

## Web System design

Online websites such as Google, Twitter, Facebook, Amazon and Netflix are used by millions of user worldwide, as the user increase, a scalable, highly available system must be designed to accommodate a lot of user. Here are the things to consider in designing the system:

1. Functional and non functional requirement
2. Capacity estimation
3. Database to use, Relational or NoSQL
4. Vertical scaling, Horizontal scaling, Sharding
5. Load Balancing
6. Master-Slave Replication
7. Cache and CDN
8. Stateless and Stateful servers
9. Data center georouting
10. Message Queue, Publish Subscribe Architecture
11. Performance Metrics Monitoring and Logging
12. Build, test, configure deploy automation
13. Finding single point of failure
14. API Rate limiting
15. Service Level Agreement