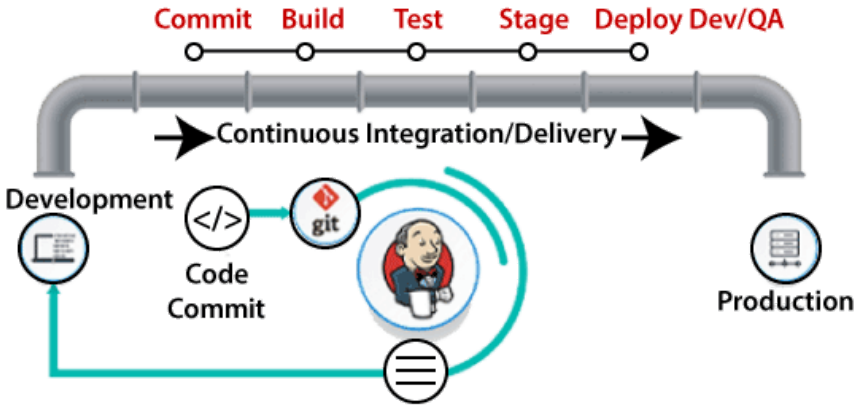
WEEK 1
DAY 1

1. What is the DevOps lifecycle ?

DevOps defines an agile relationship between operations and Development. It is a process that is practiced by the development team and operational engineers together from beginning to the final stage of the product.DevOps lifecycle includes seven phases as given below:

- **Continuous Development** : It involves the planning and coding of the project. The developer begins the code for the application. Version-control mechanisms might be involved.
- **Continuous Integration** : This stage is the heart of the Devops lifecycle. The developers are required to commit the source code more often. Every commit is built. Build also involves compile, unit test, integration test, code review and packaging this means the bugs/errors are detected at early stage.



- **Continuous Testing :** In this the code is tested continuously to detect the bug.
- **Continuous Deployment** : In this phase, the code is deployed/released to the production.
- **Continuous Feedback** : Continuous feedback is like a progress report. the software automatically sends out information about performance and issues experienced by the end-user. It's also an opportunity for customers to share their experiences and provide feedback.
- **Continuous Monitoring** : During this phase, developers collect data, monitor each function, and spot errors like low memory or server connection are broken. For example, when users log in, they should access their account, and a failure to do so means there's a problem with your application.
- **Continuous Operation** : Operations are based on the continuity with complete automation of the release process and allow the organization to accelerate the overall time to market continuingly.

Assignment

2. What is cloud computing ?

Cloud computing the delivery of different computing services like

Server
Storage
Data Base
Networking
Software
Analytics

Intelligence over the internet to offer faster innovation, flexible resources, and economies of scale. You typically pay only for cloud services you use, helping you lower your operating costs, run your infrastructure more efficiently, and scale as your business needs change.

DAY 2

1. What are service models and deployment models in cloud computing ?

There are three types of service Models : IaaS, PaaS, SaaS.
Four types of Deployment model : Private, Public, Hybrid, Community.

2. What is IaaS, SaaS, PaaS, try to get some example service ?

IaaS: Infrastructure as a service

IaaS promotes access versus ownership.

Example : VM

PaaS : Platform as a Service

A third-party provider delivers hardware and software tools to users over the internet.

Example : Stand alone softwares

SaaS : Software as service

SaaS uses the internet and provides the service to the client using a subscription which is managed by a third-party-vendor.

Example : Netflix, Hotstar

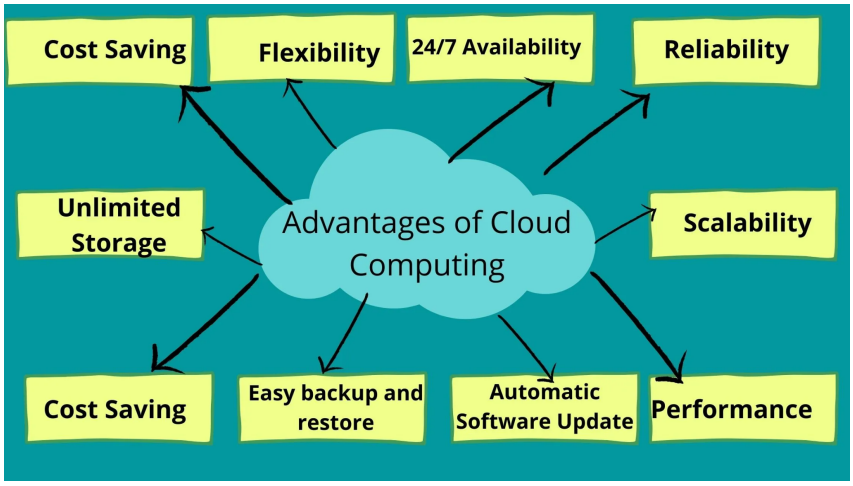
3. What are different models which are available in cloud computing ?

Service Model : Iaas, Paas, Saas,
Deployment model : Private, Public, Hybrid and Community.

Assignment

4. Explain what is public, private, hybrid, and community?
   Public : The service is accessible to every user.
   Example : Gmail
   Private : The service is dedicated to a particular organization.
   Example : Company portals
   Hybrid : It is a combination of any two cloud models.
   Example : Teams
   Community : Which share to multiple organizations to use the service.
   Example : Github Community

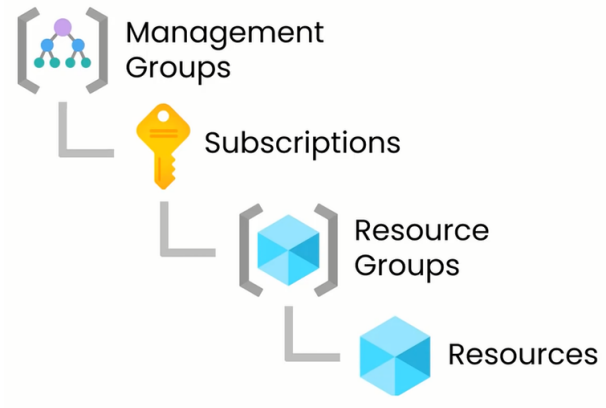
5. What are the benefits of cloud computing?



DAY 3

1. What is the hierarchy of Azure resources?
   Azure provides four level of Management

   Azure AD Tenant (Active Directory)



Assignment

2. What is a management group ?

   A way to manage Azure subscriptions by grouping them together and creating hierarchies that require the organization's resources.

3. What is a Resource group ?

   Is a collection of Resources (or) Resource groups are the central unit in System Automation for Multiplatforms. You can use resource groups to control all of their members collectively.

4. What is Active directory?

   It is a kind of administration where we have access to the Organization resources.

5. What is a Resource ?

   Resources are also called as a service where they will have access to work.

6. What are different ways to authenticate to azure?

   SDK - Software development kit
   PowerShell
   Azure CLI
   ARM Template

   It is a programmatic way to access

7. What is VM ?

   VM (Virtual Machine)

   Virtual Machine is a computer file which acts the same as a physical computer.

8. How do you authenticate to a Windows VM?

   Username and Password

9. How many ways can you authenticate to a linux VM?

a. SSH key
b. Username and password

10. What is ssh and how do you create ?

    SSH (Secure Shell) key (For this we need to generate and download the key before creating the VM. If we miss to download the key, we have to re create the vm.)

11. What are the different tools used to connect linux VM?

    Git Bash
    Putty
    Mobaxterm
    Ssh client

Assignment

12. What are different flavors available in linux ?
    - Debian
    - Ubuntu
    - Centos
    - kernels