmployees, String departmentName, Date startDate) {

```
// declare list to hold employees who meet requirements
List<Employee> x = new ArrayList<>();
for (int i = 0; i < allEmployees.size(); i++) {</pre>
    int id = DepartmentHelper.getDepartmentIdFromName(departmentName);
    if (allEmployees.get(i).getHireDate().isBefore(startDate)) {
        if (DepartmentHelper.checkEmployeeInDepartment(allEmployees.get(i), id)) {
            x.add(allEmployees.get(i));
if (x.size() > 0) {
    return x;
} else {
    return new ArrayList <> ();
```

Can you code review this snippet of code and make suggestions - specifically with regards to performance and readability?

DEBRIEF

How do you practice or prepare?

What about take-home portions?

Other questions?



THANK YOU FOR LISTENING!

Questions?

