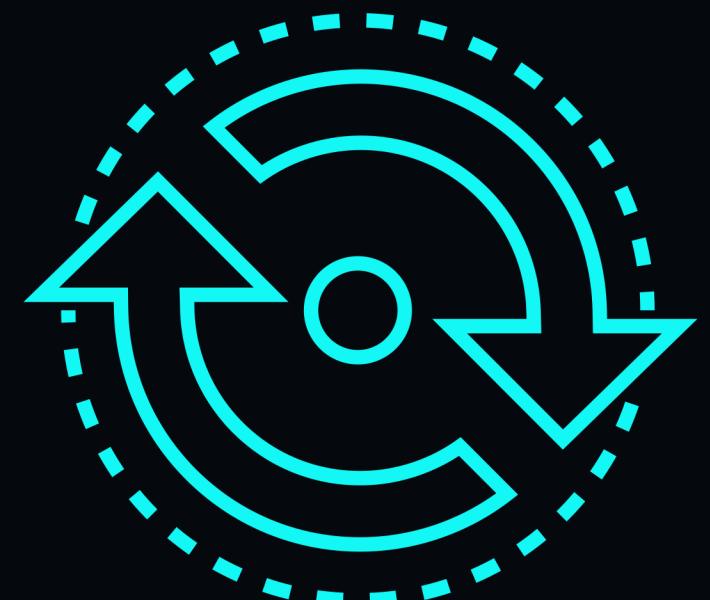


# HELM

- Helm is **a package manager and deployment tool for Kubernetes**, an orchestration platform for containerized applications.
- Helm simplifies the deployment, management, and scaling of applications within a Kubernetes cluster.
- Helm allows users to **easily install, upgrade, and manage applications in a consistent manner**, streamlining the deployment process and improving the overall Kubernetes experience.



# CONCEPT

- **Chart**: A Helm Chart is a package that contains all the necessary files to define, version, and share a Kubernetes application
- **Repository**: A Helm repository is a centralized location for storing and sharing Helm charts. Repositories provide a way to organize, version, and distribute charts for public or private use.
- **Release**: A release is a specific instance of a deployed Helm chart in a Kubernetes cluster

# PROBLEM WITHOUT HELM

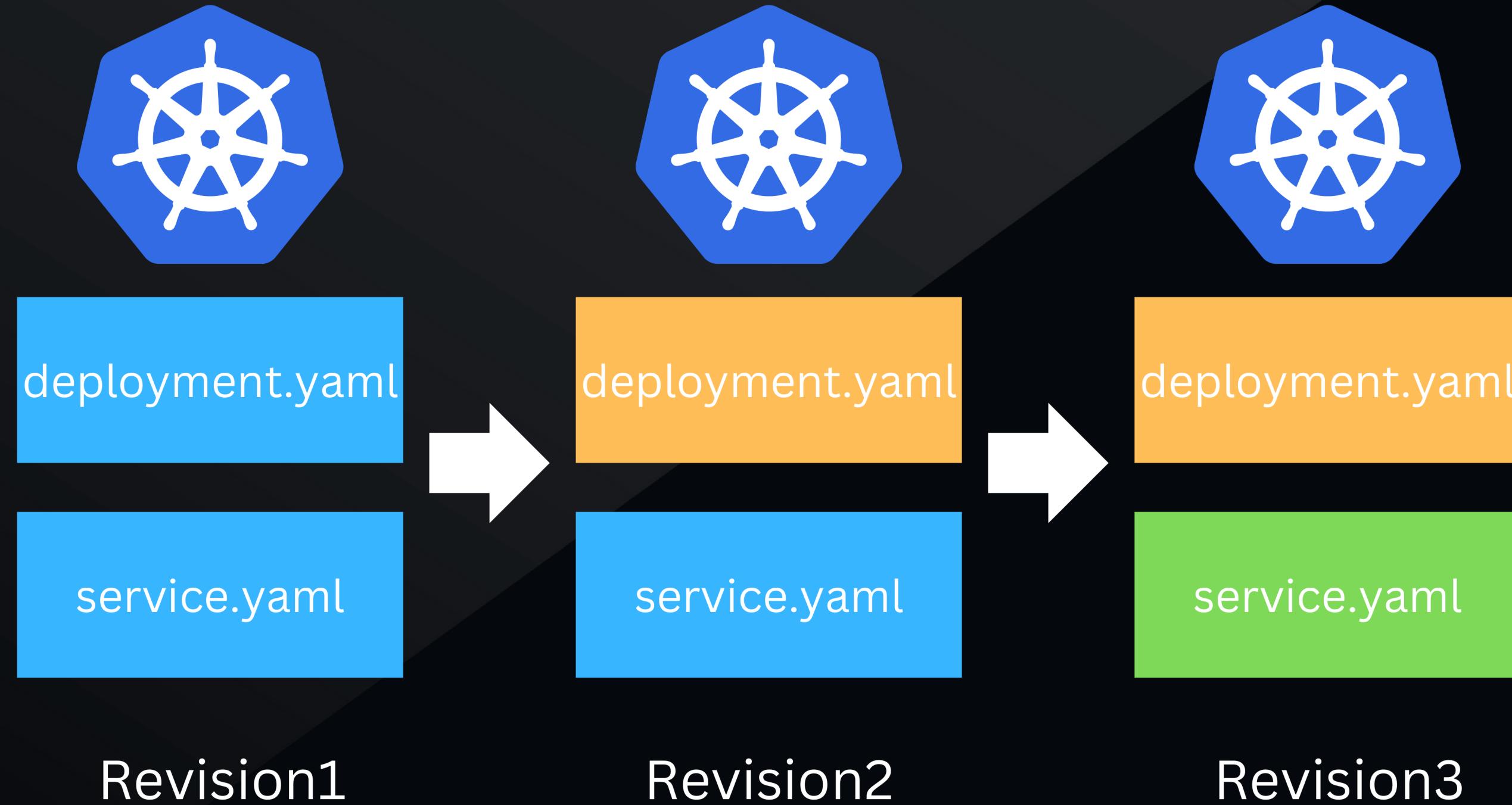
## Consistency



What if the developer use `kubectl edit`

# PROBLEM WITHOUT HELM

## Revision History

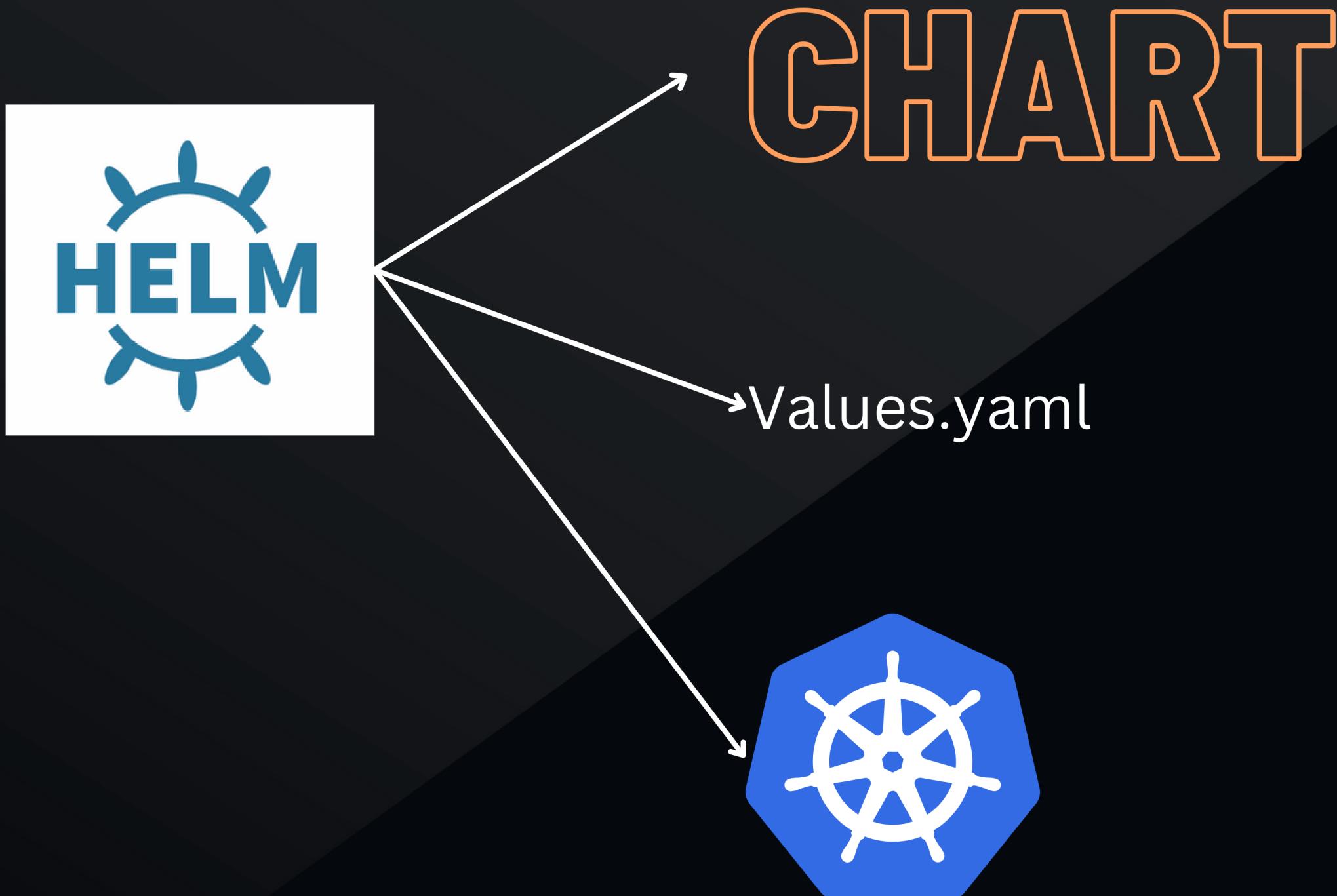


# PACKAGE MANAGER

- A package manager is a software tool that **automates the process of installing, upgrading, configuring, and removing software packages in a consistent manner**. Package managers simplify the management of software by handling dependencies, versioning, and configurations



# HOW IT WORKS



# INSTALLATION



```
1 # Installation doc  
2 https://helm.sh/docs/intro/install/  
3  
4 # for Mac  
5 brew install helm
```

# HELM REPO



```
1 # add chart repo
2 # helm repo add [name] [url]
3 helm repo add bitnami https://charts.bitnami.com/bitnami
4
5 # list the repo
6 helm repo list
7
8 # search repo
9 helm search repo bitnami
10 helm search repo wordpress
11
12 # update repo
13 helm repo update
```

# INSTALL APPLICATION



```
1 # install
2 helm install my-wordpress bitnami/wordpress
3
4 # optional - for minikube
5 minikube service my-wordpress --url
6
7 # check the deployment status
8 helm list
9
10 # uninstall
11 helm uninstall my-wordpress
12
```

# UPGRADE / ROLLBACK



```
1 # upgrade
2 helm upgrade my-wordpress bitnami/wordpress -f my-values.yaml
3
4 # rollback
5 helm rollback my-wordpress 1
```



```
1 # my-values.yaml
2 # ref: https://github.com/bitnami/charts/tree/main/bitnami/wordpress
3 replicaCount: 2
```