INTRODUCTION TO DEVOPS

What is DevOps?

History of DevOps

What is Dev and Ops

DevOps definition

DevOps and Software Development Life Cycle

Build and release workflow

DevOps main objectives

GIT (SCM)

What is GIT?

Installing Git for Windows and Linux

Basic Commands Overview

Diff b/w Git and SVN

Git stages

Creating Branches and branching strategy

Git merge and rebase

Backing Out Changes

Renaming and Moving Files & Deleting Files

Git Repository Setup

Git push, pull and fetch

Git Stash

Git Conflicts

Git fetch, merge

Git Tags

Git Revert

Git cherry pick

How to use Github and Bitbucket

MAVEN

Over view of Maven

Diff b/w Maven and Ant

How to install Maven in Windows and Linux

Maven Phases

Maven repositories

How to create .Jar, .war and .ear files

How to add dependency, properties and plugins

Sample Maven Projects

How to Deploy Executable files in Application Servers

TOMCAT

What is Tomcat

How to install Tomcat in windows

How to install Tomcat in Linux / AWS

How to deploy code in Tomcat

Deploying code by using Jenkins

JENKINS (CI/CD)

What is CI/CD

Introduction to Jenkins

History of Jenkins/Hudson

How to install Jenkins in Windows and Linux

How to create Jobs

Diff types of jobs

Working with Github

Working with Build tools

Build from Github Project

Managing Remote Systems with Jenkins

Parameterized Builds

Securing Jenkins

How to install plugins in Jenkins

Scheduling Builds

Setting up Different Types of Automated Builds

How to configure one job to another job

Configure Global Security Jenkins Administration

How to create maven type job

How to create ant type job

Jenkins pipeline by using script and plugins

Jenkins Backup

How to deploy code in servers

Authentication and Authorization

How to create Nodes in diff Servers

Build pipeline view

Most useful 20 plugins

ANSIBLE

What is Ansible

What is Ansible & its features

How to setup Ansible

Understanding Ansible architecture & Execution

Ansible documentation

Installing packages by using Ansible

Ansible Modules, Writing playbook

Ansible Roles and diff types of playbooks

DOCKER

Learning the Basics of Docker

Introduction to Docker

Containers vs Virtual Machines

Docker Architecture

Docker Hub

Docker Installation

Creating Our First Image

Working with Multiple Images

Packaging a Customized Container

Running Container Commands with Docker

Managing and Removing Base Images

Pushing to Docker Hub

Creating Shared volume groups

Create own images

Creating own docker files

Docker Events

Docker volumes

Docker web-applications

Docker Networking

Docker file for user

Volume management

Docker Link

Docker Compose

Creating Docker-hub account and managing Docker images

KUBERNETES(K8S)

What is Kubernetes

Basics of Kubernetes container orchestration

Diff b/w Kubernetes and docker/docker swarm

Why really we need kubernetes for docker

Installation and configuration of Kubernetes cluster

Deploying apps on the cluster and scaling it

What are Pods, Services and Volumes in Kubernetes

Scheduling the applications on the container

PODS

Namespaces

Resource Requiremnts

Multi-Container Pods

SecurityContexts

Replicasets

Deployments

TERRAFORM

Introduction to Terraform

Terraform installation on Linux/windows

AWS CLI installations

Getting started with Terraform

Terraform Modules

Terraform Workflow

Terraform projects

AWS

Introduction to Cloud Computing:

Introduction to cloud computing

Essential Characteristics of Cloud Computing

Service Models in Cloud computing

Introduction to AWS

AWS Account creation & free tier limitations overview

EC2:

EC2 Instance Launch Wizard

EC2 Instance Types

Generating custom Public Key and Private keys for EC2 instances

Security groups

Volumes and Snapshots

Creating customized Amazon Machine Images

Elastic Load Balancers & Health Checks

Auto Scaling Groups

EBS

Cloud Watch

Creating Billing Alarm and EC2 instance alarms.

Elastic File System

S3

VPC (Virtual Private Cloud):

Networking Basics

Creating custom VPCs and custom Subnets

Route Tables & IGW

VPN Configuration with AWS (OpenVPN)

Elastic IP

Route-53

ENI

Application Services:

Simple Notification Service

Simple Email Service

Databases:

Launching a RDS Instances (MySQL, MSSQL & Aurora)

DynamoDB

EFS

Identity Access Management:

Root Account Vs IAM user

IAM Password Policies

Creating Customer Managed Policies.

Groups

Roles

LINUX & SHELL SCRIPTING

All basics of Linux

How to create files, dir, and groups

How to change permissions of files, dir, and groups How to create users

Ssh

Scp

Winscp

Scp

Crontab

Passwordless authentication

Working with services

Most use full commands like cp, mv, tar, yum, rpm, wget, rm, find, vim, cat, touch etc…

GCP(GOOGLE CLOUD PLATFORM)

Overview of an GCP cloud with kubernetes(k8s)

Monitoring Tools

Nagios

Cloud watch (AWS)

MOST USEFUL TOPICS

Virtualization

What is virtualization?

Diff b/w Bare metal, virtual machine & Docker

Shell scripting

Recording videos

interview questions, pdf material and Resumes

Real Time Project.