

*****[Azure DevOps Online Training](#)*****

1. Introduction

- Introduction to Traditional Programming Practices
- What is DevOps and its practices and Benefits
- About DevOps Tools and Roles
- Azure DevOps Introduction
- Setup DevOps Account

2. Azure Boards

- Azure Boards Introduction and Getting Started with Work Items
- Work Items About Board
- Back Logs and Sprint Capacity Planning

3. Working with Git and Repos

- Introduction to Git and GitHub & Basic Git Commands
- Working with Remote Repository
- Working with Branches Locally
- Working with Local Feature and Push-Pull to Remote Master
- Working with Pull Request
- Move on Pull Request and Branches
- Working with Merge Conflicts
- Working with Rebase
- Working with Cherry pick
- Undo Changes using reset and revert
- Ignoring file changes with Git
- GitHub Integration

4. CI Pipeline using classic Editor

- Introduction to CI and CD Pipeline
- Understanding the Build Process
- Creating a Basic Build Pipeline
- Customizing Pipeline and Automatically Triggering the Run
- Creating and Using Task Group

5. CI Pipeline using YAML

- YAML Pipeline Introduction
- Editing a YAML file tasks
- Triggering Continuous Integration in YAML
- Reusing Tasks using Templates in YAML
- Validating Pull Request using Build Pipeline

6. Integrating Quality tests in Pipeline

- Setup Unit Test Project
- Integrating Unit Test with Classic and YAML Pipeline
- Code Coverage Test on Local System
- Integrating Code Coverage Test in CI Pipeline

7. Scan for code vulnerabilities and license ratings

- Sonar Cloud Integration in CI Pipeline
- White Source Bold Integration

8. Azure Pipeline for CD

- Introduction to Continuous Delivery Pipeline
- Creating Service Connection to Azure Subscription
- Creating App Services Environments
- Publishing to App Service from CI Pipeline
- Creating a Simple Multistage Release Pipeline
- Approval, Gates and Manual Intervention in Release Pipeline
- Deploy Applications to VM using Deployment Group
- Deployment using YAML

9. Deep Dive into CI and CD pipeline

- About Agent Pools
- Microsoft Hosted & Self Hosted Agents
- Pipeline Demands
- Run and Release Retention Policy
- Manage Pipeline Resources Permissions
- Deep Dive into Jobs
- About DevOps Libraries
- Pipeline Conditions

10.Key Vault and Managed identify

- Azure Key Vault
- Managed Identity System and User Assigned Identity

11.UI tests with Selenium

- Types of Functional Tests
- Performing Selenium Testing on Dev Box
- UI Tests in Release Pipeline

12.Working with SQL Database

- Creating a Database Project and Importing DACPAC
- Building and Deploy Database Project using CI and CD Pipeline

13. Working with Containerization using Docker

- Introduction to Containers and Comparison with VM
- Understanding Docker Architecture
- Creating a Docker Image using Dockerfile
- Pushing Image to Docker Hub and Azure Container Registry
- Deploying Docker Images in App Service and Container Instance
- Creating a CI and CD Pipeline for Docker Image

14. IaC using ARM Templates

- Introduction to IaC and ARM Templates
- Creating and Executing ARM Template
- Executing ARM Template using CI Pipeline

15. IaC Using Terraform

- Executing Terraform Scripts in Azure Cloud Shell
- Executing Terraform Templates from Azure Pipeline

16.Azure Artifacts

- Understanding Build and Pipeline Artifacts
- Creating and Using a Feed from Azure Artifacts
- Upstream Sources
- Working with Views in Feed
- Creating a Package using Pipeline

17. Micro Services and Kubernetes

- Introduction to Microservices
- Introduction to Kubernetes
- Creating ACR and AKS Services along with Service Principle Permissions
- Hosting Application in Kubernetes Cluster
- Creating Pipeline for Publishing to Kubernetes Cluster

18. Continuous integration using Jenkins

- Configuring Jenkins Server for CI Pipeline
- Building CI and CD Pipeline using Jenkins