AZURE DEVOPS COURSE CURRICULUM

1. **Microsoft Azure**

2. **Linux Basics**

3. **Introduction to DevOps**

4. **Git & GitHub**

5. **Azure DevOps**

6. **SonarQube**

7. **Ansible**

8. **Terraform**

9. **Docker**

10. **Kubernetes**

11. **Prometheus**

12. **Grafana**

Cloud computing:

- **Introduction to cloud**
- **Public private and hybrid cloud**
- **Benefits of cloud**
- **Introduction to azure**
- **Azure regions, zones and Data centers**

Azure Virtual Machines:

- **Into to azure virtual machines**
- **Types of provisioning – cli and portal**
- **Availability set and availability zone**
- **VMSS**
- **Connecting to Windows and linux vm**
- **Creating VM using cli, portal and powershell**

Azure Network Services:

- **Intro to azure network services**
- **Virtual network and subnet**
- **Creating Virtual network**
- **NSG and application security group**
- **Service endpoint and private end point**
- **Virtual Private network**
- **Point to site, site to site and express route**
- **Vneet peering**

Microsoft Azure Storage

- **Storage Account Replication Techniques**
- **Protocols and Consistency Model**
- **Type of Azure Storage Account**
- **Storage Services Blob, Table, queue, File**

Azure Load Balancers

- **Types of LB**
- **Use cases of LB**
- **Limitation and best practices of using LB**
- **Health checks**
- **Configuration of a LB**

Azure App Service:

- **App service overview**
- **App service plan**
- **Deployment center**
- **scaling app service**
- **deployment slots**

Server less computing:

- **what is server less computing**
- **introduction to azure function app**
- **introduction to azure logic app**
- **deploying function and logic app**

Azure bastion service:

- **introduction to azure bastion services**
- **use case of bastion**
- **deployment of azure bastion**

Azure firewall:

- **introduction to azure firewall**
- **NSG vs azure firewall**
- **Use case and benefit of azure firewall**
- **Firewall pricing**

Container Instances

- **AKS (Azure Container instances)**
- **Container instances**
- **Azure container registry**

Version control:

- **Introduction to git**
- **Git Vs Github**
- **Installation and setup**
- **Git workflow & demo**
- **Branching and merging**
- **Clone, Remote Branches, Fetch, Pull**
- **Git Branch Merge Demo**
- **Git Fetch Pull Demo**
- **Pull Request & Demo**
- **Forking and updating repo**
- **Merge conflict**
- **Ignoring files**
- **Git revert & reset**

- **Rebase, Rebase Vs Merge**
- **Rebase demo**
- **Git cherrypick**
- **Git stash**
- **Branching Strategies**
- **Github hooks**
- **Interview tips and questions**

Docker

- introduction
- Installation and setup
- Docker Architecture
- Docker commands
- Docker network and demo
- Docker volumes and demo
- Docker images
- Docker registry
- Docker compose
- Docker Orchestration swarm & Kubernetes.

Azure DevOps

- Introduction to Azure DevOps
- Azure Boards.
- Azure Repo
- Azure Pipeline
- Introduction to YAML
- CI/CD pipeline with classic editor
- CI/CD pipeline with YAML file

Projects:

- Setting up CI/CD pipeline for AKS
- Setting up CI/CD pipeline for app service using code on github
- Setting up CI/CD pipeline for docker container using docker hub
- Setting up CI/CD pipeline for app service using ACR

Terraform

- **Introduction to IAC and its importance**
- **Terraform lifecycle**
- **Terraform setup**
- **Terraform versioning**
- **Terraform blocks and modules**
- **Terraform operators**
- **Tools to write terraform scripts**

Ansible:

- **Introduction to Ansible**
- **Setting up Ansible environment**
- **Ansible roles, variables, Modules, Loops, conditions, Inventory and vault**

Kubernetes:

- **Introduction To Kubernetes.**

- **Kubernetes Architecture.**

- **Minikube installation.**

- **Yaml introduction**
- **Introduction to pods, replica sets and deployment**
- **Imperative approach for pods, replica sets and deployment**
- **Declarative approach for pods, replica sets and deployment**
- **Introduction to different Kubernetes services.**
- **Use case of each type of service with application**
- **Resource management in pods**
- **Volumes in Kubernetes: SC, PV and PVC**
- **Auto scaling in Kubernetes: cluster auto scaling and pod auto scaling**
- **Secret management in Kubernetes**
- **Config maps**
- **Kubernetesnamespace**

Prometheus

- o **What is Prometheus?**
- o **Prometheus Architecture**
- o **Prometheus Installation**
- o **Monitoring container metrics with Prometheus**
- o **Prometheus UI**
- o **Alerting rules in Prometheus**
- o **Monitoring Kubernetes cluster with Prometheus**

Grafana

- o **Grafana dashboard for Prometheus metrics**
- o **Grafana dashboard for kubernetes clusters**

OUR KEY FEATURES

- **Real Time Use Case Based Teaching**
- **Daily 1 Hr Trainer Session**
- **Daily Notes & Session Recorded Video**
- **Use Cases On Covered Topics**
- **Interview Questions On Covered Topics**
- **9 Real Time Sample Projects.**
- **100% Job Assistance & Mock Interviews**
- **Resume Grooming Session**
- **Naukri & LinkedIn Account Creation & Optimisation.**
- **Recruitment and Hiring detail**