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Grokking Modern System Design Interview for Engineers & Managers

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Key-value Store

Content Delivery Network (CDN)

Sequencer

Distributed Monitoring

Monitor Server-side Errors

Monitor Client-side Errors

Distributed Cache

Distributed Messaging Queue

Pub-sub

Rate Limiter

Blob Store

Distributed Search

Distributed Logging

Distributed Task Scheduler

Sharded Counters

Concluding the Building Blocks Discussion

Design YouTube

Design Quora

Design Google Maps

Design a Proximity Service / Yelp

Design Uber

Design Twitter

Design Newsfeed System

System Design: Newsfeed System

Requirements of a Newsfeed System's Design

System Design: Newsfeed System

Learn about the basics of designing the newsfeed system.

We'll cover the following

- What is a newsfeed?
- How will we design the newsfeed system?

What is a newsfeed?#

A **newsfeed** of any social media platform (Twitter, Facebook, Instagram) is a list of stories generated by entities that a user follows. It contains text, images, videos, and other activities such as likes, comments, shares, advertisements, and many more. This list is continuously updated and presented to the relevant users on the user's home page. Similarly, a newsfeed system also displays the newsfeed to users from friends, followers, groups, and other pages, including a user's own posts.

A newsfeed is essential for social media platform users because it keeps them informed about the latest industry developments, current affairs, and relevant information. It also provides them additional reasons to return and connect with a platform on a regular basis. Billions of users use such platforms. The challenging task is to provide a personalized newsfeed in real-time while keeping the system scalable and highly available.

This chapter will discuss the high-level and detailed design of a newsfeed system for a social platform like Facebook, Twitter, Instagram, etc.

Newsfeeds on a mobile application

How will we design the newsfeed system?#

We have divided the design of the newsfeed system into the following three lessons:

1. **Requirements:** In this lesson, we'll identify the functional and non-functional requirements. We'll also estimate the resource requirements to provide a personalized newsfeed to billions of users each day.

2. **Design:** We'll discuss the high-level and detailed design of the newsfeed system in this lesson. We'll also describe the API design and database schema for our proposed design. Moreover, this lesson will also help us to rank newsfeed to provide a better experience to users.

3. **Evaluation:** In this lesson, we'll evaluate the design of the newsfeed system based on the non-functional requirements. We'll also take a quiz to assess our understanding of the design of the newsfeed system.

Let's list down the requirements for designing our version of the newsfeed system.

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Quiz on Twitter's Design

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Requirements of a Newsfeed System'…

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