\*\*\* EXPERIENCED **DevOps** ENGINEER \*\*\*

**-: PRE REQUISITES :-**

1. Laptop with dual boot – Windows and Ubuntu-18.04.
2. Github, Gmail and AWS Trial user accounts.
3. Basic vi use in Ubuntu Linux. [create/edit/save/view file]
4. Cisco WebEx application working in your laptop.
5. Slack will be used for training related communication.

**-: COURSE CONTENT :-**

1. **DevOps – DEV**elopment and **OP**eration**S**
   1. What is it,
   2. Why,
   3. Benefits,
   4. Common devops tools,
   5. Build/Release workflow etc
   6. SDLC concepts
2. **Version Control System or SCM – Git/Github**
   1. clone, add, commit, push, branch, checkout, merge, pull, fetch, diff, log, status, stash, status, reset, rebase cmds
   2. Product dev – project/training code repository
   3. Product automation repository – test code, automation etc
   4. Add collaborators, Create access key
   5. Add, Commit and Push files
   6. Create branch, move to it, As files, commit, push
   7. Branch merge from CLI and from UI via Pull Requests
3. **OS Fundamentals – LINUX Basics – Ubuntu18.04**
   1. Introduction OS
   2. Most widely used/asked Linux commands.
   3. Lab Session
   4. Basic shell scripting Lab. (Code push to GIT)
4. **Introduction to Cloud Computing - SaaS, PaaS, IaaS - AWS**
   1. **Cloud computing concepts**
   2. **Launch VM in AWS EC2 – Elastic Compute Cloud** 
      1. Instances, Regions, Security groups, and RSA pem key
      2. Access VM using SSH (22) with Public key.
   3. **Deploy Jenkins on above VM ( Ubuntu18.04 )**
      1. Installation steps – dependencies - JRE/JDK etc
      2. Deployment of Jenkins on AWS VM
      3. Enabling outbound/inbound traffic - http(80)
      4. Access Jenkins http://<AWS VM Public IP>:8080 for config
   4. **Using AWS S3 – SSS – Simple Storage Service - for storage requirements**
      1. Upload/Download Build artifacts to/from S3
5. **Project Management Tool (also Bug Tracking & Agile) – JIRA**
   1. Install and configure open source bug tracking tool
   2. Create tickets and life cycle
   3. Create a dashboard etc
6. **Nginx Web server**
   1. Installation and Configuration
   2. Configure it as a file server to show test logs
7. **Containers – Docker, Docker swarm, Kubernetes**
   1. Create Docker image, Write docker file, Run, Use, Stop.
   2. What is Docker swarm?
   3. Introduction to Kubernetes
8. **IaC – Infrastructure as Code – Terraform­­**
   1. Write, Plan, and Apply
   2. Managing infrastructure
9. **CI/CD – Jenkins application (hosted in AWS)**
   1. Create Build job (1) – **Maven**, Upload artifacts (s/w) to S3
   2. Create Setup(2) & Test jobs(3) – Download artifacts from S3
   3. Configure - **Email** (for your Gmail id), and Git Pull Request PlugIn.
   4. Uploading Build/test logs etc to **Ngnix** Webserver
   5. Integrate all Tools (**Github**, **JIRA, Gmail, S3, and Nginx**) so that once Pull Request is raised all tools learned in this course are used in automated way.

**NOTE:** Interview Questions. Mock Interviews. Placement assistance.