

Interview Preparation Guide

Angular, ASP.NET Core, SQL Server, and Behavioral Questions

Prepared for Technical Interviews

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1 Technical Preparation

1.1 Angular (Frontend)

Be confident in the following areas:

- **Component Lifecycle:** Understand `ngOnInit`, `ngAfterViewInit`, and other lifecycle hooks.
- **Data Binding:** Master one-way and two-way binding (`[[ngModel]]`).
- **Services & Dependency Injection:** Know how to create and inject services.
- **HTTP Client:** Handle GET, POST, error handling, and HTTP interceptors.
- **Routing:** Implement lazy loading and route guards (e.g., `AuthGuard`).
- **Reactive Forms:** Use `FormBuilder` and `Validators`.
- **RxJS:** Understand `Observable`, `subscribe`, `pipe`, `map`, and `switchMap`.

1.1.1 Common Angular Questions

- What is the difference between template-driven and reactive forms?
- What are observables and how are they used?
- How does Angular handle dependency injection?
- How do you secure routes using `AuthGuard`?
- What is lazy loading and why is it used?

1.2 ASP.NET Core (Backend)

Be confident in the following areas:

- **Controllers and Routing:** Understand API controllers and attribute routing.
- **Dependency Injection:** Know how to configure and use DI.
- **Entity Framework Core:** Perform CRUD operations and manage migrations.
- **DTOs, AutoMapper:** Map entities to DTOs efficiently.
- **JWT Authentication:** Implement middleware and token validation.
- **LINQ Queries:** Write efficient LINQ queries for data retrieval.
- **Repository & Unit of Work Pattern:** Understand their implementation.

1.2.1 Common ASP.NET Questions

- What is the difference between `IActionResult` and `ActionResult<T>`?
- How does dependency injection work in ASP.NET Core?
- How do you implement JWT authentication?
- What is the difference between `AddScoped`, `AddTransient`, and `AddSingleton`?
- How do you connect to a database using Entity Framework Core?

1.3 SQL Server

Be confident in the following areas:

- Writing basic to complex SQL queries.
- Using JOIN, GROUP BY, HAVING, and window functions.
- Creating and using stored procedures and views.
- Understanding indexes and database normalization.
- Optimizing queries for performance.

1.3.1 Sample SQL Questions

- Write a query to get the second highest salary.
- Explain the difference between clustered and non-clustered indexes.
- How do you handle transactions in SQL Server?
- How do you optimize a slow-running query?

2 Behavioral and HR Questions

Prepare your answers using the **STAR** format (Situation, Task, Action, Result):

- **Tell me about yourself:** Provide a brief introduction, highlight skills, experience, and current goals.
- **Why should we hire you?** Emphasize technical strengths, learning ability, and teamwork.
- **What was the biggest challenge in a project?** Discuss a real challenge (e.g., integration bug, tight deadline).
- **Tell me about a time you worked under pressure:** Share a story where you managed time or solved a critical issue.
- **Are you more comfortable working alone or in a team?** Preferably say, “Both, but I enjoy collaboration.”

3 Project and System Design Questions

Expect questions such as:

- Describe a recent project you worked on.
- How did you implement login functionality in Angular + ASP.NET?
- How do you structure your Angular and .NET projects?
- What are common security issues in web apps and how do you prevent them?

4 Bonus: Questions to Ask the Interviewer

When asked, “Do you have any questions for us?”, consider asking:

- What technologies does the team use most frequently?
- What does a typical day look like for this role?
- How is the team structured?
- Are there opportunities to work on full stack features?