**Step-by-Step Tutorial: Sample Web App with Nginx + DockerHub**

**🛠 Step 1: Create a Simple Web Application**

We’ll make a basic index.html.

**Project Structure**

mywebapp/

├── index.html

└── Dockerfile

📄 **index.html**

<!DOCTYPE html>

<html>

<head>

<title>My Sample WebApp</title>

</head>

<body>

<h1>Hello, Kubernetes! 🚀</h1>

<p>This is a sample web app served with Nginx.</p>

</body>

</html>

**🛠 Step 2: Create a Dockerfile**

We’ll use the official **Nginx** image and copy our HTML file.

📄 **Dockerfile**

# Use the official Nginx image

FROM nginx:alpine

# Copy index.html to nginx default html location

COPY index.html /usr/share/nginx/html/index.html

# Expose port 80

EXPOSE 80

**🛠 Step 3: Build the Docker Image**

Navigate into the mywebapp/ folder and build the image.

cd mywebapp

docker build -t mydockerhubusername/mywebapp:1.0 .

*(Replace mydockerhubusername with your actual DockerHub username.)*

**🛠 Step 4: Test Locally**

Run the container locally:

docker run -d -p 8080:80 mydockerhubusername/mywebapp:1.0

Open browser → <http://localhost:8080>  
You should see **Hello, Kubernetes! 🚀**

**🛠 Step 5: Push to DockerHub**

1. Login to DockerHub:
2. docker login
3. Push your image:
4. docker push mydockerhubusername/mywebapp:1.0

Now your image is live on DockerHub 🎉

**🛠 Step 6: Deploy to Kubernetes**

Now we’ll create Deployment + Service YAML files.

📄 **deployment.yaml**

apiVersion: apps/v1

kind: Deployment

metadata:

name: webapp-deployment

spec:

replicas: 2

selector:

matchLabels:

app: webapp

template:

metadata:

labels:

app: webapp

spec:

containers:

- name: webapp

image: mydockerhubusername/mywebapp:1.0

ports:

- containerPort: 80

📄 **service.yaml**

apiVersion: v1

kind: Service

metadata:

name: webapp-service

spec:

selector:

app: webapp

ports:

- protocol: TCP

port: 80

targetPort: 80

type: NodePort

**🛠 Step 7: Apply to Kubernetes**

kubectl apply -f deployment.yaml

kubectl apply -f service.yaml

Check status:

kubectl get pods

kubectl get svc

If you’re using **Minikube**:

minikube service webapp-service

✅ Done! You have:

* Built a simple HTML web app
* Served it with Nginx
* Dockerized it
* Pushed to DockerHub
* Deployed on Kubernetes 🎉