1. Junit framework
2. SQL Queries
3. Micro service architecture
   1. Gateway service impl
   2. Authentication
   3. Rate limit
   4. Circuit Breaker
   5. ->
4. Hibernate
5. System design
6. Azure cloud services.
   1. About SQL DB
   2. Cosmos DB
   3. Blob storage
   4. Cache for redis
   5. Azure data bricks
7. Sorting/Searching algorithms and notations.
8. DS and algorithms
9. Spring boot and Spring
10. Threads
11. Collections
12. Maven, Gradle
13. AWS services in general.
14. Log servies like coralogix and Grafana.  
      
      
    Week 1️⃣ - 𝗧𝗼𝗽𝗶𝗰𝘀: Scalability, API Gateway, Load Balancing, Caching, CAP/PACELC theorems, Bloom Filters.  
      
    Study the basics of scalability and load balancing, including horizontal and vertical scaling, load balancing algorithms, and caching strategies.  
      
    Week 2️⃣ - 𝗧𝗼𝗽𝗶𝗰𝘀: Databases, Data Modeling, Partitioning, Sharding, Replication  
      
    Study different types of databases, including SQL and NoSQL, and their use cases. Learn about data indexing, sharding, and replication strategies.  
      
    Week 3️⃣ - 𝗧𝗼𝗽𝗶𝗰𝘀: Networking, REST, gRPC, GraphQL, DNS, Proxies, Websockets, Long Poll.  
      
    Study the basics of computer networking and RESTful architecture, including the HTTP protocol, DNS, Proxies, and Websockets.  
      
    Week 4️⃣ - 𝗧𝗼𝗽𝗶𝗰𝘀: Distributed Systems, Consistency Models, Quorum, Leader/Follower, Merkle Tree, Consistent Hashing.  
      
    Study the basics of distributed systems, consistency models, and how to ensure fault tolerance in distributed systems.  
      
    Week 5️⃣ - 𝗧𝗼𝗽𝗶𝗰𝘀: APIs, Architectural Design Patterns, and Microservices.  
      
    Study common design patterns like Publisher-Subscriber, Sharding pattern, Circuit Breaker, and Static Content Hosting. Understand the pros and cons of microservices.  
      
    Week 6️⃣ - 𝗧𝗼𝗽𝗶𝗰𝘀: System Design Practice and Interview Preparation.  
      
    Practice solving system design problems, both individually and in groups. Prepare for system design interview questions and scenarios.  
      
    Prepare for designing social media, Facebook Newsfeed, Instagram, Twitter Search, YouTube, Quora, and Stack Overflow.  
      
    Week 7️⃣ - 𝗧𝗼𝗽𝗶𝗰𝘀: More System Design Practice and Interview Preparation  
      
    Practice solving system design problems: Designing Dropbox, Typeahead Suggestion, API Rate limiting. Messenger.  
      
    Week 8️⃣ - 𝗧𝗼𝗽𝗶𝗰𝘀: More System Design Practice and Interview Preparation  
      
    Practice solving system design problems: Designing Web crawler, Yelp or proximity server, Uber, Ticketmaster.  
      
    To prepare for system design, I highly recommend 'Grokking' courses: [**https://lnkd.in/dHjzjuwr**](https://lnkd.in/dHjzjuwr) and [**https://lnkd.in/dC6ivjUz**](https://lnkd.in/dC6ivjUz)  
      
    Source: System Design Interview Survival Guide (2023):  
    [**https://lnkd.in/deqz6gnz**](https://lnkd.in/deqz6gnz)  
      
    My Recommendations:  
    1. 𝗚𝗿𝗼𝗸𝗸𝗶𝗻𝗴 𝗦𝘆𝘀𝘁𝗲𝗺 𝗗𝗲𝘀𝗶𝗴𝗻 𝗙𝘂𝗻𝗱𝗮𝗺𝗲𝗻𝘁𝗮𝗹𝘀 by [**Design Gurus**](https://www.linkedin.com/company/designgurus/) for acing system design interviews: [**https://lnkd.in/dm6qA9fe**](https://lnkd.in/dm6qA9fe)  
    3. 𝐋𝐞𝐚𝐫𝐧 𝐭𝐨 𝐜𝐨𝐝𝐞 with the world's largest web developer site [**W3Schools.com**](https://www.linkedin.com/company/w3schools.com/) for free.  
    4. 𝐌𝐚𝐬𝐭𝐞𝐫 𝐦𝐨𝐝𝐞𝐫𝐧 𝐰𝐞𝐛 𝐝𝐞𝐯𝐞𝐥𝐨𝐩𝐦𝐞𝐧𝐭 with a project cased approach at [**JavaScript Mastery**](https://www.linkedin.com/company/javascriptmastery/)  
      
    If you’re still feeling stuck or need career support, here’s the link to request free mentorship session: [**https://lnkd.in/dwRmCu-k**](https://lnkd.in/dwRmCu-k)  
      
    ♻ Repost to help others level up their software engineering career.  
    👤 Follow [**Tauseef Fayyaz**](https://www.linkedin.com/in/ACoAACogvGkBsaFqvSPBkBwBwBpj-QjPY9YEKss) for more.