

# Full Stack Developer Interview Prep - Cheat Sheet

## Java + Spring Boot

- Explain the differences between @Component, @Service, and @Repository.
- How does Spring handle dependency injection internally?
- How do you implement JWT-based security in a Spring Boot REST API?
- How would you handle global exception handling using @ControllerAdvice?
- What are Spring Profiles and when would you use them?

## React / Angular + Tailwind

- Explain the Virtual DOM in React and its benefits.
- How do you manage state using Redux or Context API?
- What is useEffect and when does it run?
- Explain Angular's dependency injection system.
- How does Tailwind CSS support responsive design?

## Microservices & System Design

- Design a URL shortener service with high scalability.
- Explain API Gateway and its role in microservices architecture.
- How would you implement inter-service communication with RabbitMQ?
- What are Circuit Breakers and why are they important?
- How would you migrate from monolith to microservices?

## DevOps + Cloud (AWS)

- How do you containerize a Spring Boot app with Docker?
- What are the differences between Docker and Kubernetes?
- Describe a CI/CD pipeline you've set up using Jenkins.
- What are the best practices for deploying on AWS EC2?
- How do IAM roles work in AWS and why are they important?

## SQL / MongoDB

- Write a query to get the top 3 orders per customer.
- What is the difference between WHERE and HAVING clauses?
- Explain the CAP theorem in context of MongoDB.

- How would you design a schema for a blog in MongoDB?
- What is indexing in SQL and how does it improve performance?

## **Behavioral**

- Describe a challenging bug you faced and how you resolved it.
- How do you handle conflicts or disagreements in a remote team?
- What do you do when you're stuck during a sprint?
- Explain a time you learned a new technology quickly to meet a deadline.
- How do you manage communication across distributed teams?