**SWE 645 Assignment – 3 (Extra Credit -2)**

RESTful Webservices and JPA - Setup Argo CD Application

**Team Members:**

Amulya Jaladi [G01394922]

Rakesh Badam [G01381556]

Sai Kumar Reddy Ambati [G01381823]

Guru Dwaraka Tej Vandavasi [G01380462]

Task 1: Create a helm chart for spring boot application.

First install Helm on the system and have the yaml file(a3ex.yaml) in same folder as helm.exe.

Now run below command in terminal:

*helm create helma3*

This will create a sample helm chart with given folder name.

Navigate to values.yaml and update:

Image and service as shown below: repository is docker image name.

A black background with green and red text

Description automatically generated

A black screen with text and numbers

Description automatically generated

Then open deployment.yaml under templates and remove path and port of liveliness Probe and readiness Probe.

Now save and push the changes to the git repository.

<https://github.com/ajaladi/swesurvey>

Task 2: Create Argo CD app locally

Install kubectl and give the permissions using below commands

* *curl -LO "https://dl.k8s.io/release/$(curl -L -s https://dl.k8s.io/release/stable.txt)/bin/darwin/arm64/kubectl"*
* *chmod 777 ./kubectl*

Now export your yaml file (a3ex.yaml)

* *export KUBECONFIG=/Users/amulyajaladi/Desktop/swesurvey/a3ex.yaml*

Create a namespace and the run the commands

* *./kubectl create ns argocd*
* *./kubectl apply -n argocd -f* [*https://raw.githubusercontent.com/argoproj/argo-cd/stable/manifests/install.yaml*](https://raw.githubusercontent.com/argoproj/argo-cd/stable/manifests/install.yaml)
* *kubectl patch svc argocd-server -n argocd -p '{"spec": {"type":"NodePort"}}'*

Now install argo CD cli

* *sudo install -m 555 argocd-darwin-arm64 /usr/local/bin/argocd*

*rm argocd-darwin-arm64*

Generate password

* *argocd admin initial-password -n argocd*

Now open argo CD locally

* *kubectl port-forward svc/argocd-server -n argocd 8080:443*

After running this command you should be able to acess argo CD from below url:

<https://localhost:8080/login>

Now give the password generated above and login.

Then click one new app and give name then select below options:

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

Once created synchronise the app. Now you can see the replicas in UI and also in rancher cluster.

Now when we make change in helm chart, we need to increase version value by 1 in chart.yaml and push the changes to git.

Argo CD will detect the changes and reflect them on cluster.

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated