Unit-5

1) Cloud Components:

Client:

Mobile, terminals, Computers, Laptop

Benefits:

* Lower hardware costs.
* Lower IT costs
* Security
* Data Security
* Less power consumption
* Easey of repair or replacement
* less noise

Data Centers:

* Collection of Servers, where the application is housed.
* It could be in large room in the basement of your building

Virtualizing Servers:

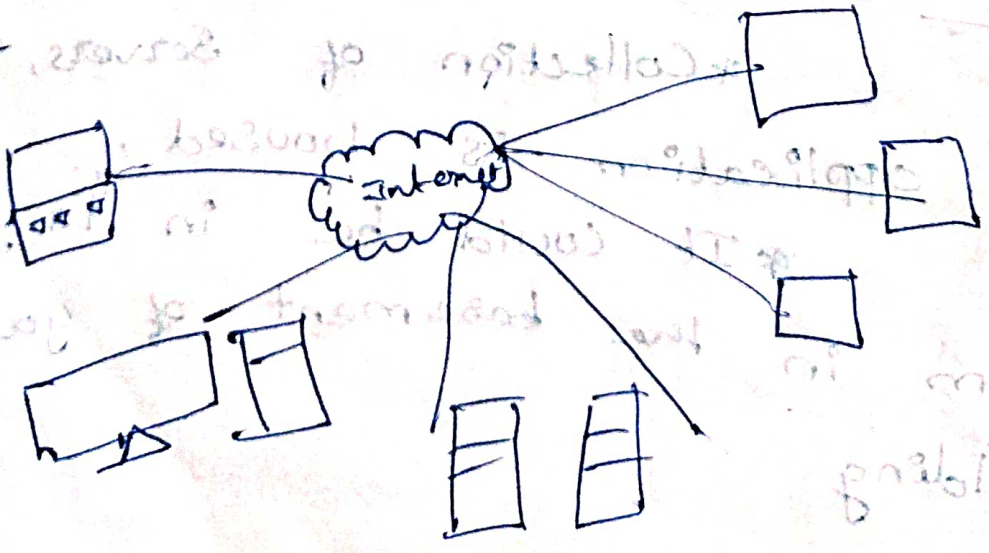
* Software can be installed in the multiple instances of virtual. Servers. and a dozen of virtual Servers can run on one physical Server

Distributed Servers:

* these type of Serevers can be in geographically disparate locations. -

* If Something happen at one site, causing a failure. Service can be accessed through another site

* If cloud needs more hardware then they can add them at another Site



Pros :

* Lower Computer costs
* Improved performance - runs faster
* Reduced Software cost
* unlimited storage
* Pay for use
* Easier group collaboration
* Data relability

Cons:

* It requires a constant Internet connection
* features might be limited
* Stored data might not be secure
* Does not work well low-speed connections.

2) Cloud Deployment models:

* Cloud deployment models are refers to the location and management of the Cloud infrastructure

* Cloud models is classified into four different types. they are

* private cloud
* public cloud
* community cloud
* Hybrid cloud.

*public Cloud:

* The Cloud infrastructure is made available to the general public.

* It is owned by an organization selling cloud services.

* public cloud is a huge data centers that offers the same services to all its users.

* Pay for what user use
* Good for application development testing and deployement

*Private cloud:

* The cloud infrastructure is operated and organized by a single organization
* Data is highly secured when compared to public cloud
* It organizations use a private cloud

Cons of PC:

* Highly investment.
* cost effective
* old processes are not suitable.

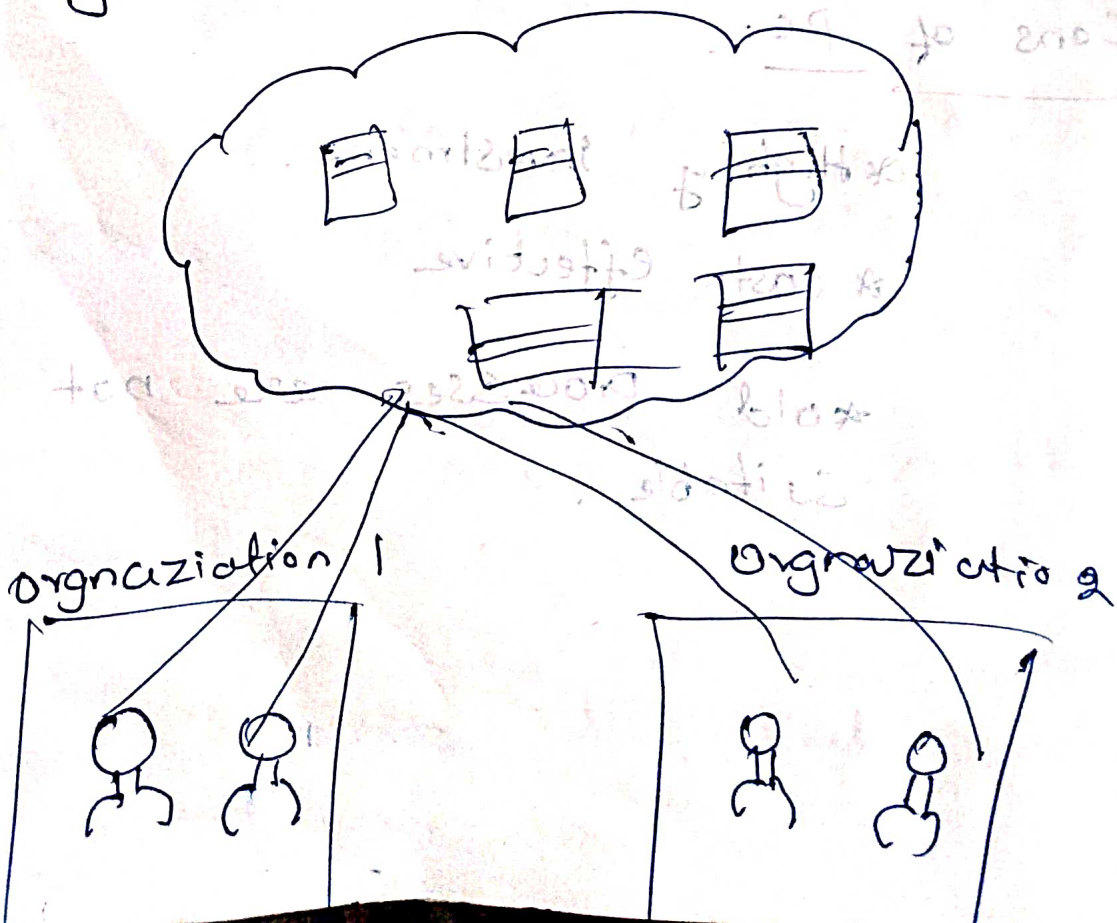
* Community Cloud:

* This cloud infrastructure is shared by several organizations.

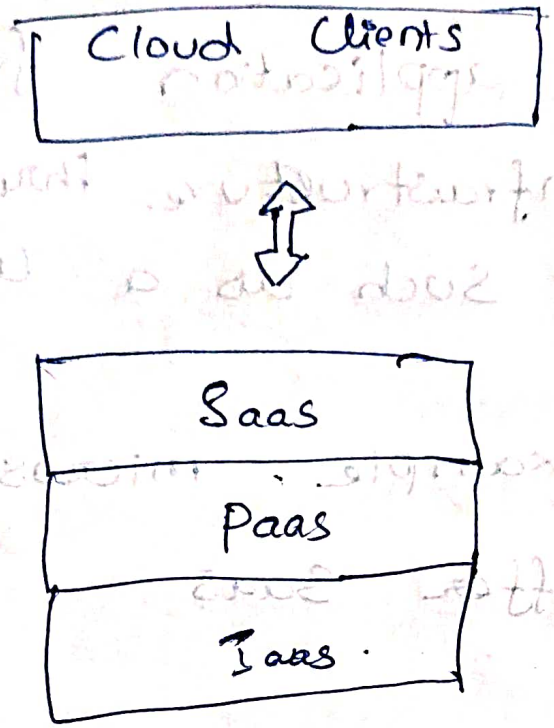
* It may be managed by the organizations or a third party.

* Hybrid Cloud:

* The cloud infrastructure is a composition of two or more clouds, that enables data sharing



3). Cloud Services models:



Saas:

* Saas is known as Software as a Service

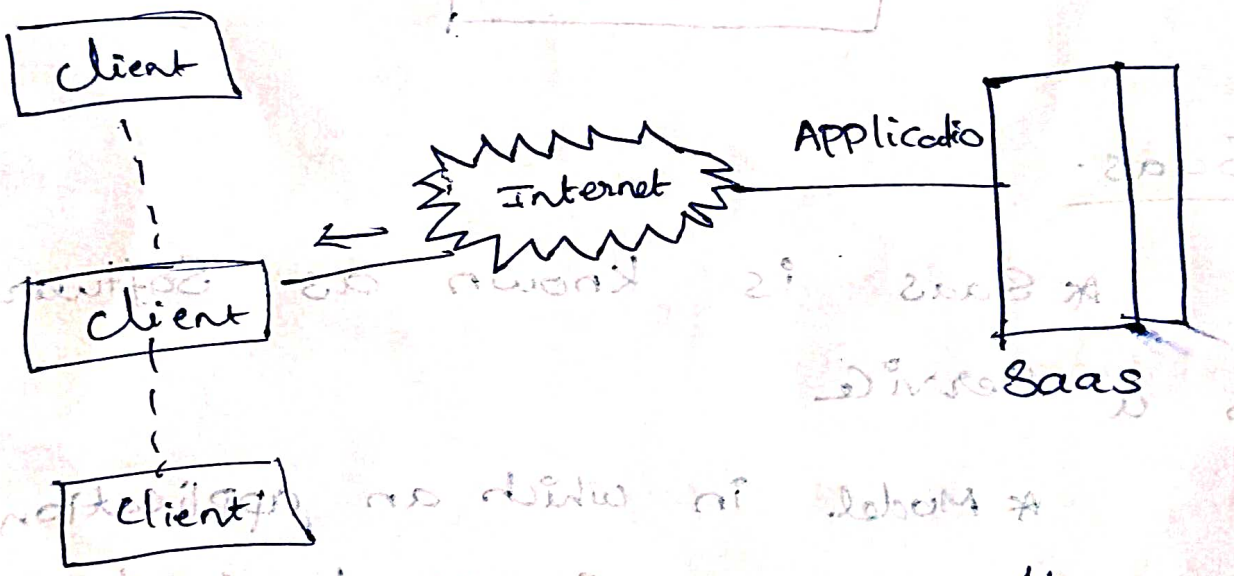
* Model in which an application is hosted as a service to customer who access it via the internet

* The service provider does all the patching and upgrades as well as keeping infrastructure running

* In traditional model of Software distribution, in which Software is purchased and installed on computer

* In modern model of Software distribution, User, Client or Consumer runs an application from a cloud infrastructure through an interface such as a web browser

* for example microsoft, google, zoho. offer Saas



* User can access the Software applications via remotely.

* you only pay for what you use

* Easier administration and invoicing

Paas :

* Paas is also known as platforms as a Service

* platform as a Service is an another application delivery model and also known as Cloud-ware.

* It supplies all the resources required to build applications and services completely from the Internet, without having to download or install software

* Paas is closely related to Saas.

* Service includes: Application design, development, testing, deployment and hosting, team collaboration, web service integration, database integration, Security, versioning etc.

* Pay contractry to billing

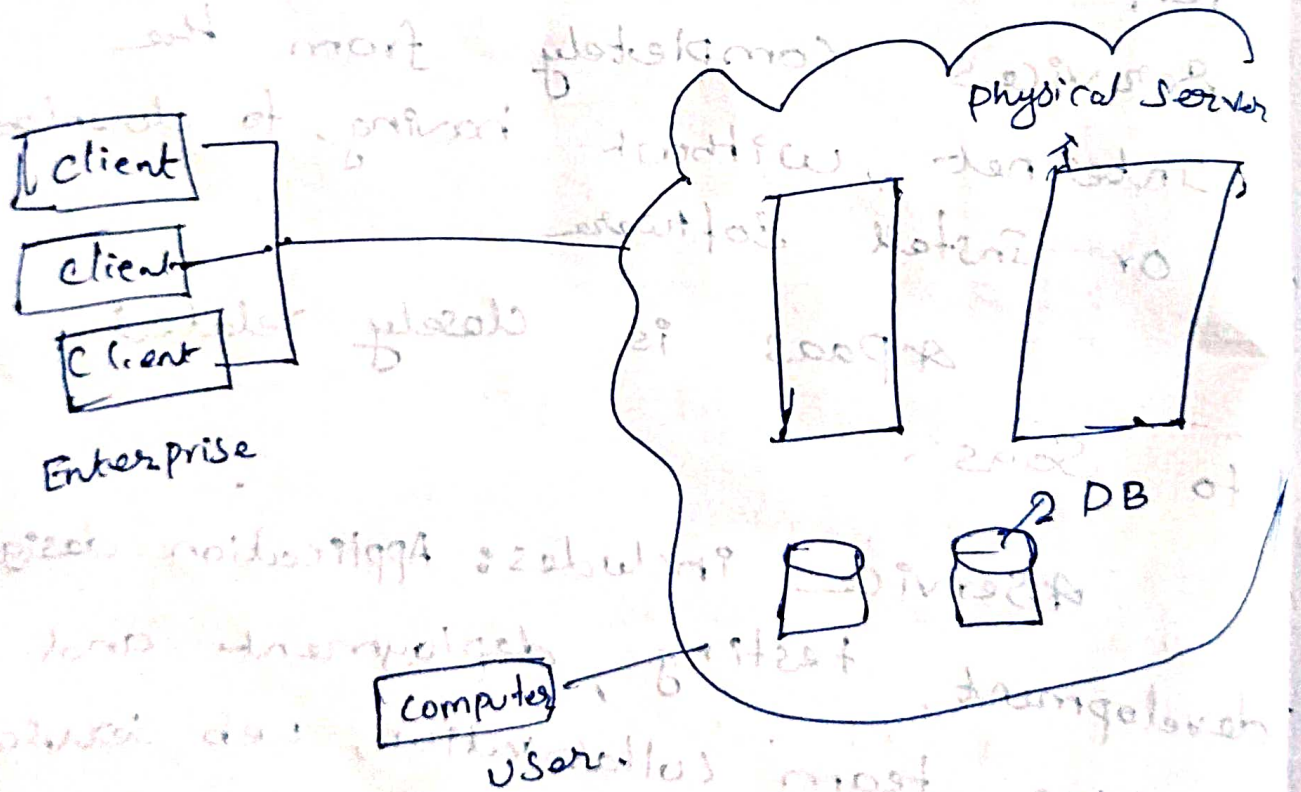
* Eg: aws, azure, goggle cloud.

Iaas:

* Iaas is also known as Infrastructure as a Services.

* Iaas gives the storage room to store data's.

* The storage centers are known as data center's



* Highly cost effective,

for constructing Iaas physical Server, Dedicated virtual Server, Shared virtual Server

Cloud Services and platform:

- aws
  - EC2 Instances.
  - maria DB
  - Lambda
  - AMI
  - Aws storage.
- azure.
  - App Servic
  - Azure Quantum
  - kubernetess.
  - Cosmos DB.
  - Azure SQL.
  - Virtual machine.

Google Cloud:

- gmap
- Firestore
- NLP.
- kuip
- CDN
- storage.