

# COURSE SYLLABUS

## i. What is the DevOps:

- Benefits of DevOps
- DevOps Principal

## ii. Introduction to CI/CD:

- Continuous Integration & Continuous Delivery With Jenkins
- Introduction to Jenkins
- SDLC and DevOps culture
- Jenkins features and architecture

## iii. Introduction about Cloud (IaaS, SaaS, PaaS) - LAB:

- What is the cloud benefits (Create the account in AWS - free for 1 years since we will use the AWS)
- What is the cluster
- How to create the cluster in AWS
- How to access the AWS Cluster (EC2) machine from my local system for install the other software

## iv. Getting Started With Jenkins - LAB:

- Install Jenkins
- Configure Jenkins
- Get started with Jenkins
- Setup Jenkins job
- Jenkins pipeline view
- Install Artifactory

## v. DevOps tool - Repository - LAB:

- Understand the repository GIT
- Benefit and how to use and checking checkout code from GIT
- How version controlling happening?
- Create the Repository on the fly

## vi. Build Jobs and Configurations

## vii. CI & CD Pipeline With Jenkins, Gradle & Artifactory - LAB:

- Build CI and CD pipeline with Jenkins and Gradle
- Configure Artifactory
- Build CI and CD pipeline with Jenkins and Gradle (contd.)

## viii. CI & CD Pipeline With Jenkins & Maven - LAB:

- Create Java application project
- Start building CI and CD pipeline with Jenkins and Maven
- Start building CI and CD pipeline with Jenkins and Maven #2

- Start building CI and CD pipeline with Jenkins and Maven #3

## 9. Configuring Build Pipelines - LAB

## 10. Automated Testing In Jenkins - LAB

## 11. Code Quality Improvement using Jenkins - LAB

## 12. Automated Deployment and Continuous Delivery - LAB

## 13. Distributed System In Jenkins - LAB

## 14. Docker overview and understanding - LAB:

- Docker Architecture
- Docker benefits
- Docker installation in AWS
- Deploy the image in AWS cluster
- Run the application
- Docker commands

## 15. How to monitor application logs using ELK - LAB:

- What is the kibana and how to install the how to use it.