S.no	SDLC Stages	Tools	Duration(50 hours)
1	Configuration Management Tool	Ansible	10 hours
2	Version control/Source Code Management	Git, Code commit	6 hours
3	Deployment Tool	Docker	12 hours
4	Container Orchestration	Docker Swarm	2 hours
5	Monitoring Tool	Nagios, Splunk	8 hours
6	Integration Tool	Jenkins	6 hours
7	Infrastructure as Code	Terraform	6 hours

Introduction to DevOps

1) Explain SDLC
2) What is DevOps?
3) Why is DevOps is Needed?
4) How is DevOps different from traditional IT
5) DevOps Lifecycle
6) DevOps Work Flow
7) Who is a DevOps Engineer?
8) Roles, Responsibilities, and Skills of a DevOps Engineer
9) DevOps Training Certification
10) DevOps Automation Tools

Configuration management tool : Ansible

1) What is Ansible?
2) Ansible architecture
3) Important terms used in Ansible
4) Ansible Installation in Linux
5) Configuring the inventory
6) Ansible ad-hoc commands
7) Ansible modules
8) Ansible Playbooks
9) Configure playbook to use ansible modules
10) Configure playbook to install tomcat server
11) Configure playbook to install Apache web server in Ubuntu host
12) Configure playbook to install HTTP web server in centos host
13) Configure playbook to install DB server in centos/ubuntu host
14) Create playbook to create aws instance
15) Managing Hosts group

Version control tools : Git

1) Basic Concepts
2) Traditional Structure
3) What is Github
4) Environment Setup
5) Life Cycle
6) Git installation
7) Clone Operation
8) Perform Changes
9) Review Changes
10) Commit Changes
11) Push Operation

12) Pull Operation
13) Stash Operation
14) Move Operation
15) Rename Operation
16) Delete Operation
17) Branching
18) Tagging
19) Online Repositories
20) Git operation through Windows OS

Deployment Tools: Docker

1) What is Virtualization?
2) What is Containerization
3) Advantages of Containerization over Virtualization
4) Introduction to Docker
5) Benefits of Docker
6) Docker Installation
7) Docker Image
8) Docker Container
9) What is Docker Hub?
10) Docker Architecture
11) Docker Compose
12) Docker build
13) Docker push
14) Dockerfile
15) Managing storage in container
16) What is Docker Swarm
17) Docker Networking
18) Docker configuration in Windows server

Integration tools: Jenkins

1) Overview
2) Installation
3) Tomcat Setup
4) Git Setup
5) Configuration
6) Management
7) Setup Build Jobs
8) Unit Testing
9) Automated Testing
10) Notification
11) Reporting
12) Code Analysis
13) Distributed Builds
14) Automated Deployment
15) Managing Plugins
16) Security
17) Backup Plugin
18) Remote Testing
19) CI CD Pipelining

Monitoring Tool: Nagios

1) Architecture
2) Create the Nagios user and group
3) Install the dependencies
4) Install Nagios
5) Install the Nagios Plugins
6) Install NRPE
7) Configure Nagios

8) Configure E-mail contacts
9) Configure the NRPE command
10) Configure Apache
11) Login to Nagios
12) Monitoring a Windows Host
13) Setting up the Windows config file
14) Monitoring a Linux Host
15) Setting Up the Linux Host config file
16) Installing and Configuring Nagvis
17) Setting up live maps
18) Conclusion

Infrastructure as Code: Terraform

1) Why Terraform?
2) Core Terraform Components
3) Fundamental Concepts
4) Terraform syntax, internals, and patterns
5) Terraform Coding Examples
6) Provisioning resources with Terraform
7) Creating and accessing compute instances
8) Obtaining variables from Terraform into external scripts
9) Using shell script remote executor from Terraform to configure platform on launched VMs
10) Deploying Java application on VMs launched through terraform
11) Use of elastic ip in Terraform
12) Automation through Hosts entry modification
13) Using tomcat API to provision application
14) Understanding integration points between Jenkins and Terraform
15) Understanding alternatives to Terraform
16) Where terraform succeeds

Real Time Monitoring: Splunk

1. Splunk - Overview
2. Splunk - Environment
3. AWS Monitoring Resources
4. Splunk - Interfaces
5. Splunk - Data Ingestion
6. Splunk - Source Types
7. Splunk - Basic Searching
8. Splunk - Field Searching
9. Splunk - Time Range Search
10. Splunk - Sharing and Exporting
11. Splunk - Search Language
12. Splunk - Search Optimization
13. Splunk - Transforming commands
14. Splunk - Reports
15. Splunk - Dashboards
16. Splunk - Pivot & Datasets
17. Splunk - Lookups
18. Splunk - Schedules and Alerts
19. Splunk - Knowledge Management
20. Splunk – Sub searching
21. Splunk - Search Macros
22. Splunk - Event Types
23. Splunk - Basic Chart
24. Splunk - Overlay chart
25. Splunk - Sparklines
26. Splunk - Managing Indexes
27. Splunk - Calculated Fields
28. Splunk - Tags
29. Splunk - Apps

30. Splunk - Removing Data
31. Splunk - Custom Chart
32. Splunk - Monitoring Files
33. Splunk - Sort Command
34. Splunk - Top Command
35. Splunk - Stats Command