DevOps Internship Assessment

Title: Containerize and Deploy a Next.js Application using Docker, GitHub Actions, and Minikube

Objective

This assessment tests your ability to:

- Containerize a Next.js application using Docker
- Automate build and image push using **GitHub Actions** and **GitHub Container Registry (GHCR)**
- Deploy the containerized app to **Kubernetes (Minikube)** using manifests

Requirements

1. **Create a Next.js application** (can be a simple starter template)
2. **Write a Dockerfile** to containerize the application with best practices
3. **Set up GitHub Actions workflow** to:
   - Build Docker image on push to main branch
   - Push image to GitHub Container Registry (GHCR)
   - Use proper image tagging
4. **Create Kubernetes manifests** in a k8s/ folder:
   - deployment.yaml - with replicas and health checks
   - service.yaml - to expose the application
5. **Document everything** in README.md with:
   - Setup instructions
   - Local run commands
   - Deployment steps for Minikube
   - How to access the deployed application

Submission

- **Create a PUBLIC GitHub repository**
- **Push all code, Dockerfile, workflows, and Kubernetes manifests** to the repository
- **Share the repository link** via email

Email Format:

- Subject: "DevOps Assessment Submission - [Your Name]"
- Include: Repository URL and GHCR image URL

Evaluation Focus

- Docker optimization
- GitHub Actions implementation
- Kubernetes configuration quality
- Documentation clarity