Que 1. What is SaaS?

Ans-

SaaS or Software as a Service is the most popular and commonly used model out of the big three cloud computing models. SaaS is a method of delivering software and applications over the internet as a service via a subscription model. Instead of purchasing and installing software on individual computers or servers, users access the software and its features through a web browser or app on their device, paying for it on a subscription basis.

SaaS is much better compared to our traditional software model because in traditional software models users would have to manage, install and upgrade software themselves on local servers or computers. With SaaS you can provide a server for an instance in the cloud and in a couple of hours you will have your software or application ready to use. SaaS allows users to easily scale up or down the use of software applications based on their needs, without having to worry about maintenance, availability, performance, upgrades, or security. The provider takes care of all of these aspects, ensuring that users always have access to the latest version of the software, and that their data is secure and backed up. Therefore to use Saas, the user don't have to be a developer or an IT expert.

Some key examples- email services like Gmail, applications or tools on computer such as MS office or adobe creative cloud or music streaming service, project management tools like Asana.

Asana is a web-based project management tool designed to help teams manage and collaborate on tasks and projects more efficiently. It provides a centralized platform for teams to create and assign tasks, set deadlines, track progress, communicate, and share files. Asana's features include the ability to create project boards, assign tasks to team members, set due dates and priorities, add comments and attachments, track progress, and receive notifications and reminders. The tool is highly customizable, allowing users to create workflows and processes that fit their specific needs and requirements.

Que 2. What is Paas?

Ans-

Platform as a service or PaaS is a cloud computing model in which a third party provider delivers hardware and software tools usually those needed for application development, deploying, and managing web applications to users over the internet without the need for on-premises hardware or software. PaaS is like renting a car, you are not investing the time, money or customization into it like you would on a car you own, but you're still the one driving it and paying for gas.

In PaaS, the cloud issuer supplies users with a entire software development platform along with infrastructure, middleware, operating system, and other tools required for application development, testing, and deployment. Users can construct and deploy applications on PaaS platform using programming languages, frameworks, and other tools of their choice.

PaaS affords a vary of benefits, together with multiplied productivity, quicker time-to-market, decreased costs, scalability, and flexibility. Users can without difficulty scale their applications up or down primarily based on demand, except having to worry about underlying infrastructure or maintenance. PaaS additionally allows teams to collaborate and work on the identical codebase in a centralized environment.

Examples of popular PaaS providers are- Google App Engine, Microsoft Azure, and Amazon Web Services Elastic Beanstalk.

These platforms provide developers with a complete development environment, making it easy to build, test, and deploy applications on the cloud. They additionally provide a number of offerings such as databases, load balancing, and auto-scaling, which can assist developers build fairly scalable and dependable applications.

Google App Engine -

It is a PaaS platform that allows developers to build and deploy scalable web applications using Google's infrastructure. It supports many programming languages such as Python, Java, PHP, and Node.js, and provides various features such as auto-scaling, load balancing, and data storage.

Que 3. What is IaaS?

Ans-

Infrastructure as a Service or IaaS is a cloud computing model that offers computing infrastructure as a service over the internet. In this model, rather of purchasing and retaining physical hardware and software, customers can rent virtual computing resources such as servers, storage, networking, and operating systems from a cloud service provider.

IaaS providers usually offers a range of services, inclusive of virtual machine instances, storage services, load balancing, and network services. These services are typically provided on a pay-per-use basis, permitting users to scale up or down their computing resources as needed without having to invest in additional hardware.

IaaS is famous with groups of all sizes due to the fact it allows them to minimize capital charges and focal point on their core competencies, instead managing IT infrastructure. Additionally, IaaS can offer larger flexibility and scalability than traditional on-premise infrastructure, making it perfect for organizations that need to rapidly adjust their computing resources primarily based on demand.

Examples -

Amazon Web Services (AWS)- AWS provides a wide range of IaaS services, including Elastic Compute Cloud (EC2), Simple Storage Service (S3), and Elastic Load Balancing.

Microsoft Azure- Azure provides a range of IaaS services, including virtual machines, storage, and networking.

Google Cloud Platform (GCP)- GCP provides a range of IaaS services, including Compute Engine, Cloud Storage, and Cloud Load Balancing.

These providers offer a range of features and pricing options to suit different business needs, making it simpler for organizations to select the best fit for their infrastructure requirements.

Que 4. What is Iaac?

Ans-

Infrastructure as a Code or IaaC is a practice in cloud computing that includes managing and provisioning infrastructure via machine-readable definition files or code rather than through manual process. Essentially, it approves you to automate the method of building, configuring, and deploying your infrastructure, which can save time and decrease errors.

In cloud computing, IaC is typically implemented using configuration management tools like Chef, Puppet, or Ansible, or through infrastructure management tools like Terraform, CloudFormation, or Azure Resource Manager.

With IaaC, you can outline your infrastructure necessities in a file or script, which can be version controlled and easily shared with your team. This permits for easier collaboration and ensures consistency throughout environments. Additionally, it allows for the automation of infrastructure changes, such as scaling up or down, making it less difficult to manipulate and maintain your infrastructure over time.

Overall, IaC is an important practice in cloud computing that can help you streamline your infrastructure management, reduce errors, and enlarge efficiency.

Examples-

Puppet- Puppet is a configuration management tool that uses a declarative language to define the desired state of infrastructure. Puppet code is written in its own domain-specific language, which is designed to be easily readable and understandable by both technical and non-technical users.

CloudFormation- A tool provided by AWS that enables user to create and manage AWS resources as code. User can define and provision AWS infrastructure using JSON or YAML templates.

Ansible: A configuration management tool that can be used for infrastructure automation, application deployment, and task automation. Ansible uses YAML syntax for defining infrastructure.

Que 5. What is a Software?

Ans-

Software refers to a set of instructions or programs that tell a computer what to do. It consists of computer programs, data, and other supporting materials that enable a computer to perform specific tasks. Software can be divided into two categories: system software and application software.

System software includes operating systems, device drivers, and utility software, which helps manage and control computer hardware and provides a platform for application software to run on.

Application software, on the other hand, includes programs that are designed to perform specific tasks or solve particular problems, such as word processing, graphic design, accounting, and gaming.

Software is usually developed by software developers using programming languages such as Java, Python, C++, and many others. It can be installed on a computer or accessed online through web applications and mobile apps.