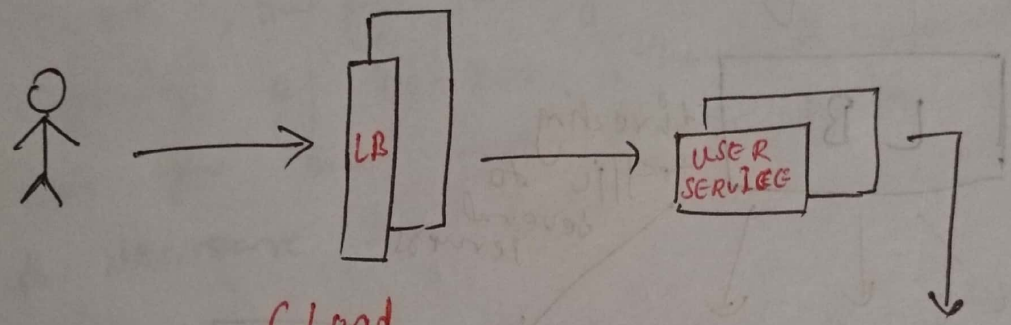
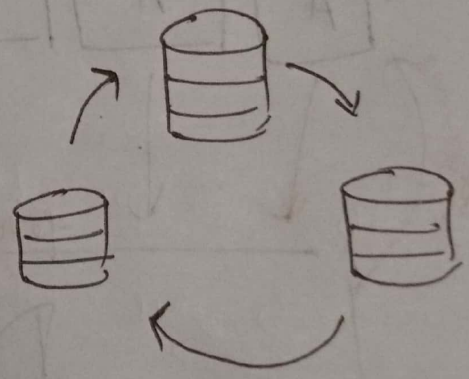
→ Overview of LLD, HLD

- High level design (HLD) is a general system design
  1) Selection of components, platforms, different tools.
  2) Database Design
  3) Brief description of relationships b/w services & modules.



(Load Balancer)

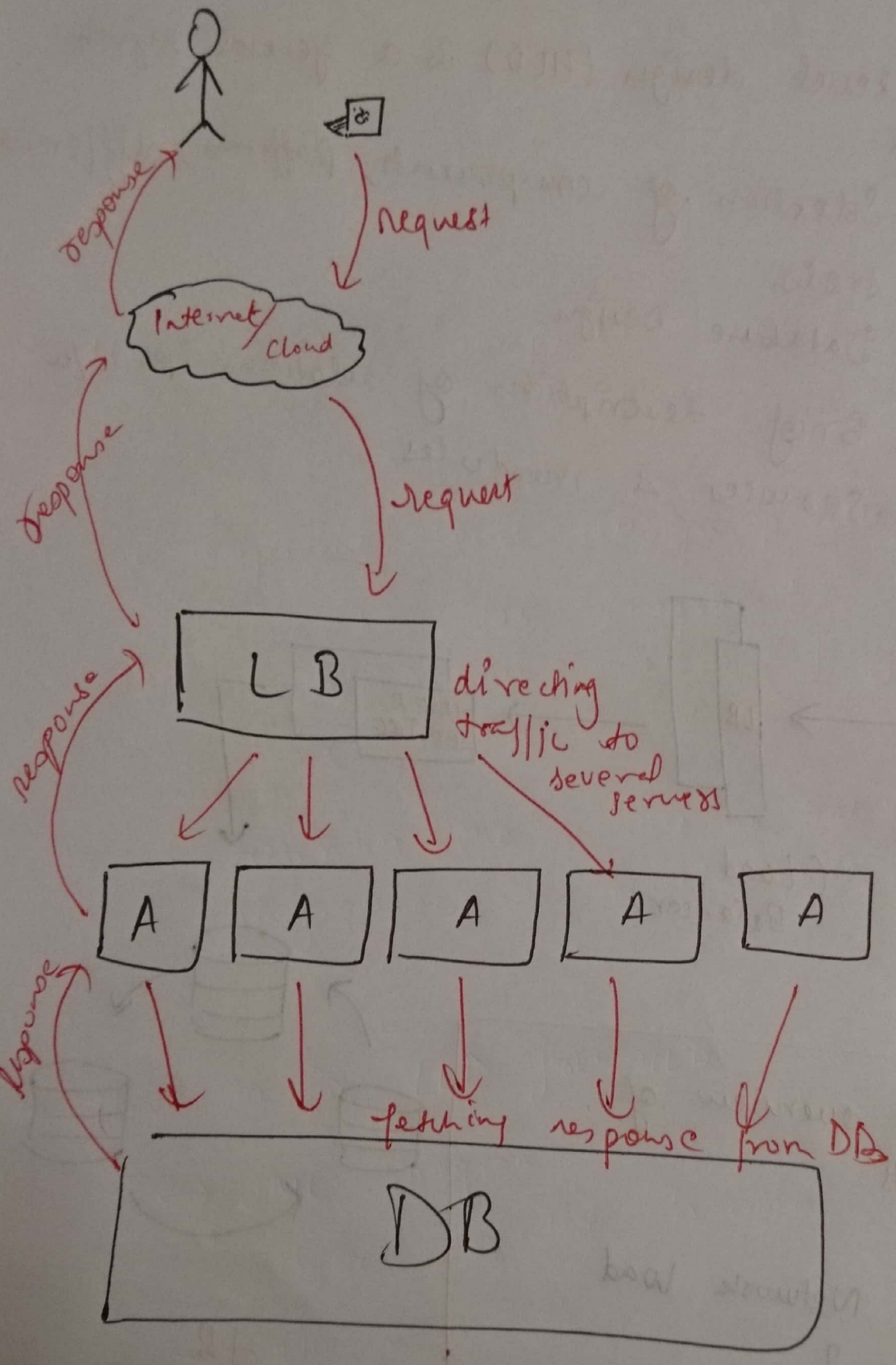


dB

* HLD gives overview of components

* What is Network load Balancer ?

⇒ for eg. you have a website



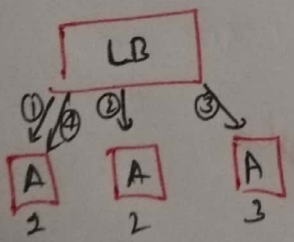
- Consider if your website has one user then 1 server without load Balancer would work, if user increases to 100 then also it would work.

But if it increases to 10,000 you would need more servers, but the question will be how, to direct which user to which server. that is where (LB) comes. It divides the comming traffic to different servers so that there is not heavy loads on each server.

Suppose if one server is functioning at capacity of 20-25%. then it would turn it off & distribute it in other, it will reduce cost, but if every server is working at capacity of 80-90%. then it would ask for one more server to be increased, to decrease the load.

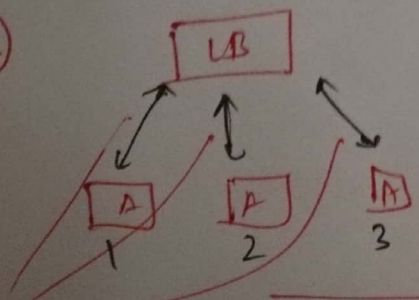
- There are three scenarios in which "LB" works

(1) round robin scenari



user 1: ①
user 2: ②
user 3: ③
user ④: ④

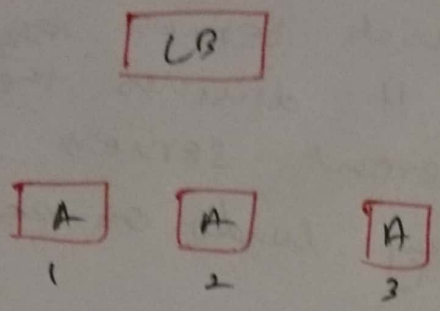
(2) Smart balancer



Constantly monitoring how much which server is having load

in this there is a tool for measurement b/w server & LB, so when a new user comes in, it checks which server is least busy & sent user to it

(3)



Some what b/w
(1) st scenario
& (2) nd scenario.

* LLD works at component level & it gives design at component level

- component level design process
- describes class diagram with methods & relations b/w classes & program specs
- describes the module so that the programmer can directly code from the document

* How to for LLD from HLD

→ UML Diagram
→ Object oriented Principle
→ SOLID principles