COURSE SYLLABUS

1. **What is the DevOps:**
   - Benefits of DevOps
   - DevOps Principal
2. **Introduction to CI/CD:**
   - Continuous Integration & Continuous Delivery With Jenkins
   - Introduction to Jenkins
   - SDLC and DevOps culture
   - Jenkins features and architecture
3. **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
4. **Getting Started With Jenkins - LAB:**
   - Install Jenkins
   - Configure Jenkins
   - Get started with Jenkins
   - Setup Jenkins job
   - Jenkins pipeline view
   - Install Artifactory
5. **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
6. **Build Jobs and Configurations**
7. **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.)
8. **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.