

Git & GitHub with Jenkins and SonarQube

Duration: 5 days

Prerequisite: Basic Linux Knowledge

Applications Required: Git, GitHub Desktop, SourceTree, Visual Studio Code

Hands-On Format: This hands-on class is approximately 80/20 lab to lecture ratio, combining engaging lecture, demos, group activities and discussions with comprehensive machine-based practical programming labs and project work.

Module 1 – Git & GitHub

- Introduction to Version Control System
- History of Git
- Introduction to GitHub, SourceTree
- Introduction to VsCode
- Git Basics
- Working of Git
- States in Git
- Installing Git
- Configuration of Git
- Basic Git Commands
- Working with Remotes
- Tagging
- Git Branches & Head
- Cloning, exploring public repo
- Git fetch, Git pull and Git push
- Forking and contribution to Public Repo
- Git tags and rebasing
- GitHub Issues and labels
- Watch, star, Raw, Blame and History of file on GitHub
- Ignoring files in Git

Module 2 – Jenkins

- Introduction to Continuous Integration
- Introduction to Jenkins
- Jenkins Installation
- Jenkins Management
- Build Java Program
- Run Jobs on Remote Machines
- Jenkins-Maven Setup
- Build a Jar using Maven
- Building with ant
- JUnit Testing
- Graphical View of Tests
- Saving Artifacts in Jenkins
- Introduction to Jenkins Pipeline
- Jenkins Pipeline with Maven

Module3 – SonarQube

Introduction to SonarQube

Installation and Setup

Sonar Scanner Integration with Apache Maven

Sonar Scanner Integration with Gradle

Sonar Scanner Integration with Apache Ant

Configuring Sonar Scanner with Jenkins

Trigger Sonar Analysis from Jenkins

Quality Gates

Quality Profiles