

## **DevOps**

- 1) Discuss different commands of Git (i.e. init , ls , pull , push etc..)
- 2) What is DevOps, Git, Jenkin, CI tool ?
- 3) Discuss all the functions of Mockito API (i.e. mock() , addReturn(), verify() ) and their uses.

## **AWS**

### **Lesson 1: Cloud Basics**

- 4) Definition of Cloud computing
- 5) Discuss key components and characteristics of Cloud Computing
- 6) Discuss different Cloud models
- 7) Discuss all cloud models (i.e. private , public , Hybrid, community etc.)
- 8) Discuss all service models( i.e. IaaS , PaaS , SaaS etc. )

### **Lesson 2: AWS Basics**

- 1) Discuss different type of Amazon Web services category
- 2) Discuss each AWS services come under each Category
- 3) AWS features
- 4) Discuss AWS Global infrastructure

### **Lesson 3 : AWS Compute Service**

- 1) Discuss all services comes under AWS Compute service
- 2) Discuss on AWS EC2 , EC2 instance types , EC2 Free service duration ,EC Container , Elastic Bean Stack
- 3) Different way to avail Amazon Ec2 service( i.e. on demand etc. )

### **Lesson 4: AWS Storage service**

- 1) Discuss all services comes under AWS Storage service
- 2) Discuss on Different type of storage services ( i.e. Block , Object etc. )
- 3) Discuss more on AWS Block storage and their uses
- 4) Discuss more on S3 and the S3 buckets
- 5) Use of Amazon Glacier – It is used to store infrequent data

### **Lesson-5-AWS database Service**

- 1) Discuss all services comes under AWS Database services
- 2) Discuss on Amazon RDS service benefit , features
- 3) Discuss on Amazon DynamoDB benefits and features

### **Lesson-6 AWS Network Service**

- 1.) Discuss all services comes under AWS Networking services and their use case

- 2.) Discuss on Amazon VPC service benefit , features
- 3.) Discuss on Amazon Route 53 benefits and features
- 4.) Discuss on Amazon Direct connect benefits and features
- 5.) Discuss on Amazon Cloud front benefits and features

### **Lesson-7 AWS Analytics Service**

- 1.) Discuss all services comes under AWS Analytics services and their use case
- 2.) Discuss on Amazon EMR service benefit , features
- 3.) Discuss on Amazon data pipeline and kinesis benefits and features

### **Lesson-8 AWS Deployment and Management Service**

- 1.) Discuss all services comes under AWS Deployment and management services and their use case
- 2.) Discuss on Amazon Elastic Beanstalk service benefit , features
- 3.) Discuss on Amazon Cloudwatch benefits and features
- 4.) Discuss on Amazon Cloud formation and kinesis benefits and features
- 5.) Discuss on Amazon Code build and Code deploy benefits and features

### **Lesson-9 AWS Administration Service**

- 1.) Discuss more on IAM
- 2.) How IAM helps to provide security to other AWS services
- 3.) Discuss the each option available in IAM and their uses (i.e. Users. group, policy etc.)

## **MicroServices and Cloud Native**

### **Lesson-1- Microservice introduction**

- 1) Explain Service and the definition of SOA .
- 2) Explain Monolithic Architecture and the drawbacks
- 3) Explain Microservice and benefits , features
- 4) Difference between Monolithic and Microservice
- 5) Challenges in Microservice architecture

### **Lesson-2- Cloudnative concepts**

- 1) Explain Cloud native approach (i.e. Devops , Containers , CD, Microservices etc.)
- 2) What is 12 factors app
- 3) Explain features of each component of 12 factors app.

## **NoSQL and MongoDB**

- 1) What is NoSQL
- 2) Different types of NoSQL Databases
- 3) MongoDB benefits
- 4) MongoDB important Terminology (i.e. Database, Collection, Document, Field etc.)
- 5) MongoDB data models
- 6) Datatypes and commands to create Database , collection and discuss different help command
- 7) Discuss all CRUD commands i.e. Insert, update, delete, find, remove etc.
- 8) Insert Vs Save command
- 9) Discuss more on Update command
- 10) Discuss query using modifiers
- 11) Discuss comparison operators
- 12) Different modifiers , logical operators
- 13) Discuss on Pipeline Operators with examples
  - \$limit
  - \$skip
  - \$max
  - \$minAnd all other operators

## **Adv Microservice using Spring BOOT and Rest**

- 1) Discuss Spring boot annotations.
- 2) @SpringBootApplication , @Configuration , @ComponentScan
- 3) SpringRest controller annotation
- 4) Discuss Spring Mongo application annotation
  - a) @Document
  - b) @ID

## **Docker**

### **Lesson-1- Introduction to Docker**

- 1) What is Docker
- 2) Explain Docker container and their components .
- 3) Limitation of VM
- 4) Virtualization Vs. Containerization

- 5) Discuss Docker architecture
- 6) Commands to install Docker and start Docker

## **Lesson-2- Docker platform Overview**

- 1) What is Docker
- 2) Explain Docker container and their components.
- 3) Docker Engine
- 4) Docker features
- 5) Docker commands