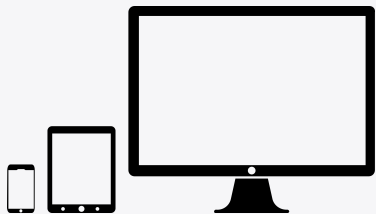


System Design Fundamentals

Client Application



Network Layer



Application Layer



Cache Layer

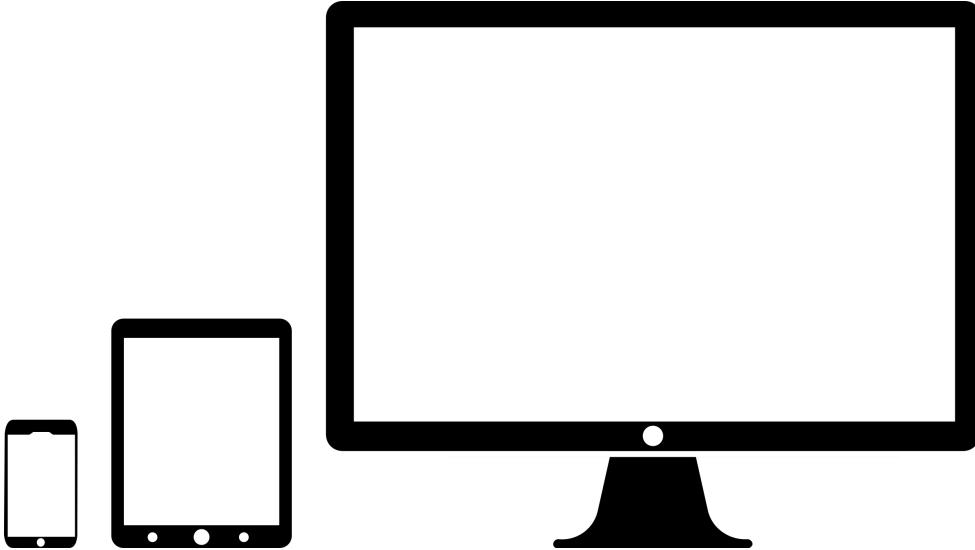


Database Layer



Client Application

- User end cache storage
- Edge computing



Network Layer



- SOAP / REST API's
- Network responses
- Encryption

Application Layer



- Load balancers
- Horizontal and vertical scaling
- Rerouting

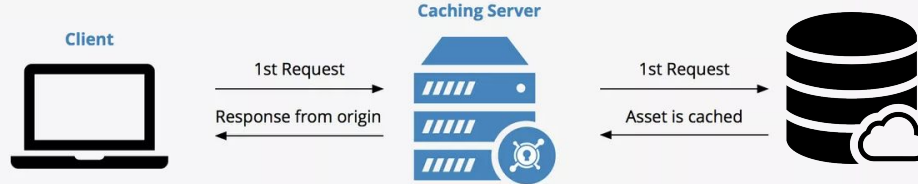
Data storage layer



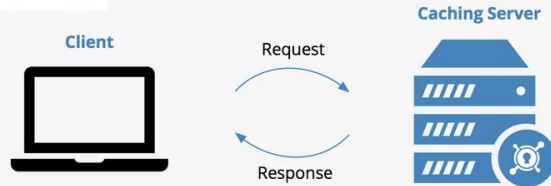
- CAP Theorem
- Sharding
- SQL / NOSQL
- Data Normalization
- Server Architecture

Caching layer

1st Request



Subsequent Requests



- Type of caches
- CDN (Content Delivery Networks)
- Indexing
- Bloom filters
- Tries
- LinkedHashMap