

# MicroDegree



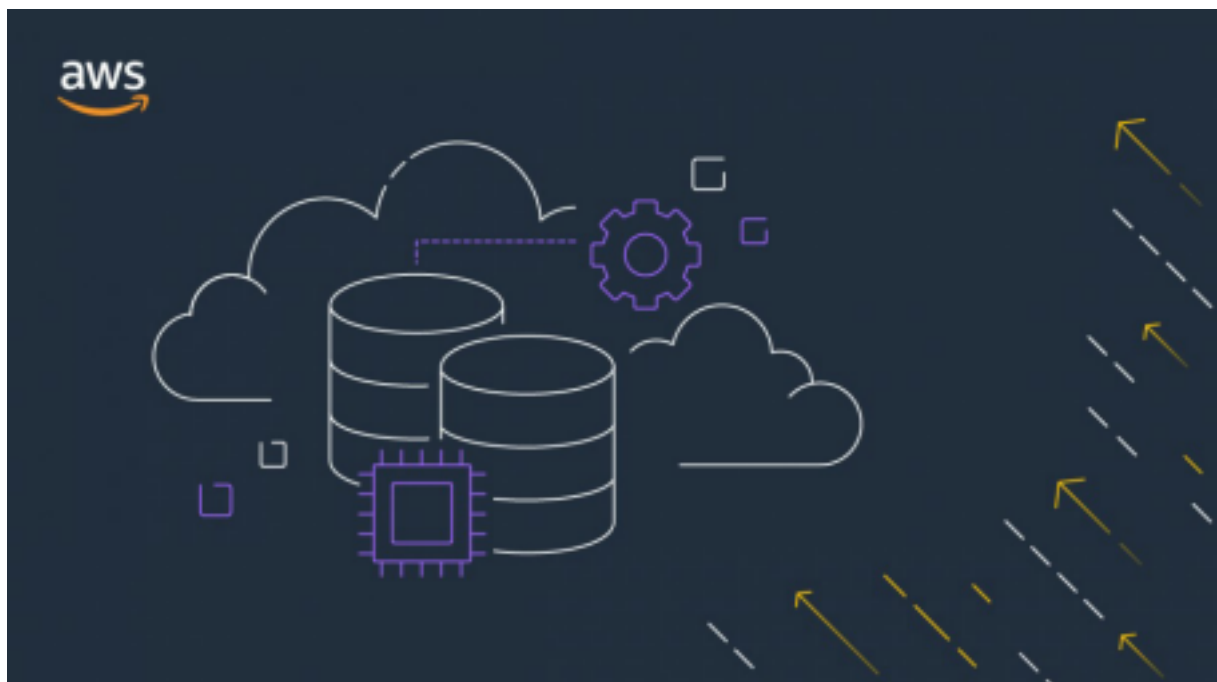
## AWS And DevOps

Course Duration: 45 days (70 Hours) More Details Please Contact

Manikanta Nair: [831-088-2795](tel:831-088-2795)

Course: AWS & DevOps Gaurav Kamath: [974-329-5272](tel:974-329-5272)

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# AWS - amazon web services

## Introduction:

- Introduction to cloud Computing and AWS
- Advantages of Cloud Computing
- SaaS, IaaS & PaaS
- Why we should care about AWS
- computer networks , Infrastructure of company
- IP addresses.

## Networking:

- Creating a VPC(virtual Private Cloud)
- Creating Private & Public Subnets
- Cloudfront
- Route53
- Securing VPC
- VPC peering
- Transit Gateway
- Updating and working with domain names

## EC2 (Elastic Compute Cloud):

- Explanation about EC2
- Creating Internet Gateways
- Creating security groups.
- Creating and assigning Elastic IPS

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## Identity Access Management:

- Introduction to IAM
- Configuring IAM via AWS Management Console
- Multi Factor Authentication
- AWS Security Token Service (STS)
- Configuring Routing & Route Tables

## ELB(Elastic Load Balancing):

- Characteristics of ELB
- Configuring ELB via AWS management Console
- Auto Scaling Features
- How Auto Scaling works
- Configuring Auto Scaling

## Logging & Monitoring Tools:

- CloudWatch
- Cloudtrail
- Trusted Advisor
- Systems manager

### **S3(Simple Storage Service):**

- Different storage types
- About Buckets and storing data
- Glaciers
- EFS
- Storage Gateway

### **Databases on AWS:**

- Introduction to Databases
- Amazon Relational Database Service (RDS)
- Create an RDS Database Instance
- Amazon RDS Read Replicas
- Amazon RDS Multi AZ Deployments

### **Serverless Architectures:**

- Cloud front
- Lambda

**We will assign/help with the required real time projects & assignments which includes all above Topics.**

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## **DevOps**

### **Devops Basics:**

- DevOps Culture End to End DevOps What, Why DevOps ?
- Continuous Integration

- Continuous Delivery
- Continuous Deployment
- Cloud Importance Principles of DevOps

## Devops Tools:

### GIT

- Version controllers basics
  - Why Version controllers
  - Installation & Configuration
  - Cloning repositories
  - Dealing with branches
- 
- Git commands
  - Git stash
  - Complete understanding of Github and Gitlab

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### Maven

- Introduction to build tools
- Importance of build tools
- Installation
- Working with build commands
- Build lifecycles
- Understanding artifacts
- Usage in CI/CD process

### Jenkins

- Jenkins installation
- Jenkins setup
- Creating users
- Managing permissions
- Creating Jobs
- Git integration
- Configuring Master Slave
- Emails server configuration
- Email notifications
- Automatic builds
- Creating Pipelines and Jenkins files

### Ansible

- Why Infra as Code
- Provisioning infrastructure with Code
- Ansible Introduction
- Installation Control Machine
- Configuration file
- YAML

- Command line
- Inventory
- Playbooks

## Docker

- Containers vs VMs
- Docker Introduction
- Docker Architecture
- Installing Docker
- Docker registry
- Docker commands
- Docker Compose

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- Docker Containers
- Docker Images
- Networking
- Docker Services
- Docker Swarm

## Kubernetes

- Kubernetes Introduction
- Microservice with Kubernetes
- Installing Kubernetes
- Pods
- Services
- YAML syntax
- Create Kubernetes Cluster
- Minikube Kubectl Commands
- Deploying Containerised apps to Kubernetes Cluster

## Monitoring using Prometheus and Grafana

- Introduction to Prometheus and Grafana
- Prometheus and Grafana Setup
- Monitoring using Prometheus
- Dashboard Visualization using Grafana
- Creating a Dashboard to monitor the Pipeline

## Provisioning using Terraform

- Introduction to Terraform
- Terraform vs Ansible
- Terraform Architecture
- Terraform Configuration
- Terraform Common Commands

## Artifact Repository - Nexus

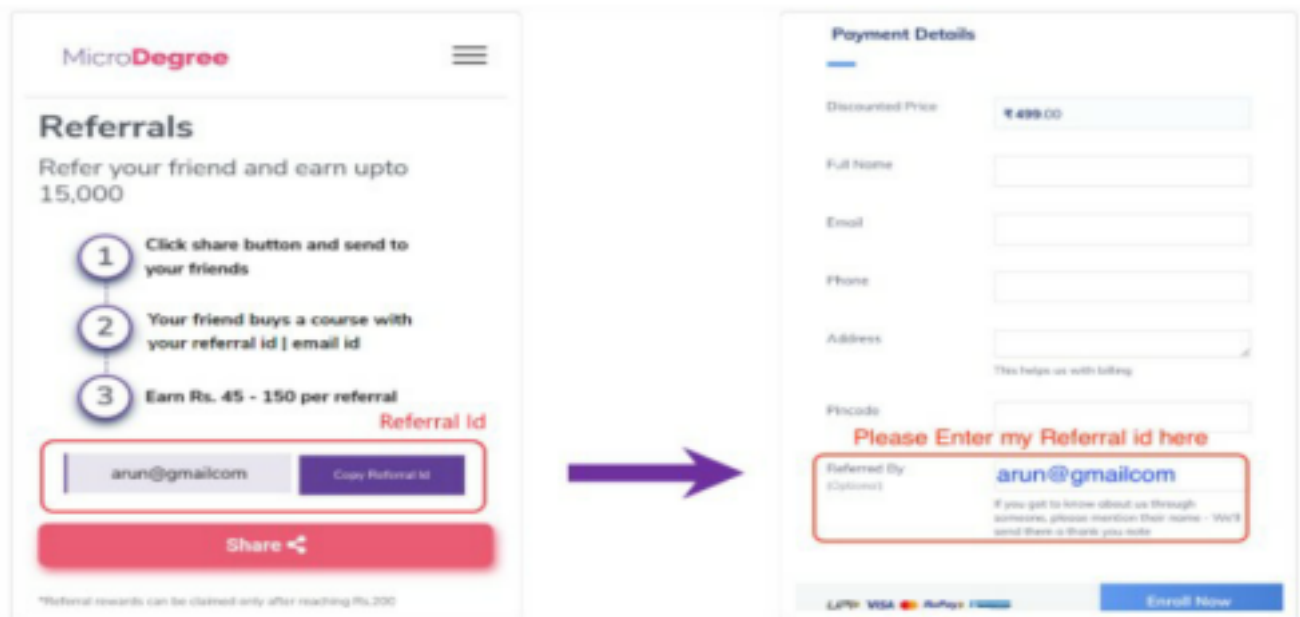
# Refer your friend & Earn

Upto Rs. 1000 per referral

## How It Works

- Ask your friend to use your EMAIL ID in referral box

### How it works



Share your referral id with your friend

Ask your friend to paste your referral id in payment page

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