**Required Steps to Deploy Service using Minikube + Kubernetes**

Tech Stack:

1. Install Docker
2. Install Minikube
3. Any application

* Create a Docker Image for an application

Steps:

1. Clone Git repository
2. Cd to project directory
3. Create an empty docker file and named as “Dockerfile” in the root project directory
4. Paste following content in Docker file (for any application using npm dependency manager)

FROM node:alpine

WORKDIR /app

COPY package.json ./

COPY package-lock.json ./

COPY ./ ./

RUN npm install --save

CMD ["npm", "run", "start"]

1. Run following command to build a new container image

**$docker build -t <docker-username>/<project-build-name> .**

1. Allow docker to build an image
2. Upload image to Docker hub (Can be done through docker UI)

* Deploying docker image to Minikube cluster using Kubernetes

Steps:

1. Run following command to start Minikube cluster:

**$minikube start**

1. Run following command once Minikube is started to create a service pod

**$kubectl create deployment <pod-name> --image=docker.io/<image-name>**

1. Run following command to view pods to ensure service is running

**$kubectl get po -A**

1. Run following command to expose the service to port

**$kubectl expose deployment <pod-name> --type=NodePort --port=80**

1. Run following command to forward service to view it on localhost

**$ kubectl port-forward <pod-name> 3000**