**3-Day Bootcamp Syllabus**

**Day 1: Introduction to DevOps & AWS Basics**
Session 1: Theory (1.5 Hours)

- What is DevOps?
    - Definition, history, evolution, and importance
- DevOps Lifecycle
    - Plan, Develop, Build, Test, Release, Deploy, Operate, Monitor
- Cloud Computing Overview
    - Cloud models: IaaS, PaaS, SaaS
    - Benefits of AWS for DevOps

Session 2: Tools Overview & Practical (2.5 Hours)

- DevOps Tools: Git, Jenkins, Docker, Kubernetes, Terraform
- Hands-on with Git: Repository, commit, push, pull, branch, merge
- AWS Setup: Create an AWS Free Tier account, IAM basics

Session 3: CI/CD Pipeline & Q&A (2 Hours)

- CI/CD Pipeline Setup with Jenkins
- Q&A and recap

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**Day 2: Implementing DevOps with AWS**
Session 1: Theory (1.5 Hours)

- DevOps on AWS
    - AWS services for DevOps: CodeCommit, CodePipeline, CodeBuild, CodeDeploy, CloudFormation
- Containerization Overview
    - Introduction to Docker, Amazon ECS, and EKS

Session 2: Practical (2.5 Hours)

- Containerization with Docker: Install Docker, create a Dockerfile
- Deploying a CI/CD Pipeline on AWS using CodeBuild and CodeDeploy

Session 3: Q&A and Recap (1 Hour)

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**Day 3: Advanced DevOps Concepts & Pre-Hackathon**
Session 1: Theory (1.5 Hours)

- Infrastructure as Code (IaC)
    - Introduction to Terraform and CloudFormation
    - Benefits and real-world use cases
- Advanced Scaling
    - Auto-scaling groups and Load Balancing
    - Overview of Elastic Beanstalk

Session 2: Practical (2.5 Hours)

- IaC with CloudFormation: Deploy an application
- Auto-Scaling and Load Balancing setup
- Hands-On with Elastic Beanstalk

Session 3: Pre-Hackathon Q&A and Guidance (1 Hour)

- Overview of the hackathon objectives
- Tips for team collaboration and presentation

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## 24-Hour Hackathon:

The hackathon will be conducted over 24 hours, allowing participants to work on a real-world DevOps challenge using AWS and DevOps tools. The schedule will be customized based on college availability and requirements.