DevOps Assessment

🚀 **DevOps Assessment Task – Yii2 + Docker Swarm + CI/CD + Ansible**

Objective:
Deploy a sample PHP Yii2 application using Docker Swarm and NGINX (host-based reverse proxy) on an AWS EC2 instance.
Automate setup using Ansible and implement CI/CD via GitHub Actions.

🛠️ **Task Breakdown:**

1. Application Deployment

- Use a sample Yii2 PHP application (can be minimal or from GitHub).

- Set up Docker Swarm mode on the EC2 instance.

- Containerize the Yii2 application using Docker.

- NGINX should run on the **host**, not in a container, and act as a reverse proxy to the Docker container(s).

2. CI/CD with GitHub Actions

- Trigger pipeline on **push to** `main` branch.

- Build and push Docker image to Docker Hub or GitHub Container Registry.

- SSH into the EC2 server.

- Pull the new image and update the Docker Swarm service.

- Optional: Implement rollback on failure.

3. Infrastructure Automation with Ansible

- Write Ansible playbook(s) to:

  - Install Docker, Docker Compose

  - Install NGINX, Git, PHP dependencies (if needed)

  - Initialize Docker Swarm

  - Configure NGINX with a reverse proxy to your Yii2 app

  - Clone the repo (if needed)

  - Deploy the app as a Swarm service

4. Deliverables

- GitHub repo with:

  - Dockerfile, docker-compose.yml

  - Ansible playbooks

  - `.github/workflows/deploy.yml` (GitHub Actions)

  - NGINX configuration file

  - README explaining:

    - Setup instructions

    - Assumptions

    - How to test deployment

🎯 **Bonus Points**

- Use GitHub Secrets for environment variables or SSH keys.

- Add health checks in your Docker setup.

- Add Prometheus + Node Exporter for basic monitoring.