

DevAarambh: Kickstart Your DevOps Journey

Cohort Starts Date: 13th October 2024

Duration: 5 Weeks (Weekends Only)

Session Length: 2 Hours per Session

Format: Completely Online

Cost: Free

Eligibility: Exclusively for Engineering Students Currently Pursuing Their Degrees

Course Overview

Welcome to **DevAarambh**, an online program crafted to empower engineering students with essential DevOps skills. Over five weekends, this free cohort offers two-h

our online sessions that provide hands-on experience with key DevOps tools and practices, including Linux, Git & GitHub, Jenkins, Ansible, Docker, Kubernetes, Prometheus, and Grafana. Our goal is to bridge the gap between academic knowledge and industry demands, equipping you with the competencies needed for a successful technology career.

Why Join DevAarambh?

- **Completely Online:** Participate from anywhere with an internet connection.
- **Time-Efficient Sessions:** Each session is 2 hours, fitting seamlessly into your weekend schedule.
- **Cost-Free Learning:** Acquire valuable DevOps skills at no financial cost.
- **Exclusive for Engineering Students:** Tailored content to complement your academic studies.
- **Practical Experience:** Engage in hands-on labs and real-world projects.
- **Industry-Relevant Skills:** Learn tools and practices that are in high demand.
- **Certification Provided:** Receive a certificate upon successful completion of the course.
- **Networking Opportunities:** Connect with peers and industry professionals.

Course Schedule

Week 1: Linux Fundamentals and Introduction to DevOps

Day 1: Understanding DevOps and Linux Basics

- **Welcome and Orientation**
 - Introduction to the DevAarambh cohort.
 - Overview of course objectives and expectations.
- **Introduction to DevOps**
 - Understanding the DevOps culture and its industry significance.
- **Linux Fundamentals**
 - Introduction to the Linux operating system.
 - Basic command-line operations and filesystem navigation.

Day 2: Advanced Linux Operations

- **User and Permission Management**
 - Creating and managing users and groups.
 - Understanding file permissions and ownership.
- **Process and Networking Management**
 - Monitoring and managing system processes.
 - Basic networking concepts and commands.
- **Shell Scripting Basics**
 - Writing simple bash scripts.
 - Using variables, loops, and conditionals.

Week 2: Mastering Git & GitHub

Day 1: Version Control with Git

- **Introduction to Version Control Systems**
 - Importance of tracking code changes.
- **Basic Git Operations**
 - Initializing repositories and committing changes.
 - Branching, merging, and resolving conflicts.

Day 2: Collaboration with GitHub

- **Working with Remote Repositories**
 - Setting up a GitHub account.
 - Pushing to and pulling from GitHub.
- **Collaborative Workflows**
 - Forking repositories and creating pull requests.
 - Code reviews and best collaboration practices.

Week 3: Automating with Jenkins and Ansible

Day 1: Continuous Integration with Jenkins

- **Understanding CI/CD Pipelines**
 - The role of automation in software development.
- **Introduction to Jenkins**
 - Installing and configuring Jenkins.
 - Creating and managing build jobs.

Day 2: Configuration Management with Ansible

- **Getting Started with Ansible**
 - Understanding infrastructure as code.
 - Writing Ansible playbooks and managing inventories.
- **Advanced Ansible Features**
 - Using roles for scalable automation.
 - Encrypting data with Ansible Vault.

Week 4: Containerization with Docker and Orchestration with Kubernetes

Day 1: Docker Fundamentals

- **Understanding Containers**
 - Differences between virtual machines and containers.
- **Working with Docker**
 - Building, managing, and deploying Docker containers.
 - Using Docker Compose for multi-container applications.

Day 2: Kubernetes Deep Dive

- **Introduction to Kubernetes**
 - Kubernetes architecture and key concepts.
- **Deploying Applications**
 - Creating deployments, services, and managing pods.
- **Advanced Concepts**
 - Using ConfigMaps, Secrets, and Persistent Volumes.

Week 5: Monitoring with Prometheus and Visualization with Grafana

Day 1: Monitoring Fundamentals with Prometheus

- **Importance of Monitoring**
 - Key metrics and proactive monitoring strategies.
- **Working with Prometheus**
 - Installing and configuring Prometheus.
 - Writing queries with PromQL.

Day 2: Data Visualization with Grafana

- **Introduction to Grafana**
 - Setting up Grafana and connecting data sources.

- **Creating Dashboards**
 - Building dynamic and interactive visualizations.
- **Final Project**
 - Implementing a full monitoring solution for a sample application.

Who Should Attend?

- **Engineering Students:** Exclusively for students currently pursuing engineering degrees in fields like Computer Science, Information Technology, Electronics, or related disciplines.
- **Aspiring DevOps Professionals:** Students interested in exploring careers in DevOps, cloud computing, and automation.
- **Tech Enthusiasts:** Individuals eager to supplement academic knowledge with practical, industry-relevant skills.

How to Join

Registration is Free and Exclusive to Engineering Students.

To join the DevAarambh cohort:

- **Complete the Online Registration Form:**
 - Visit our website at <https://www.devaarambh.com/registration>.

Wait for the Response:

- Our team will review your application and select participants based on eligibility and availability.

Receive Confirmation:

- Upon selection, you will receive a confirmation email with additional details about the cohort.

Additional Course Features

- **Interactive Online Environment:** Engage in live discussions, Q&A sessions, and group activities via our online platform.
- **Resource Materials:** Access to lecture slides, code samples, and supplementary resources.
- **Certificate of Completion:** Receive a certificate recognizing your participation and achievements upon completing the course.
- **Career Guidance:** Insights into industry trends and advice on pursuing a career in DevOps.

Benefits of Participating

- **Enhance Your Skill Set:** Complement your engineering education with practical DevOps skills.

- **Real-World Applications:** Understand how DevOps tools and practices are applied in the industry.
- **Networking Opportunities:** Build connections with peers and professionals in the field.
- **Competitive Advantage:** Stand out in internships and job applications with hands-on experience.

Contact Information

For any queries or additional information:

- **Email:** Sarthak@devaarambh.com

Join Us Online and Transform Your Future

Embark on this exciting online journey with **DevAarambh** and equip yourself with the skills shaping the future of technology. Don't miss this opportunity to learn, grow, and advance your engineering career—all for free!

***Disclaimer:** This program is exclusively for educational purposes and aims to enhance the skills of engineering students. The schedule and content are subject to change based on participant needs and industry updates.*