Devops Content

Devops
• SDLC
• Agile Method
• Waterfall Method
• What is Devops?
• It's use cases
• Devops Advantages
• Prerequisites

Linux
• Linux Installation
• Unix Command Line
• Distribution List
• Directory structure
• File System and File Management
• User Administration
• VI editor
• Configure and monitor system logs
• Service and process management
• Package Management
• Searching tool grep, find, locate
• Text processing tools awk, cut, sort, uniq

Shell Scripting
• Variables and it's types
• If conditions
• For loops
• While loops
• Use cases
• Real time Scenarios with examples

AWS
• Overview of Virtualization
• Cloud Computing
• AWS services EC2, VPC, Security Group, Subnet
• Ec2 instance Backup and Restore process
• Static IP using Elastic IPs
• Elastic Load Balancer
• Cloud Watch
• Simple Notification Services
• Auto-Scaling
• Simple Storage Service S3 and its types
• User management using IAM
• Route53
• Elastic Container Registry

GIT
- GIT basics
- Difference between versioning control tools and GIT
- Git installation
- Getting and creating projects: initialize a directory as Git repository and copy a Git repository
- Adding file contents to staging area
- View status of your files in the working directory and the staging area
- Show diff at various stages
- Record snapshot of staging area
- Undo changes and commits
- Remove files from staging area
- Branching and merging strategies
- Sharing and updating projects

Maven:
- Maven basics
- Installation and Setup of Maven
- Maven lifecycles
- Maven integration with Jenkins

Jenkins:
- Introduction of CI/CD
- Fresh instance of Jenkins installation and configuration
- How to create a job and configure it
- A walk-through of different features of Jenkins
- Jenkins Pluggins installation and configuration
- Different types of Jenkins jobs configuration such as Freestyle/Maven/ Pipeline/ Multibranch Pipeline
- Practical Jenkins administration issues
- How to integrate different build and release tools like Ant, Maven, GIT, SVN, Tomcat etc.
- Devise a strategy for the candidate's organization build and release process
- Maven project setup
- Docker and Kubernetes deployments using CI/CD

SONAR
- Sonar installation and Advantages
- Sonar Integration with Jenkins builds

NEXUS Repository
- Nexus installation and Advantages
- Nexus Integration with Jenkins builds

Docker
- Introduction to Docker
- Containers vs virtual machine
- Docker platform overview and terminologies
  Docker Engine
  DockerHost

DockerImages
DockerContainer
DockerRegistry
DockerRepositories

• Getting started with Containers

• Building customized Images in different ways

• DockerVolumes(storage)

• Configure Applications and accessing Applications on containers.

• Basic Container Networking.

KUBERNETES (Orchestration tool)
• Why Kubernetes ?
• Difference between Orchestration tools such as Docker swarm and Kubernetes
• Kubernetes Usage and advantages
• Kubernetes Architecture
• Different types of installation such as Kops, kubeadm, minikube, eks
• Creation of different kinds in Kubernetes such as deployment, pod, service, namespace in CLI.
• Creation of different kinds in Kubernetes such as deployment, pod, service, namespace by using manifest files.
• Kubernetes Load balancer
• Kubernetes Auto scaling
• Kubernetes Network
• Kubernetes Storage types.

Ansible
• Installing Ansible

• Basic inventory file setup

• Basic Concepts

• Modules and its use cases

• Ansible Playbook and Roles

• Application Deployment

• AWS instance spin using playbooks

• AWS instance backups

Nagios
• Installing Nagios master and slave
• How to configure different services in slave
• How to configure notification in Nagios.