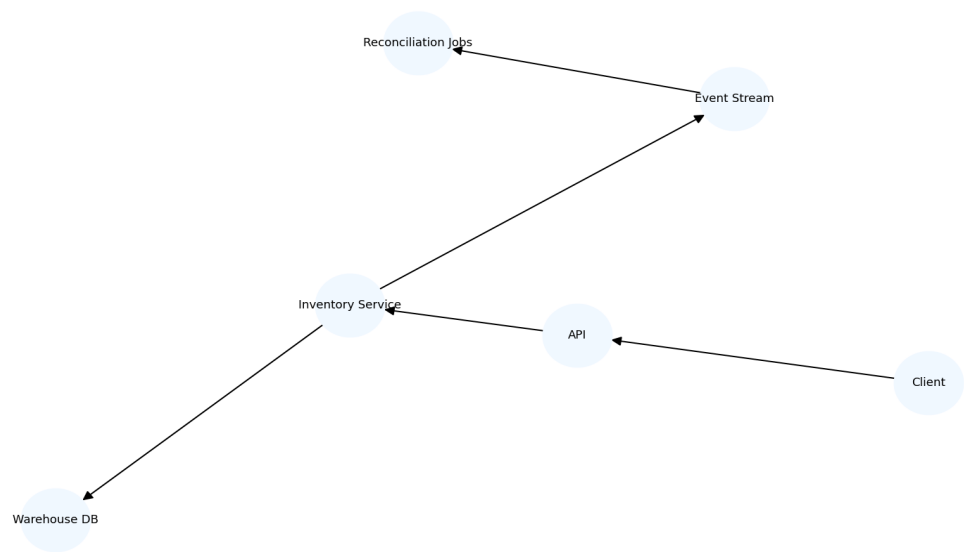


System Design Interview Cheat-Sheet (Amazon & Facebook)

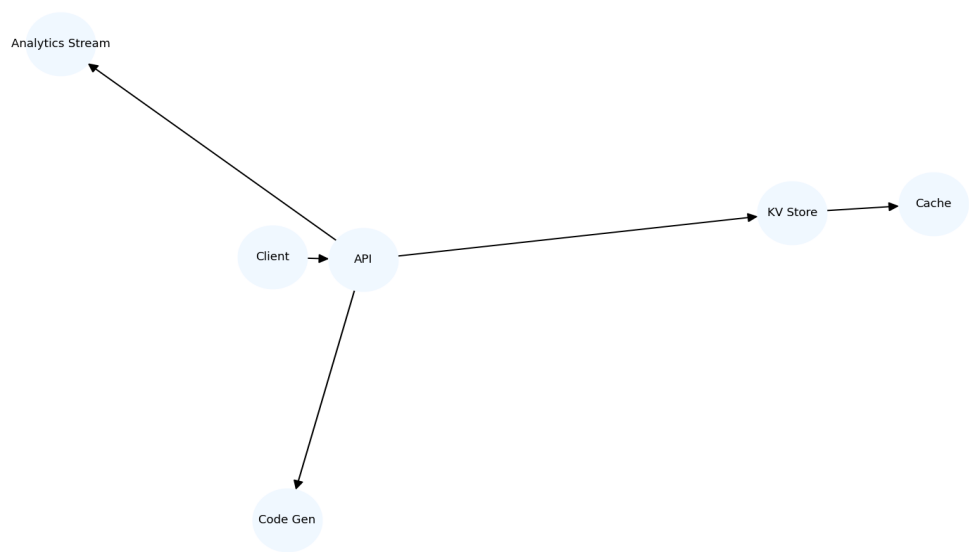
■ Inventory Management System (Amazon)

Start with requirements, show per-warehouse partitioning, reservation flow (reserve -> commit -> release), and reconciliation.



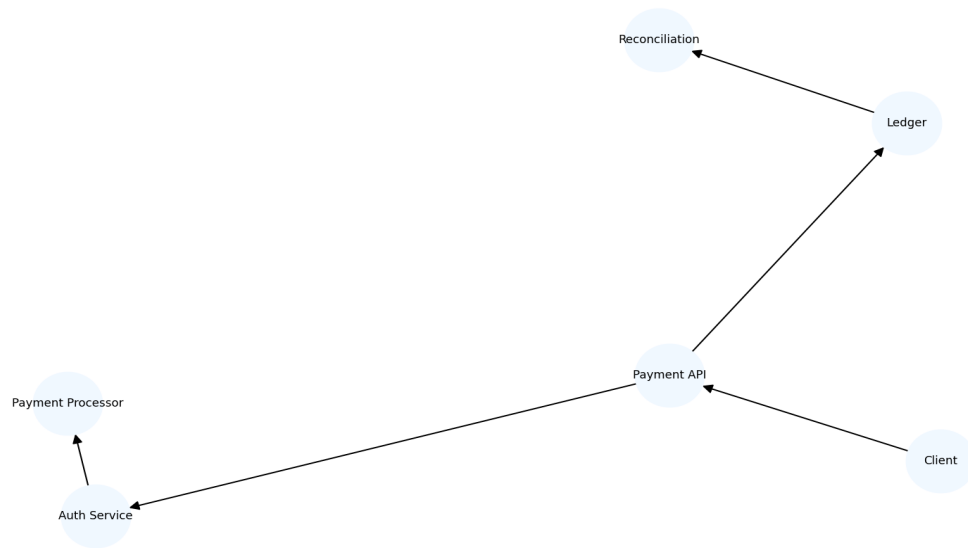
■ URL Shortener (Bitly-like)

Describe code gen, persistence, caching, edge redirect, and analytics pipeline.



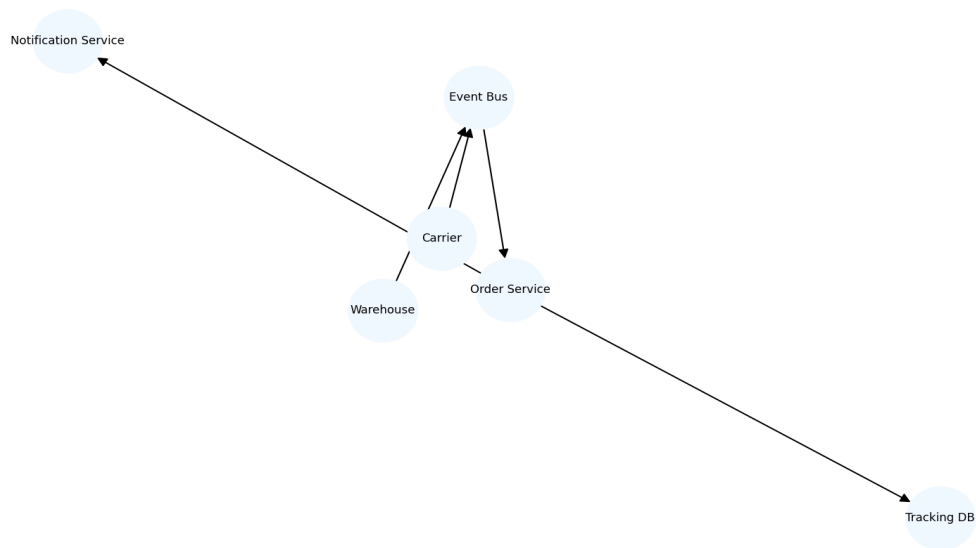
■ Online Payment System (Amazon Pay)

Explain auth/capture flow, ledger writes, reconciliation, and fraud checks.



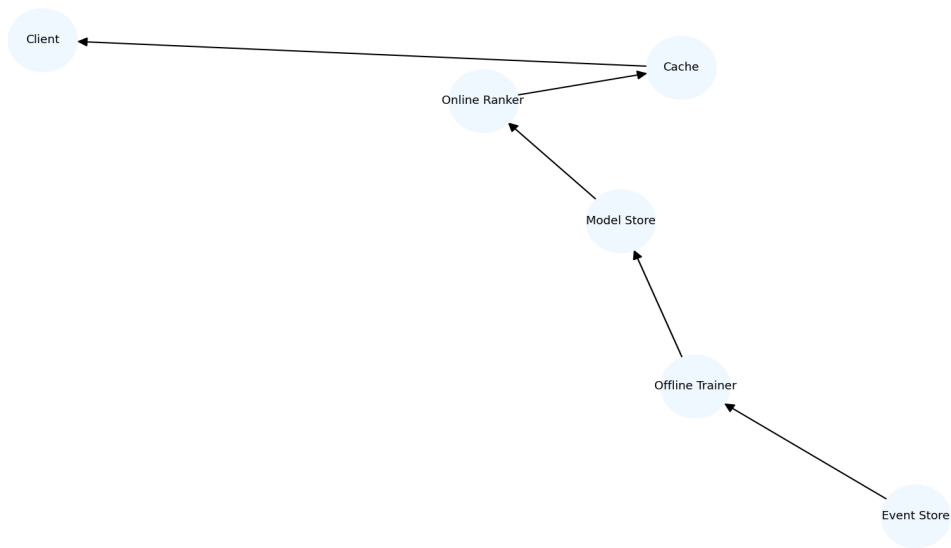
■ Order Tracking System

Show event-driven flow: sources -> event bus -> materialized views -> API.



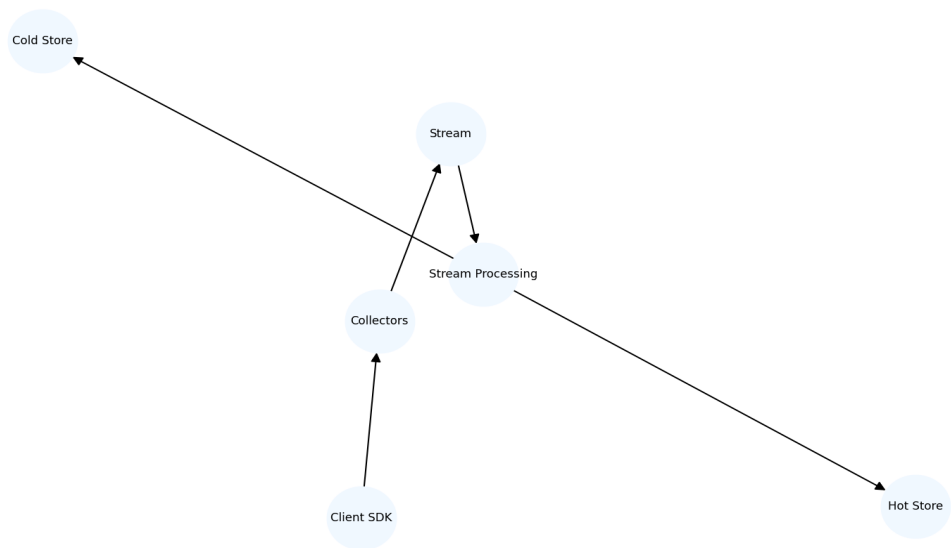
■ Recommendation System (Amazon)

Outline offline training -> candidate generation -> online ranking -> feature serving.



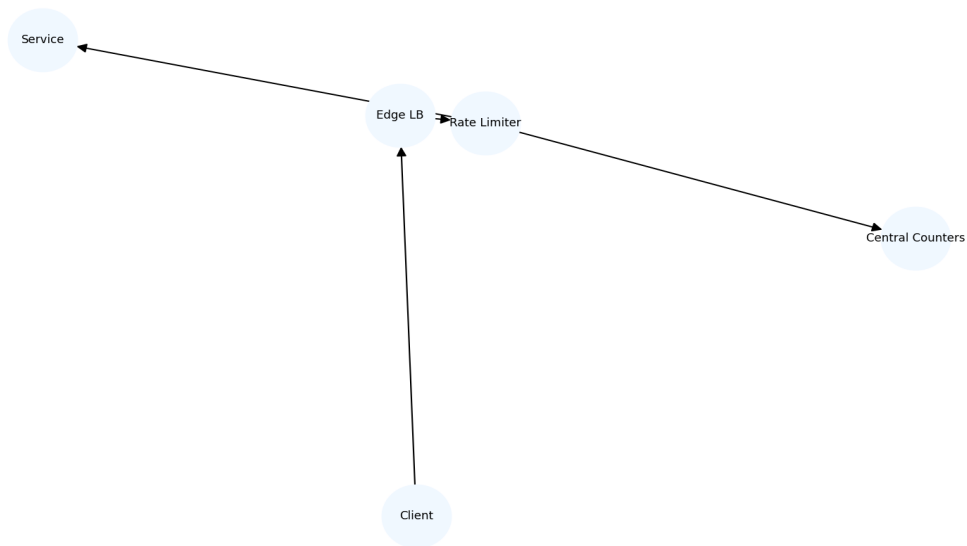
■ Real-time Analytics Pipeline

Walk ingest -> stream -> processing -> serving for dashboards.



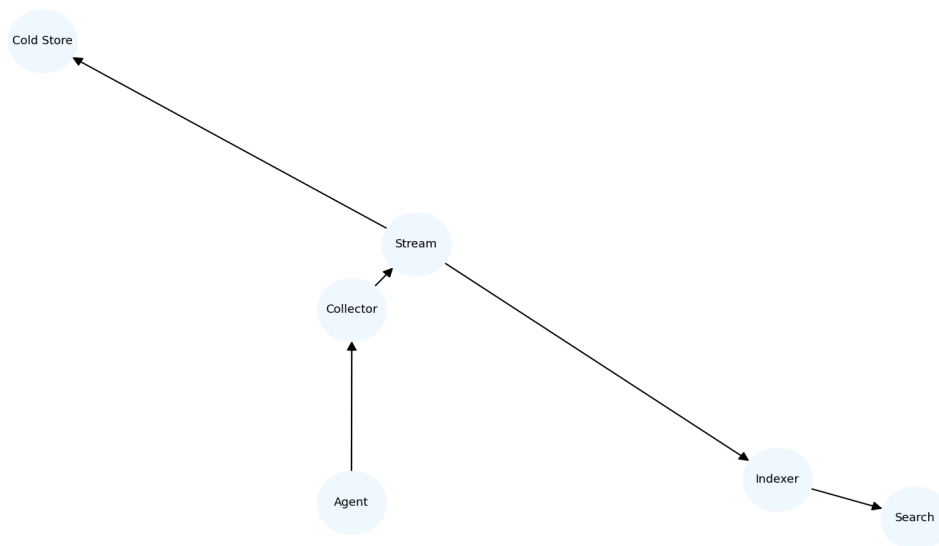
■ API Rate Limiter (high QPS)

Explain local token buckets, sync, and handling strict vs approximate limits.



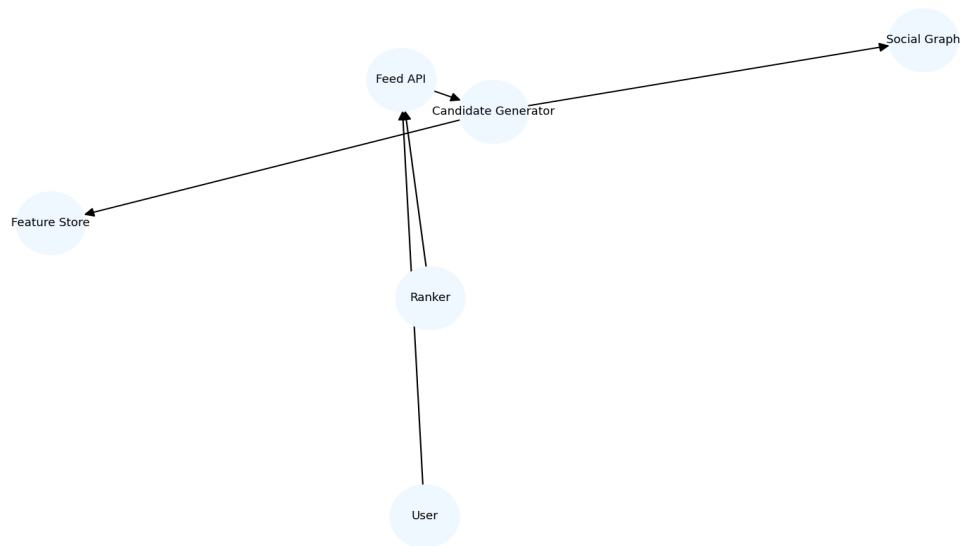
■ Scalable Logging System

Show pipeline and explain indexing, retention, and alerting.



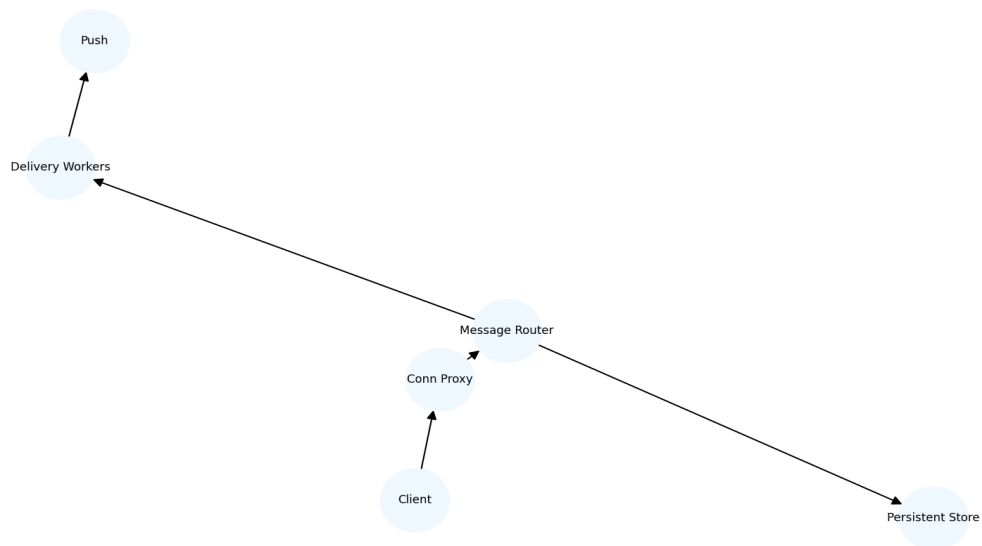
■ News Feed System (Facebook)

Explain signal collection -> candidate generation -> ranking -> serving with caching strategies.



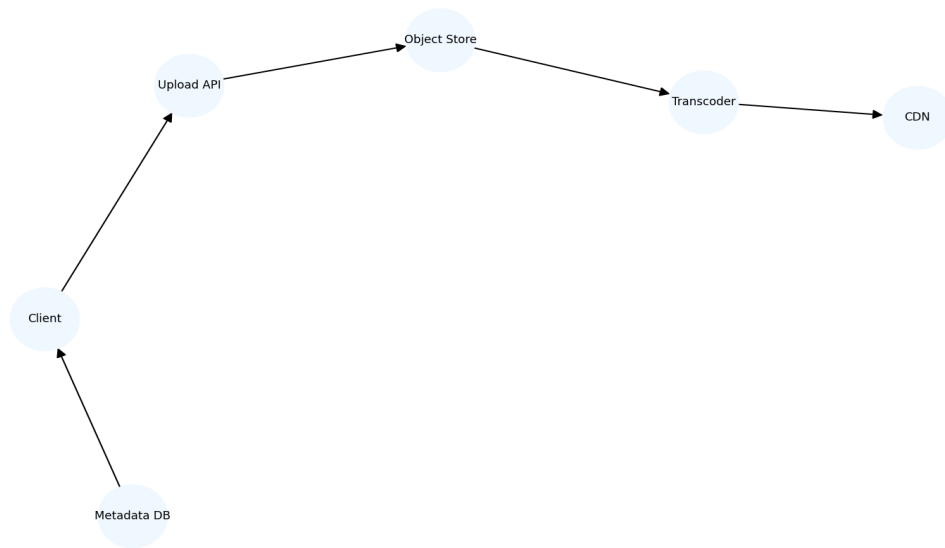
■ Messenger (Facebook Chat)

Walk connection -> send -> persist -> deliver -> ack flow.



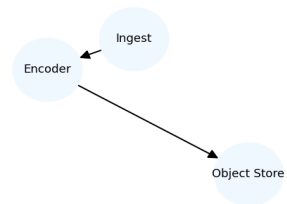
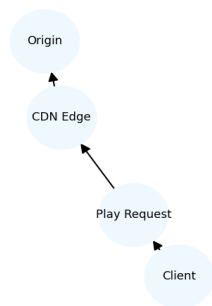
■ Photo Storage and Sharing

Describe upload to origin, variant generation, storage, CDN delivery, and moderation pipeline.



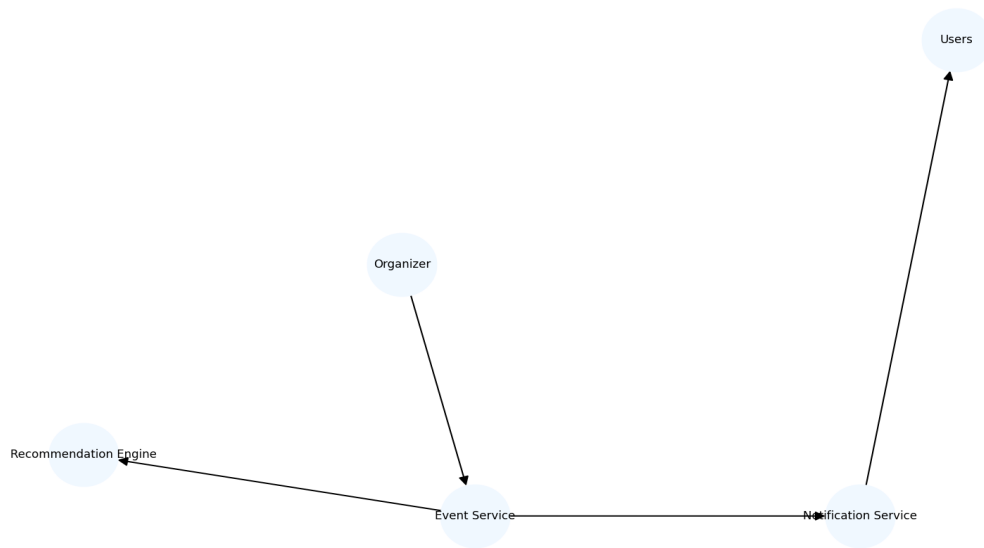
■ Video Platform (on-demand + live)

Explain VOD pipeline and differences for live streaming.



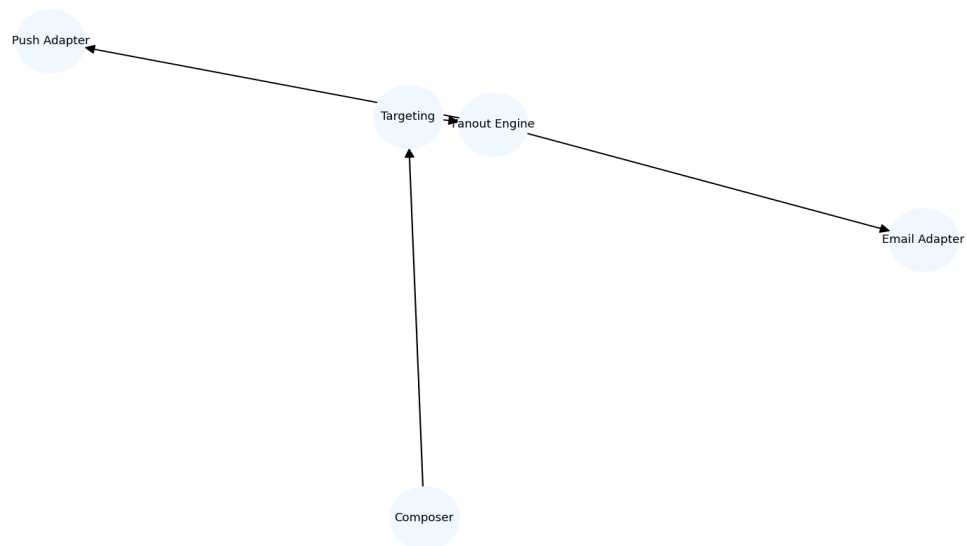
■ Event System (create/join/notify)

Walk event lifecycle from creation to notifications and recommendations.



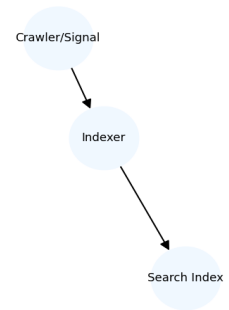
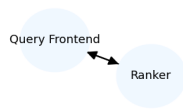
■ Notification Service (fanout to billions)

Explain targeting -> fanout -> per-channel adapters and retries.



■ Search for People/Pages/Posts

Walk crawl/index -> retrieval -> ranking -> serve path.



■ Fake Account / Spam Detection System

Show streaming detection -> scoring -> action -> review loop.

