(courses -> A 3-900 -> billing, security & summary centre concepts)

which provides on demand services.

Scalability => It is the ability to scale, It is a process of allocating (+) or deallocating (-) resources -> Hor / Ver => [illegible] limited / [illegible] unlimited

Elasticity => Automatic scaling / ability to scale dynamically
user workload typical app during the day
↓
it changes as the day progresses -> properly designed systems will alloc / de-alloc resources whenever need it

agility => cloud — seconds, minutes, hours; on-prem — days, weeks
↓ ability to react quickly
↓ ability to allocate & deallocate resources quickly

fault tolerance -> ability to remain up & running during component & service failures

cloud
- public — services are offered over the internet
- private — restricted / constrained / data security, avail in diff location
- hybrid → allowing data & application to be shared b/w them
  ↓ public + private

cloud → provides services / which can be used over internet

Benefits :- high availability
scalability

Capital Expenditure [CapEx] :- up-front spending of money on physical infrastructure & then deducting that up-front expense over time
* Has a value that reduces over time

Operational Expenditure [OPEx] :-
is spending money on services or products now, & being billed for them now
* you can deduct this expense in the same year you spend it.
* No up-front cost

CC is a consumption-based model
⇒ No upfront costs
⇒ no need to purchase & manage costly infrastructure
⇒ ability to pay for additional resources when they are needed
⇒ ability to stop paying for resources that are no longer used

IaaS (infrastructure-as-a-service):-

* is the closest to managing physical servers
* a cloud provider will keep the hardware up-to-date, but O.S maintenance & network config is up to you as the cloud tenant.

Advantage:-

⇒ rapid deployment of new compute services.

Paas (Platform as a service):-

* managed hosting environment
* this C.P manages VM's & network resources
* cloud tenant deploys their applications onto the managed hosting environment

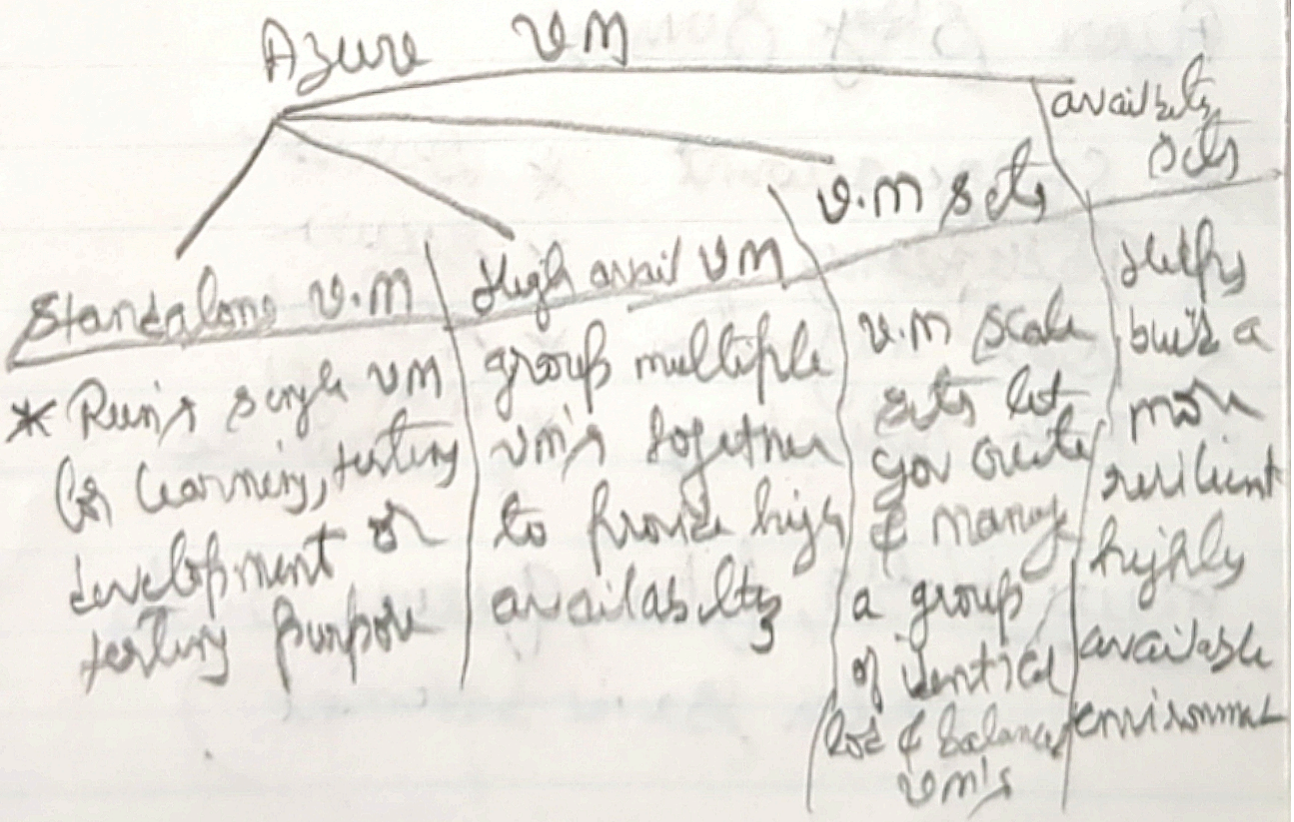
SaaS (software as a service):-

* manages all aspect of the application environment, such as VM's, network resources, data storage & application
* cloud tenant only needs to provide their data to the application managed by the cloud provider

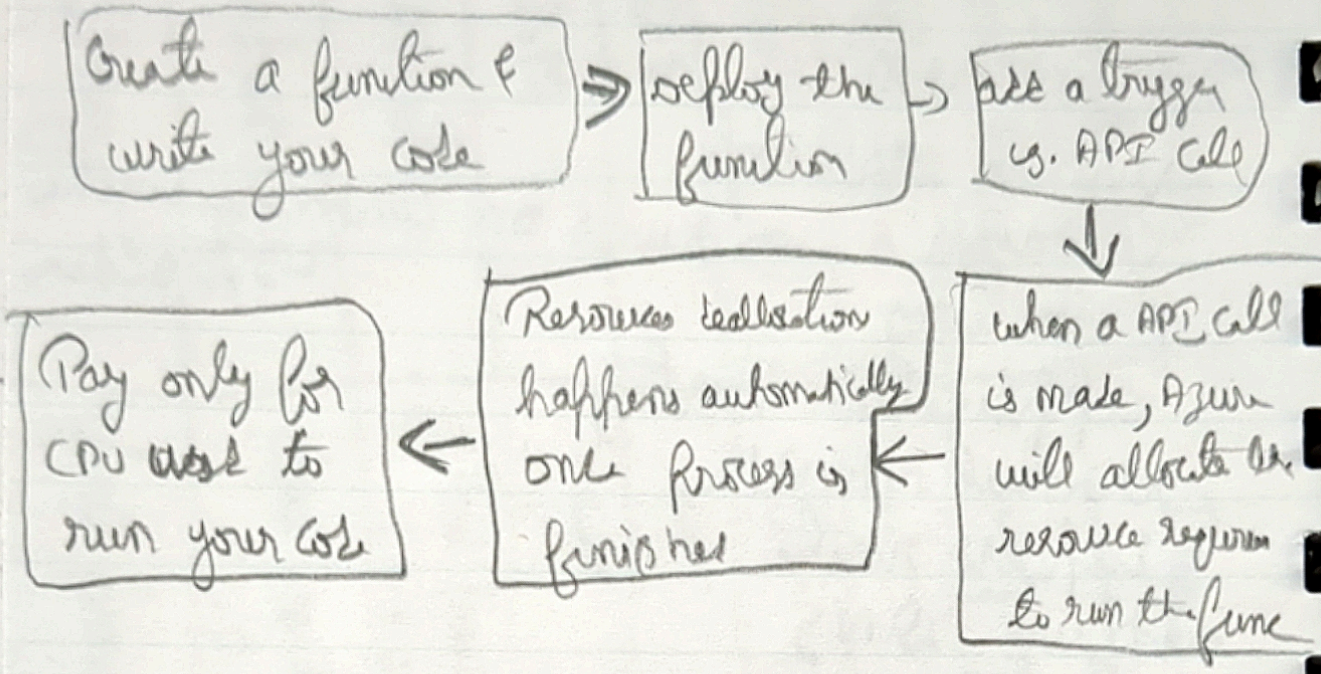
on-premises (Private cloud)	IaaS	PaaS	SaaS
Data & users	✓ (managed by you)	✓	✓
application	✓	✓	C.P.S
Runtime	✓	C.P.S	C.P.S
O.S	✓	C.P.S	C.P.S
V.M	✓	C.P.S	C.P.S
Compute	Cloud provider manage (C.P.S)	C.P.S	C.P.S
Networking	Cloud provider manag. (C.P.S)	C.P.S	C.P.S
Storage	Cloud provider manage	C.P.S	C.P.S

Azure compute & networking services

→ Azure VM
Virtual desktop
Containers → runs on container engine
↳ Docker
Functions
application hosting
Virtual network
Express route
Azure DNS



Azure functions:



Azure Storage Services:

* Storage account
* Redundancy
* Data migration
* File redundancy
* Durable
* Secure
* Scalable
* managed
* accessible

Azure blobs, files, queues, disks
(refer browser bookmark)