Class-1 28/1/25

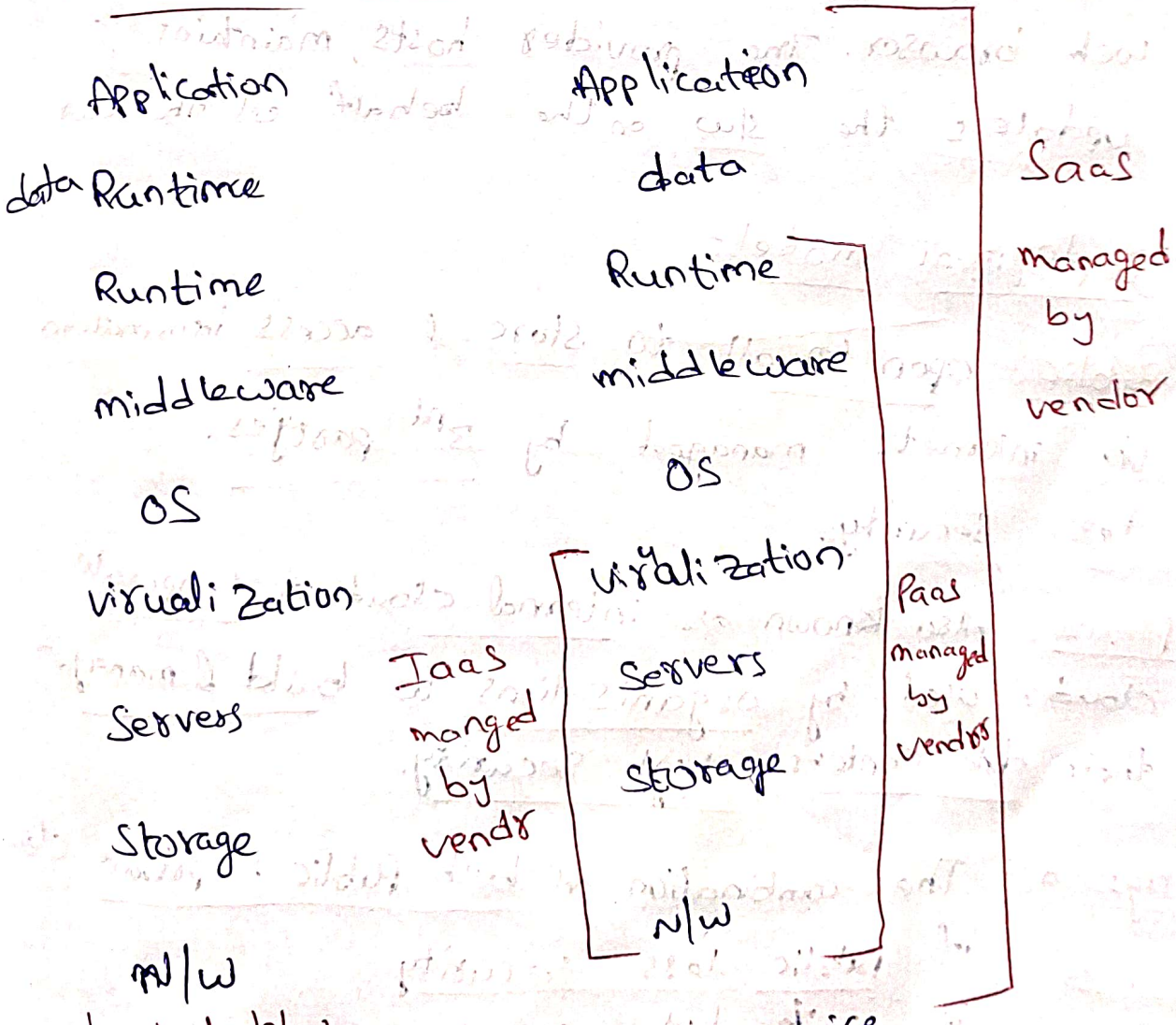
1) what is cloud computing

It is the delivery of computing services like servers, storage, database, n/w & s/w

It is the processing of accessing the data or application via the internet.

2 types of CC:- 1) service model
2) Deployment model

1) service model:-



Iaas - Infrastructure as a service
Paas - Platform as a service
Saas - Software as a service

IaaS :- The cloud provider offers virtualized computing resources such as virtual machine, storage, & n/w to customers. used for infrastructure provisioned & managed over internet.

PaaS :- This model provides a platform for developers to develop, run and manage their own applications without having to worry about the underlying infrastructure

SaaS :- This model abstracted cloud computing type delivering fully functional s/w applications via the internet. Users access these applications through web browser. The provider hosts, maintains & updates the s/w on the behalf of the user.

2) Deployment model :-

Public :- open to all to store & access information via internet. managed by 3rd party's.
less security.

Private :- Also known as internal cloud or corporate cloud. used by organisations to build & manage their data centers. high security.

Hybrid :- The combination of both Public & private clouds
if public less security.
if private high security.

Community cloud :-

It allows multiple organizations to use same cloud to store their data.

Advantages of AWS :-

→ Automated multi-region backups
→ Streamlined disaster Recovery
→ Security
→ pay-as-you-Go pricing
→ Simple automated scheduling
→ customization
→ Third-party APIs
→ Speed and agility
→ excellent customer support.

Steps to create AWS Account :-

Step-1 Get the link enter mail id & name

Step-2 we have to provide our contact information

Step-3 we have to provide our billing information

Step-4 Confirm your identity

Step-5 In this step we have to select type of the Account.

Steps to create EC2 Instances :-

Step-1 choose Amazon machine image (AMI)

→ AMI is a template that consists of sw Config (os, application server, application)
→ AMI ID which is region Specific. we can buy, sell, share the AMI's (use free tier AMI's only)

Step-2 : Choose Instance type

→ providing CPU & memory

→ Select instance under free tier

→ t2 micro instance have (1CPU & 1GB)

→ total instance families are 90

Step-3 Configure your instance

→ Configure the instance to suit your requirements you can launch multiple instance from same AMI, take advantages of lower pricing, assign access management role to the instance & more.

→ we need to Configure all your instance details like no of instances, Subnets, Vpc, IAM role, tenancy & all other.

Step-4 Add Storage

→ TO Store the data in server we use Ebs Volumes

→ ebs means elastic block storage

→ for Single server we can use multiple ebs volumes

→ OS run on ebs volume.

→ free tier eligable Customer can get upto 30gb of EBS general purpose.

Step-5 Add tags

→ you can give name to your instance

Step-6 Configure Security grp.

→ A Security grp is set of firewall rules that control the traffic for your instances

→ These are region & n/w specific
→ the port range is 0 to 65535.
→ It deals with the inbound & outbound traffic.

step-7 Review & launch.

→ At the last step we need cross verify the details of an instance & then proceed to launch the Instance.

Server :- Servers are computers that run services to serve the needs of other computer (ie to provide services) These servers uses various purposes like hosting, websites, running applications, storing & managing data.

Types of Servers :-

→ webserver (Apache, Nginx, IIS (Internet Information Service), GWS (google web server))
→ Application server (Apache Tomcat, IBM webSphere, F5 Nginix)
→ DB Server
→ email Server
→ FTP Server
→ file server
→ proxy Server
→ Streaming Server
→ IRC Server (Internet relay chat)
→ fax server.

Virtual Machine :- A vm is a program on a computer that works like it is a seperate computer inside the main computer.

vm functions as a seperate and isolated computer with its own OS, Storage & n/w resources.

Types of vm's
- → System vm's
- → Process vm's

What is EC2?

→ elastic compute cloud is a web service that provides Security & Resizable compute capacity in the cloud which is designed to used by developers easier.

→ It is one of the services provided by the aws which we can use it launch instances on different os.

→ To launch EC2 Instance there will be 7 steps needs to be perform.

Step-1 AMI (OS)

Step-2 Instance Type (Ram & CPU's)

Step-3 network configurations

Step-4 Storage (EBS volume)

Step-5 Name Tags

Step-6 Security configuration

Step-7 Review & launch