

Caching

# Caching

## Cookie

- Browsers Accept
- Browsing exp. ↑

## Cache.

- Temp files
- Passwords.
- Copied Data

frontend

- Recent
- Emojis in whatsapp
- logos (websites)
-

Problem:

High Load on Server.

client

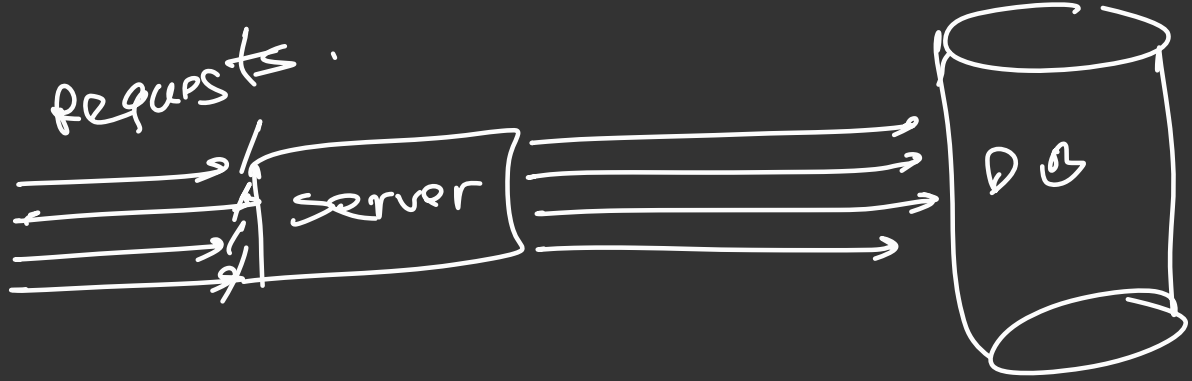
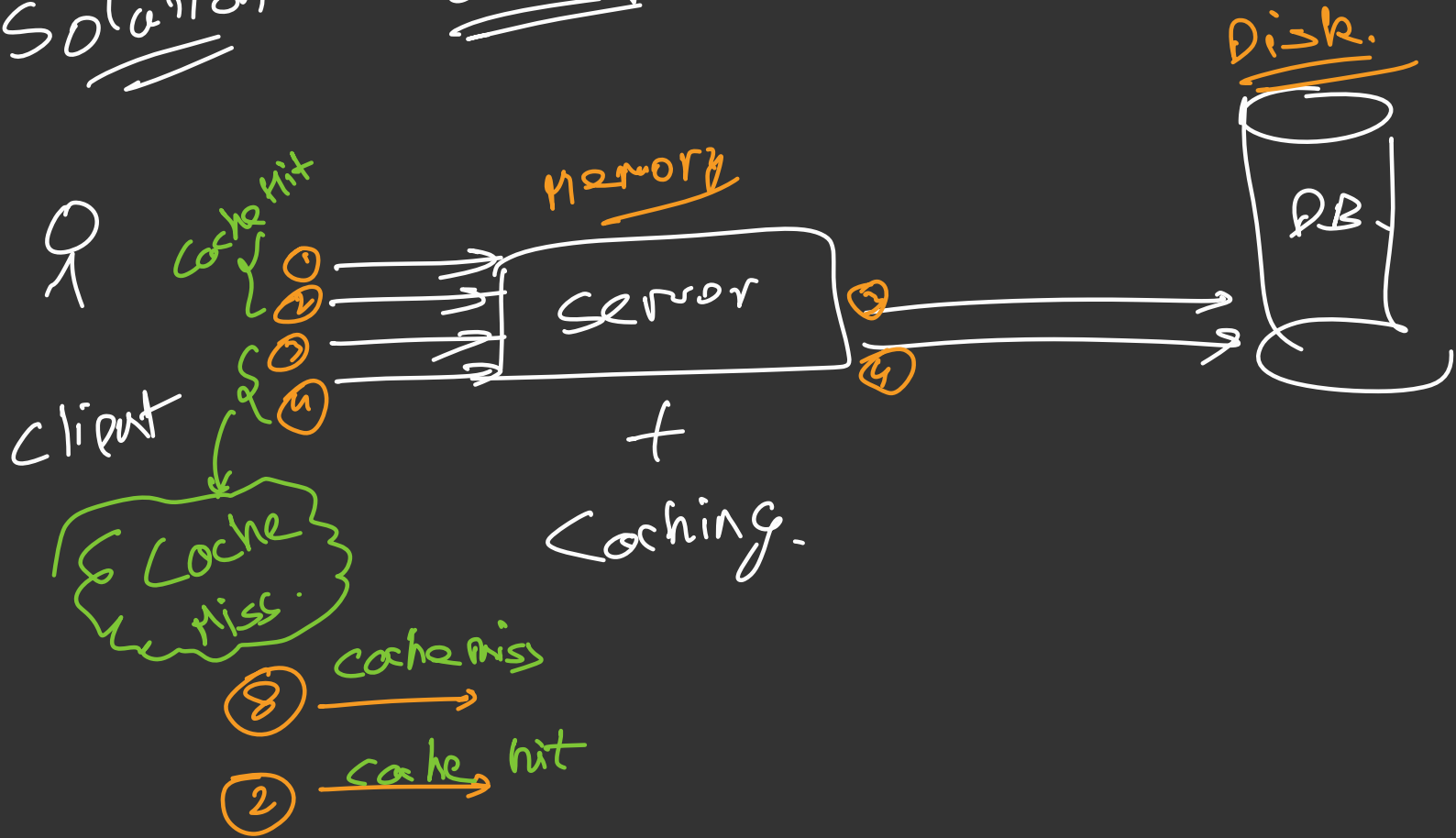


fig: Problem Statement (Caching)

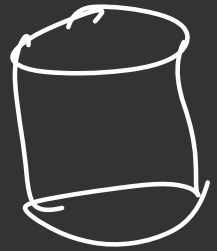
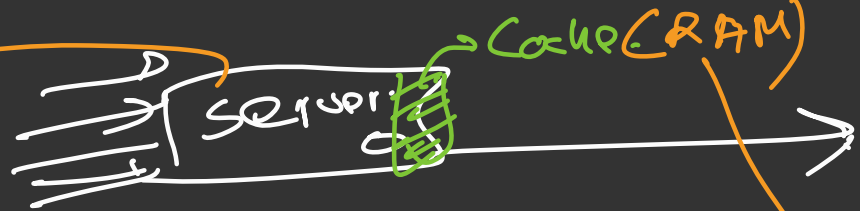
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# Solution: Caching

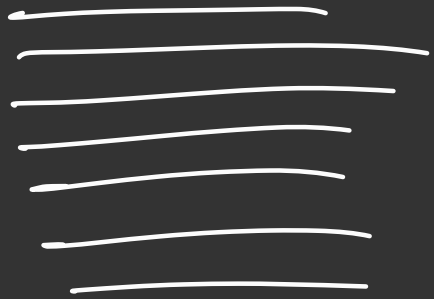
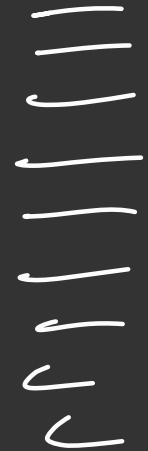


8GB RAM  
Ubuntu

i7  
256GB SSD



/ marks : student Id



1	450
2	500
3	550
4	600
5	

3

Cache hit

Cache miss

# Caching

Caching is the process of storing a copy of frequently accessed data in a temporary, high-speed storage location (a "cache"). (The goal is to make future requests for that same data much faster.)

Limited Memory



# Redis

key, value.

Redis (short for REmote DIctionary Server) is an open-source, in-memory data store.

Cache. (+) Performance (+) Cost ↓

Database. → NoSQL

↓  
key - value

name → Palan's

address → A3 DS Telf.

{  
:  
:  
}

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# Cache Eviction

Cache Eviction is the automatic process of removing data from the cache when it is full to make space for new items.

# Cache Invalidation

Cache Invalidation is the deliberate process of removing an entry from the cache because the original data in the main database (the "source of truth") has changed.