**1.what are different models which is available in cloud computing ?**

**1. service models :**

Cloud computing services offer shared resources such as servers, databases, and networks via the internet.

* Software as a Service (SaaS),
* Infrastructure as a Service (IaaS), and
* Platform as a Service (PaaS)

**2. deployment models :**

Cloud Deployment Model functions as a virtual computing environment with a deployment architecture that varies depending on the amount of data you want to store and who has access to the infrastructure.

* [Public Cloud](https://www.geeksforgeeks.org/difference-between-public-cloud-and-private-cloud/)
* Private Cloud
* [Hybrid Cloud](https://www.geeksforgeeks.org/public-cloud-vs-private-cloud-vs-hybrid-cloud/)
* Community Cloud

**2.What are the service models in cloud computing ?**

1. **Software as a Service (SaaS) :**

* *It is a way of delivering services and applications over the Internet. Instead of installing and maintaining software, we simply access it via the Internet, freeing ourselves from the complex software and hardware management. It removes the need to install and run applications on our own computers or in the data centers eliminating the expenses of hardware as well as software maintenance*.
* without any downloads or installations required. The SaaS applications are sometimes called **Web-based software, on-demand software, or hosted software**

**Advantages of SaaS :**

* **Cost-Effective:** Pay only for what you use.
* **Reduced time:** Users can run most SaaS apps directly from their web browser without needing to download and install any software. This reduces the time spent in installation and configuration and can reduce the issues that can get in the way of the software deployment.
* **Accessibility:** We can Access app data from anywhere.
* **Automatic updates:** Rather than purchasing new software, customers rely on a SaaS provider to automatically perform the updates.
* **Scalability:**It allows the users to access the services and features on-demand.

**Disadvantages of Saas :**

* Limited customization
* Dependence on internet connectivity
* Security concerns
* Limited control over data

**Example:**

Restaurant , Google search

1. **Infrastructure as a Service (IaaS) :**

* IaaS is a service where infrastructure is provided as outsourcing to enterprises such as networking equipment, devices, database, and web servers.
* IaaS customers pay on a per-user basis, typically by the hour, week, or month. Some providers also charge customers based on the amount of virtual machine space they use.

**Advantages of IaaS:**

* Cost-Effective
* Website hosting
* Security
* Maintenance

**Disadvantages of laaS :**

* Limited control over infrastructure
* Security concerns
* Limited access

**Example :** licenced s/w and uber , ola

1. **Platform as a Service (PaaS ) :**

* *[PaaS](https://www.geeksforgeeks.org/platform-as-a-service-paas-and-its-types/) is a category of cloud computing that provides a platform and environment to allow developers to build applications and services over the internet. PaaS services are hosted in the cloud and accessed by users simply via their web browser.*
* *A PaaS provider hosts the hardware and software on its own infrastructure. As a result, PaaS frees users from having to install in-house hardware and software to develop or run a new application. Thus, the development and deployment of the application take place****independent of the hardware****.*

**EXAMPLE :**

* To make it simple, take the example of an annual day function, you will have two options either to create a venue or to rent a venue but the function is the same.

**Advantages of PaaS:**

* Simple and convenient for users
* application lifecycle.
* Efficiency**.**

**Disadvantages of Paas:**

* Limited control over infrastructure
* Dependence on the provider
* Limited flexibility

**3.What are the deployment models in cloud computing ?**

### ****Public Cloud****

* The public cloud makes it possible for anybody to access systems and services
* For example, Google App Engine etc.

### ****Private Cloud****

* The private cloud deployment model is the exact opposite of the public cloud deployment model. It’s a one-on-one environment for a single user (customer).
* For example,  organization’s IT department

### ****Hybrid Cloud****

* By bridging the public and private worlds with a layer of proprietary software, hybrid cloud computing gives the best of both worlds.
* Organizations can move data and applications between different clouds using a combination of two or more cloud deployment methods, depending on their needs.

### ****Community Cloud****

It allows systems and services to be accessible by a group of organizations. It is a distributed system that is created by integrating the services of different clouds to address the specific needs of a community, industry, or business

1. what are the benefits of cloud computing ?

