DevOps Tasks & Instructions — CodeAlpha

🖥️ DevOps — Internship Overview

This internship program provides hands-on experience in DevOps practices and tools to streamline software development and deployment. CodeAlpha is a leading software development company focused on automation, continuous integration, and scalable infrastructure. The internship empowers students to work with CI/CD pipelines, containerization tools like Docker and Kubernetes, infrastructure as code, and cloud services. Interns will gain practical skills in monitoring, automation, and collaboration between development and operations teams, with expert guidance and real-world projects.

🎁 Internship Perks

- Internship Offer Letter
- Completion Certificate (QR Verified)
- Unique ID Certificate
- Letter of Recommendation (based on performance)
- Job Opportunities / Placement Support
- Resume Building Support

📌 Instructions for Interns

1. Share your internship status on **LinkedIn**, tagging **@CodeAlpha**.
2. Complete the **assigned projects** within the mentioned time frame.
3. Upload your complete source code to **GitHub** in a repository named:
   `CodeAlpha_ProjectName`
4. Post a **video explanation** of your project on LinkedIn with GitHub repo link.
5. Submit your completed task using the **Submission Form**.
6. **Complete any 3 or 2 out of the 4 tasks** listed below (from your domain).

📱 DevOps **Task List**

(Complete any 2 or 3 of the following tasks)

✅ TASK 1: CI/CD Pipeline using Azure

- Build an automated **CI/CD pipeline** with Azure Pipelines.
- Use **Azure Container Registry** for container storage.
- Deploy web apps via **Azure App Service** automatically.
- Monitor pipeline to ensure **smooth execution**.
- Learn key **DevOps concepts** using Azure tools.

✅ TASK 2: Jenkins Remoting Project

- Set up **Jenkins Remoting** to connect remote Jenkins nodes.
- Distribute build loads across different machines securely.
- Run jobs on **various architectures** remotely.
- Improve security using **node isolation**.
- Gain hands-on experience with Jenkins' **remote execution** capabilities.

✅ TASK 3: Java Application using Gradle

- Automate Java project builds using **Gradle**.
- Manage dependencies efficiently in the Java app.
- Integrate **CI/CD pipelines** for continuous delivery.
- Streamline build and deployment processes.
- Understand core **DevOps principles** in Java development.

✅ TASK 4: Web Server using Docker

- Learn **Docker containerization** basics.
- Deploy and manage a web server inside Docker containers.
- Understand container lifecycle and commands.
- Monitor container health and troubleshoot issues.
- Explore container-based app deployment best practices.

🚨 Important Note

Internship Completion Criteria:
To be eligible for the internship certificate, participants must complete a minimum of **two or three tasks**. Submitting only one task will be considered **incomplete** and certificates will **not** be issued in such cases.

📤 Submission Details

A submission form will be shared in your respective **WhatsApp group**. You are required to submit your completed task only through that form. Please follow the instructions mentioned in the form carefully to ensure your submission is accepted.

📞 Contact Information

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