**Learning Objectives:**

* Understand the basics of cloud computing
* Understanding different cloud vendors and types of cloud service models

**DevOps Objective:**

* Understanding Development
* Development SDLC : Waterfall & Agile
* Understanding Operations
* Dev vs. Ops
* DevOps to the rescue
* What is DevOps
* DevOps SDLC
* Continuous Delivery model
* DevOps tools for DevOps SDLC
* DevOps Roles & Responsibilities

# Git Fundamentals

Learning Objectives:

* Manage Code Repositories using Git
* Working with Git commands and resolve any code conflicts

Topics:

* Git Setup
* Linux Basic commands
* Git Introduction
* Learn about Git Branches
* Git Remotes
* Resolve Git Merge conflicts
* Work with Azure DevOps
* Setup a Git Repository
* Work with a Git Repository on Azure DevOps and handle merge conflicts, pull requests, and perform code review

# Azure DevOps

**Learning Objectives:**

* + Learn to implement a complete Project Lifecycle in Azure DevOps

**Topics:**

* Azure Boards
* Azure Repos
* Azure Pipelines
* Azure Artifacts
* Azure Extensions Marketplace
* Implement CI/CD in Azure DevOps
* Setting up automated pipelines to build, test and deploy the code.
* Pipeline creation
* Environments
* Tasks
* Workflows
* Deployment Pipelines using Azure Release Pipelines
* Automation of Application Configuration (web.config, app.config etc)
* Automated workflows for Deployments
* Gated Deployments
* Integration with Artifact management
* Roll-backs
* One-click deployments
* Blue-green and canary deployments
* Best Practices

# Azure Resource Manager Templates (ARM Templates)

**Learning Objectives:**

* Create and deploy your first ARM template Fundamentals
* Understand the need of ARM Templates
* Create, Deploy, Share ARM Templates

**Topics:**

* What is ARM templates?
* What are ARM templates?
* Why choose ARM templates?
* Template file
* Template deployment process
* Template design
* Share templates
* Create and deploy your first ARM template
* Editor : Visual Studio Code
* Command-line deployment
* Create your first template
* Sign in to Azure
* Create resource group
* Deploy template
* Verify deployment
* Clean up resources
* Best practices

# Power-shell Fundamentals

**Learning Objectives:**

* Understand the Use basics of PowerShell
* An understanding of how to use PowerShell to Create resources on Azure
* Automating daily activities on Azure using PowerShell

**Topics:**

* Install Azure PowerShell on Linux or Windows
* Connect to an Azure subscription using Azure PowerShell
* Create Azure resources using Azure PowerShell
* Create Free Azure Account
* Using Power-shell to interact with Azure Resources.
* Creating of Virtual Machines using PowerShell
* Creating of Storage using PowerShell
* Using Azure PowerShell to Manage the resources in Azure
* Use Power-shell to Automate daily activities

# Docker for DevOps

* Docker Introduction
* Dockers & Containers
* What are containers
* Difference between VM’s & Containers
* Hypervisor Vs Docker Engine
* Docker installation
* Images & containers basics
* Docker Images
* Docker Images Deep Dive
* Docker Hub
* Pull & Push images
* Building your own Image with Docker file
* Hosting & Managing Images
* Running, Stopping, Deleting, Inspecting & Managing containers
* Web server examples
* Local Development workflow
* Automated Workflow/ Continuous delivery of Dockers

# Kubernetes for DevOps

* + Docker Orchestration with Kubernetes
* Micro service Architecture
* Why Containers for micro services
* Kubernetes Intro & Architecture
* Kubernetes setup
* Running Docker containers on Kubernetes
* Kubectl
* Pod
* Service
* Replication controller & Set

• Deployment

**Terraform**

* Terraform Set up/Installation in local
* Terraform template creation using visual studio code
* Creating resources in azure using terraform templates
* Terraform commands usage (init,validate,plan,apply,Destroy)
* Managing the existing resources using terraform
* Terraform statefile recovery
* Terraform implementation using azure pipelines

**Azure Administration:**

* Introduction to Azure
* Cloud technology overview
* What is PaaS/ SaaS/ IaaS
* Overview of Azure
* Managing Azure Subscriptions
* Managing Azure with the Azure portal
* Demo: Azure Portal
* Overview of Azure Resource Manager Virtual Machines
* Create and Configure Virtual Machines
* VM Networking
* Manage Azure using Azure portal
* Manage Azure using PowerShell
* Creation/Deletion of database using PS
* RBAC roles
* Multi-factor authentication
* IP white-listing
* Azure portal Walk-through Working with Active Directory
* Overview of AD
* Why we need AD for Azure
* Overview of app service
* Deployment of app service
* Configuring and Maintaining web apps
* Monitoring web apps and Web jobs
* Traffic manager Azure SQL Database
* Overview of SQL database on azure
* Deploying Azure SQL Database
* Implementing and managing Azure SQL Database
* Managing security
* Azure SQL database Recovery
* Import/Export data

# 1)Interview Questions

# 2) Real time Scenarios/Tasks

# 3)Mock Interviews

# 4) Resume Preparation