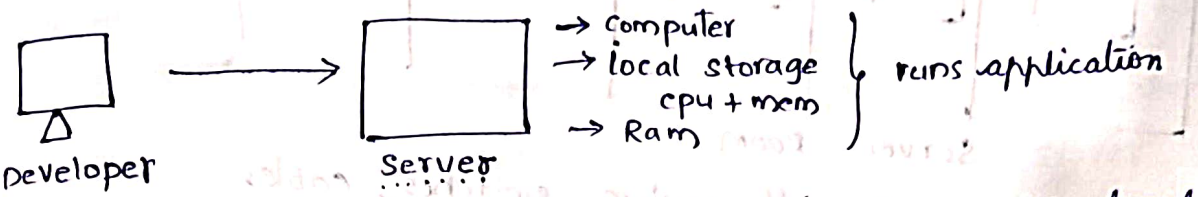
DAY - 1

UNDERSTANDING CLOUD CONCEPTS, VOCABULARY AND TECHNOLOGY TERMINOLOGY

* Repo for this class is available on "https://github.com/iam-veeramalla/Azure-zero-to-hero"

→ Cloud :- Before talking about cloud, we will see.



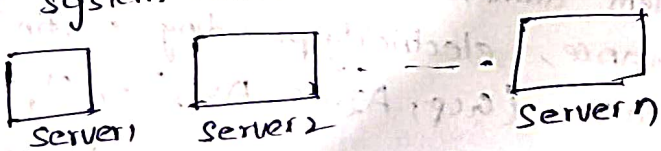
when a developer develops code, it will be in his local, he has to deploy the app in the server, so that users can access. unlike the advanced features of a laptop we use, it has cpu, mem, storage to run applications.

10 years Back → google / yahoo → they used to have dedicated system administration team whose responsibility is to procure these servers..

Even now, IBM / hp sell these servers.....

for example, 10 years back, google has multiple products like gmail, G suite...

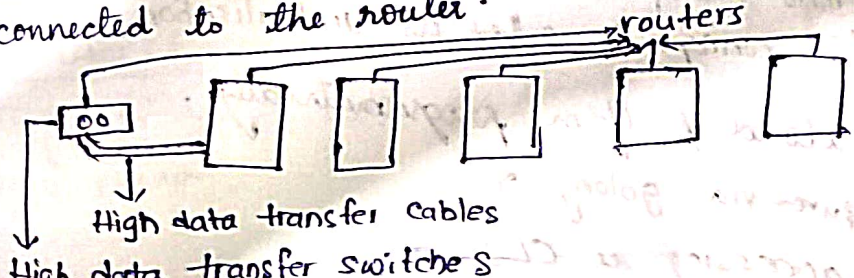
→ The system administrators in google used to maintain multiple servers



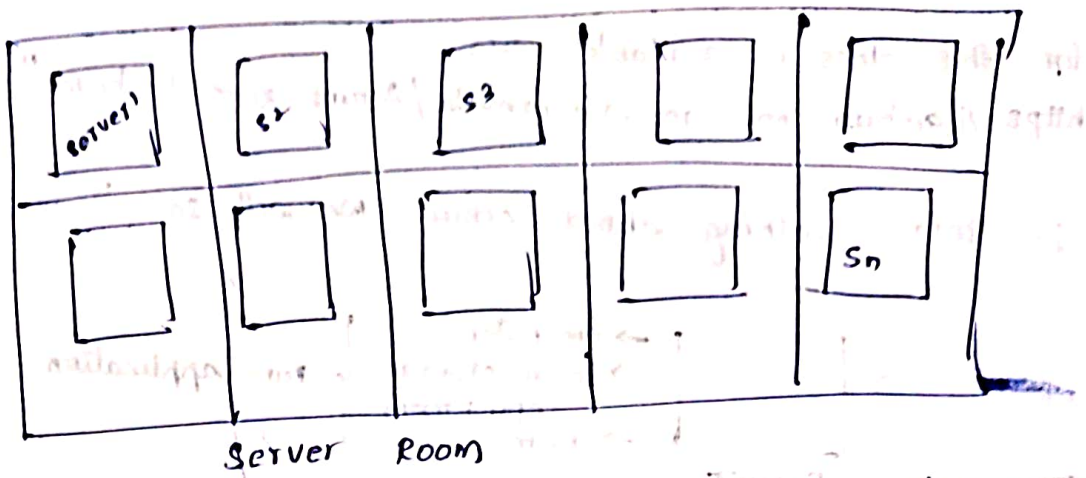
So, when people searches for www.google.com, Response is not as fast as we see it now, it was late..

~~the servers~~

→ The system administrators used to connect the servers to high data transfer cables & switches & from there all the servers get connected to the router.



These servers are used to placed in racks by system administration team



Racks

Server Room

→ They are connected with routers, switches, cables.
→ This entire setup is called as "Data center".

Let's say, it is google Data center, Developer x is from google.

Developer X wants to deploy an app on one of the servers which is of their own, then system administrator will check on which server is free & matches Requirement of a ~~server~~ developer, then he will give the server details.

This is called as "private cloud"

→ AWS from Amazon offers datacenters which is Amazon's own. we can Request vm from AWS, this usage is called public cloud

→ This resolves prblm like system admins have to take care of private cloud servers, maintainance, electricity providing continuously.
→ public cloud came into picture. (Gcp, Azure, Aws) → cloud providers
→ The company which uses public cloud, also has private cloud (on-premise) Data center is called hybrid cloud.

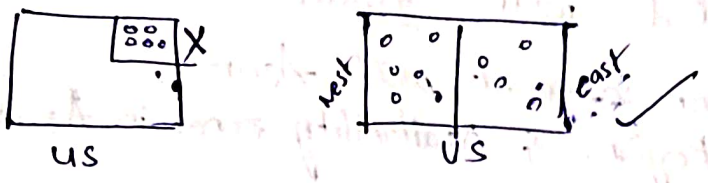
Virtualization :- Installing Hyperrisor on a server, then that server logically isolated into multiple servers, the each server is called as virtual machine. This concept is called as virtualization.

API :- Accessing the cloud platform programatically.

Eg:- Accessing Azure via golang code.

The other way of accessing is CLI.

Regions :- installing datacenters in multiple regions across the world.

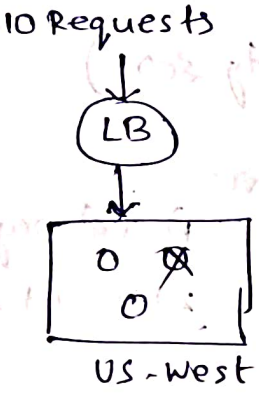


If East side goes down, west should be up & running.

Availability zones :- Data center is also called as Availability zone.

scalability :-

Load balancer :- when users accessing app increases, app shouldn't go down or, go slow, we put LB before accessing server..



LB sends 5 requests to one vm, 5 to other if one of the 3 is down. In that way, LB works.

Scalability :- make your applications scalable. means, in the above example one of the vm down means, 1 million Requests coming to the app means, the LB automatically deploys the app in vm4, vm5, it creates automatically, this is called Auto scaling.

→ If we do the same process manually, it is called manual scaling.

→ Autoscaling is also called as Elasticity

High availability :- make your application highly available. make it available most of the times. Eg :- Instagram is available most of the times, rarely it goes down. irctc app night times, it won't work properly.. it is not highly available.

Disaster Recovery :- (DR) → It is a planfaction if something goes wrong. If app is down, we should have Backup plan to make it up & running.