**DAY: 01**

1. **Introduction**

* Welcome note
* What you should know
* Infrastructure As Code (IAC)
* Tools available in market for IAC

1. **Terraform Set up**

* Installation Terraform - Windows
* Installation Terraform - Linux and MacOS
* Cloud account set up (**AWS**)

1. **Terraform Life Cycle**

* Write(main.tf)
* Initialize(.terraform,.terraform.lock.hcl)
* Plan(plan01)
* Apply/Create(terraform.tfstate)
* Reproduce
* Destroy

1. **Deploying Infrastructure with Terraform**

* VM creation on AWS
* Terraform code/file validation

1. Terraform Validate utility
2. Terraform Format utility
3. Terraform Lint

* Dig down Terraform initialization process
* Dig down Terraform Plan
* Visualize Terraform Plan using Graph
* Dig down Terraform State (Desired and Current State)
* Modify the deployed infrastructure

**DAY: 02**

**7. Terraform DSL**

* Explore Terraform
* Explore Terraform provider
* Explore Terraform Resource (Arguments and Attributes)
* Explore Terraform Input, Output and Local variables
* Explore Terraform Variable data types
* Explore Terraform Variable assignments (via file, command-line and environment)
* Understand Terraform variables parsing hierarchy
* Explore Terraform Conditional expression
* Explore Terraform Count
* Explore Terraform Dynamic
* Explore Terraform Taint

**8. Terraform State Management**

* Terraform remote state explanation
* Implementing S3 bucket for remote state management
* Locking Terraform state management in collaborating environment
* Challenges in state file locking

**DAY: 03**

**9. Terraform Provisioners**

* Terraform provisioners and its type
* Implementing provisioner - local-exec
* Implementing provisioner - remote-exec
* Implementing provisioner - file

**10. Terraform modules**

* Terraform module introduction
* Terraform module development
* Terraform module use in real code
* Terraform Registry

**11. Terraform integration with DevOps world**

* Implementation of Github for Terraform code management
* Implementation of Jenkins for Terraform code execution
* Workspace
* Multi environment deployment

**12. Terraform Security consideration**

* Cloud credential security implementation
* Sensitive parameters