

Aim:-

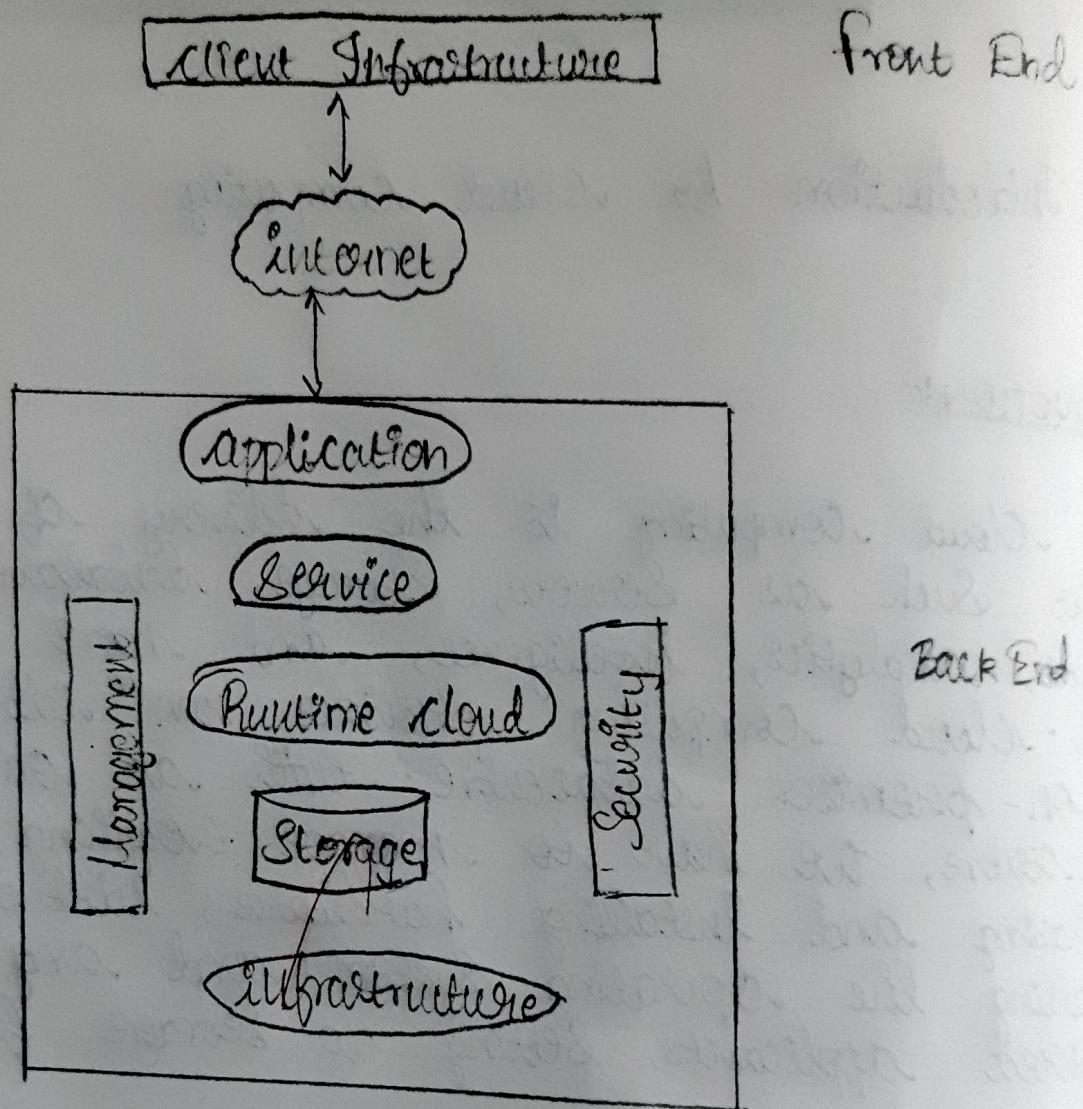
Introduction to cloud computing

INTRODUCTION:-

Cloud computing is the delivery of computing services such as servers, storage, databases, networking software, analytics, intelligence, and more over the cloud. Cloud computing provides an alternative to the on-premises datacentre. With an on-premises datacentre, we have to manage everything, such as purchasing and installing hardware, virtualization, installing the operating system and any other required applicants, setting up storage for data.

After doing all the set-up, we become responsible for maintaining it through its entire lifecycle. But if we choose cloud computing, a cloud vendor is responsible for the hardware purchase and maintenance. They also provide a wide variety of software and platform as a service. We can take any required services on rent. The cloud computing services will be charged based on usage.

Architecture:



ARCHITECTURE OF CLOUD COMPUTING:-

As we know, cloud computing technology is used by both small and large organizations to store the information in cloud and access it from anywhere at anytime using the internet connection. Cloud Computing architecture is a combination of service-oriented architecture and event-driven architecture. It is divided into ~~two~~ the following two parts:

1. Front end
2. Back end

1. Front End: The front end is used by the client. It contains client-side interfaces and applications that are required to access the cloud computing platforms. It includes web servers like & fat clients, tablets and mobile devices.

2. Back End: The back end is used by service provider. It manages all the resources that are required to provide cloud computing services. It includes a huge amount of data storage, security mechanism, virtual machines, deploying models, servers, traffic control mechanisms, etc.

TYPES OF CLOUD COMPUTING:

Cloud computing can be categorized into the following types:

1. Public cloud
2. Private cloud
3. Hybrid cloud
4. Community cloud
5. Multi-cloud

1. Public cloud :- Public cloud computing is provided by third party service providers over the internet. It allows multiple organizations or individuals to access and use shared computing resources such as virtual machines, storage and applications.
2. Private cloud :- Private cloud is dedicated to a single organization and is either hosted internally within the organization's own interface or externally by a third party provider. These are often used by organizations with strict data privacy and security requirements.
3. Hybrid cloud :- Hybrid cloud computing combines both public and private cloud infrastructure. It allows organizations to leverage the benefits of both environments by integrating their on-premises infrastructure with public cloud resources. This

Approach offers flexibility, Scalability and the ability to choose the most suitable environment for different workloads or data.

4. Community Cloud:- Community cloud computing is shared among multiple organizations with similar interests or requirements. It is designed to meet the specific needs of a particular community such as healthcare providers, government agencies or research institutions. The infrastructure and services are shared while ensuring compliance with specific regulations or standards.

5. Multicloud:- Multicloud refers to the use of multiple cloud service providers to meet an organization's computing needs. It involves using different cloud platforms or services for different purposes, such as leveraging the strengths and capabilities of each provider or avoiding vendor lock-in.

