

Name : Chetan Bhoyar

Assignment Day 2 -

Question 1

Que. Define the following cache strategies.

Ans -

a) Cache Aside

Application / Service is directly connected to Cache and Database. It will request the data from Cache, If the Cache has the requested Data then Application will retrieve otherwise it will request the data from database directly. It will then write it to Cache in order to retrieve the data faster for the future.



b) Read Through

In Read Through, Application / Server will request the data from the Cache, If the Cache doesn't have the requested data , Then Cache will retrieve the data from the Database and return it to the Service / Application.



c) Write Through

Similar to Read Through, Every write of the data will go through the cache to the database.

System Design Essentials



I

d) Write behind

Similar to Write Through, Here Service / Application still writes data to the cache but there is a delay in writing from the cache to the database.



Question 2

Que. Explain Message Queues and PUB- SUB Queues. Mention where they are used.

Ans -

Message queues pattern is a kind of point-to-point messaging system, where the message from the queue will be wiped once it is consumed by any one of the consumer.

E.g : Rabbit MQ, RocketMQ, Apache ActiveMQ, Amazon SQS.

Example: Issuing Paycheck as Everyone should only receive a paycheck once.

Publish-Subscribe pattern, Publishers are the set of producers that publishes different categories of messages and subscribers are set of consumers that consumes messages from the subscribed message categories. But in Pub-Sub Queues, the message will be wiped from the queue only if it is consumed by all of the subscribers.

E.g : Google Cloud Pub/Sub , Kafka.

Example: Prices of the stocks on the stock market.