#ASLI ENGINEERING

Understand caching

SWIPE

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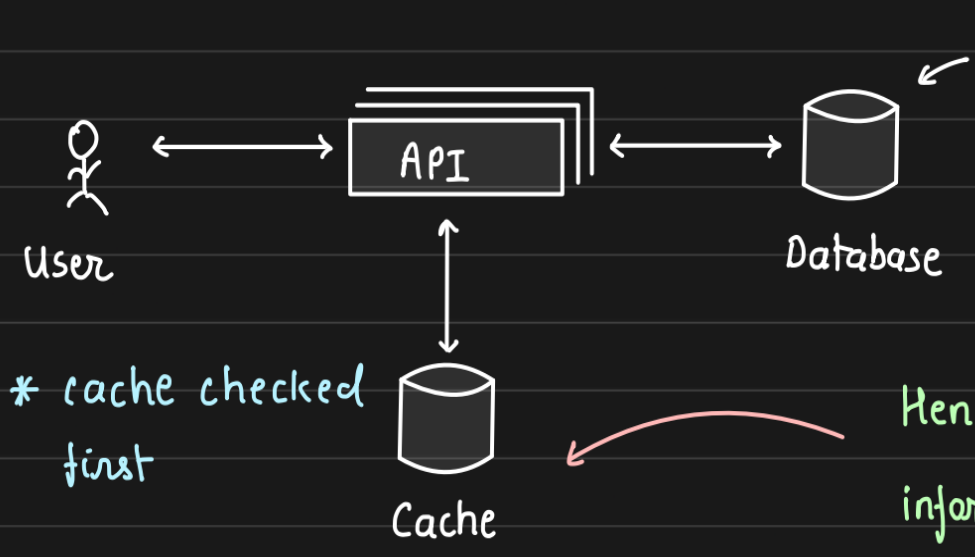
Caching

Caches are anything that helps you avoid an expensive network I/O, disk I/O, or computation

1. API call to get profile information
2. Reading a specific line from a file
3. doing multiple table joins

* Performance Improvement

Store frequently accessed data in a tempory storage location



Fetching from DB is expensive
(eg: expensive db query, expensive disk I/O)

* cache checked first

Hence, we "cache" the information is some other place (so that we do not have to go to main database)

Caches are faster and expensive

* hence we do not cache all the data. (just a subset of it which is most likely to be accessed)

Caches that we typically use are

Redis, Memcached

Note: Caches are not restricted to RAM based storage

Any storage, that is 'nearer' and helps you avoid something expensive is a cache for you!

In their simplest form,

Caches are just glorified hash tables

Some examples

1. Google News: Most recent news articles are more likely to be accessed, hence served from cache

2 Auth Tokens: Authentication are cached in "cache" to avoid load on database

[tokens are checked on every request]

3. live Stream: Last 10 min of live Stream is cached on CDN as it will be accessed the most

Exercise
1. Setup Redis locally
2. put and get some data
3. measure time taken
4. compare it with database