1. Design multilevel parking controller system for a complex
2. Design a lift system for a skyscraper
3. Design movie booking system like bookmyshow
4. Design URL shortening system like TinyURL
5. Design message broadcasting system like Twitter
6. Design a cache
7. Design geo-location based service like Uber
8. Design a collaboration tool like Googe docs
9. Design efficient memory system with processes and garbage collector
10. Design a video streaming platform like Netflix
11. Design a new DB with <xyz> extra feature
12. Design a real time messaging app like Whatsapp
13. Design webcraler to rak pages in Google.

Concepts to use

1. Component diagrams
2. Class diagrams
3. SQL queries ( Insert , select , Join)
4. Servers( EC2 , Lambda)
5. RDBMS and No SQL(MySQL , Postgres , Mongo DB , Cassandra)
6. Caches ( Redis , Map-reduce)
7. Load Balancer
8. Messaging Queues ( RabbitMQ , Service Bus Queue , Kafka )
9. Scaling (Horizontal , vertical , sharding , instances)
10. Logging ( New relic)
11. Analytics ( Google Analytics , MixPanel)
12. Realtime events and eventual consistency