

# Phase 3: Automation - Package Management, Version Control & CI/CD

# **Objective:**

Phase 3 focuses on automating the deployment process and improving version control practices. You will create Helm charts, set up Git repositories, and implement CI/CD pipelines using Jenkins.

You can use minikube and local jenkins. In the next phase we will work to migrate it to the cloud.

#### Tasks:

# 1. Package Management with Helm:

- o Create a Helm chart for your Kubernetes application.
- o Publish the Helm chart to an artifact repository. advance

#### 2. Version Control with Git:

- Set up a Git repository for your project.
- o Create multiple branches and demonstrate common Git workflows.
- Resolve conflicts and manage pull requests.

## 3. CI/CD Pipeline:

- Use Jenkins to create a CI/CD pipeline.
- o Implement different stages in the pipeline (build, test, deploy).

### **Deliverables:**

Git repo link with all the files(Including previous stages)