

# A Terse Guide to System Design Interview Prep

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Last Updated: Monday, November 21, 2022

## Resources

- <https://www.educative.io/courses/grokking-the-system-design-interview>
- Alex Xu: System Design Interview – An insider's guide, Second Edition
- Groks King: System Design Interview: Mastering Basic Introduction to System Analysis and Design
- Lewis C. Lin, et. al: The System Design Interview, 2nd Edition
- Martin Kleppmann: Designing Data-Intensive Applications: The Big Ideas Behind Reliable, Scalable, and Maintainable Systems
- Roberto Vitillo: Understanding Distributed Systems: What every developer should know about large distributed applications

## Steps

1. Clarify requirements
2. Rough estimate
3. Define system interface
4. Define data model
5. Design in high-level
6. Design in detail
7. Bottlenecks
8. Trade-offs

## Some Sample Questions

The questions revolve around designing a large system.

Examples include, but not limited to, services like:

- Typeahead Suggestion
- URL shortening service (e.g., TinyURL)
- API Rate Limiter
- Web Crawler
- Pastebin
- Newsfeed
- Messenger
- Email

Even more broadly, the interview may center around designing some subsystem or two within well-known tech-focused companies like:

- Dropbox
- Instagram
- Ticketmaster
- Twitter
- Uber or Lyft
- Yelp
- YouTube or Netflix

In general, if you see some large systems involving tech stacks, you want to make sure you know roughly how they work. Also, it helps to browse through a list of tech companies (e.g., take a look at the Forbes list [here](#)) and know the major subareas of their business focus.

The higher the level you are interviewing for, the higher the expectation that you can orchestrate each step from step 1 to step 8. It is unlikely to pass the interview if at least one step from the 8 steps is missing.