UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

APPLICATION CONTAINERIZATION AND ORCHESTRATION LAB

COURSE: B.Tech CSE (Devops)

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Lab Exercise 8– Creating Service in Kubernetes

Below is a lab exercise that will help you understand and practice creating a service in Kubernetes:

Task 1: Start Kubernetes in Docker-Desktop

- Start Kubernetes service in Docker-Desktop

Task 2: Creating a Service

Create a service to expose the deployed application within the Kubernetes cluster. You can use the following sample YAML manifest as a reference:

- Verify that the service is created by running the following command:

```
priyanshurai@MacBook-Air Kubernetes_lab % kubectl apply -f service.yaml
service/my-nginx-service created
priyanshurai@MacBook-Air Kubernetes_lab % kubectl get services
NAME               TYPE        CLUSTER-IP     EXTERNAL-IP   PORT(S)        AGE
kubernetes         ClusterIP   10.96.0.1      <none>        443/TCP        45m
my-nginx-service   NodePort    10.98.78.61    <none>        80:30001/TCP   9s
priyanshurai@MacBook-Air Kubernetes_lab %
```

Task 4: Accessing the Service

- Access the service using port forwarding. Run the following command:

Access the Nginx server running in the service by opening a web browser and navigating to
http://localhost: 30001
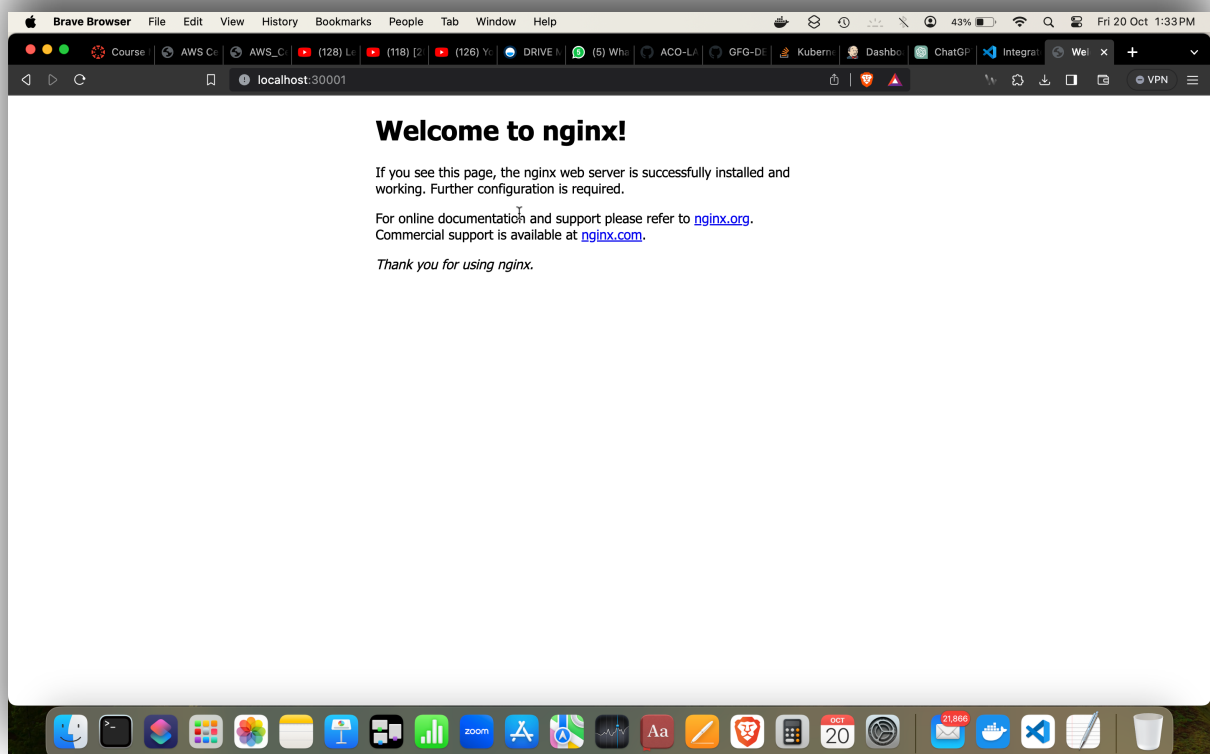
Task 5: Deleting the Service

```
priyanshurai@MacBook-Air Kubernetes_lab % kubectl delete service my-nginx-service
service "my-nginx-service" deleted
```

Task 6: Documentation and Best Practices

Document your findings and the best practices for creating and managing services in Kubernetes.

Through this exercise, you'll gain a better understanding of how to create and manage services to expose applications within a Kubernetes cluster. Adjust the exercise based on your specific use case and requirements.