PRATHEEK U B
289226

KUBERNETES ASSIGNMENT -3

Exercise 5: Create and Use a Secret

Objective: Store sensitive data using Secrets and use it in a pod.

Steps & Commands:

1. **Create a Secret for database credentials:**

```
kubectl create secret generic db-secret --from-literal=DB_USER=admin
--from-literal=DB_PASS=password123
```

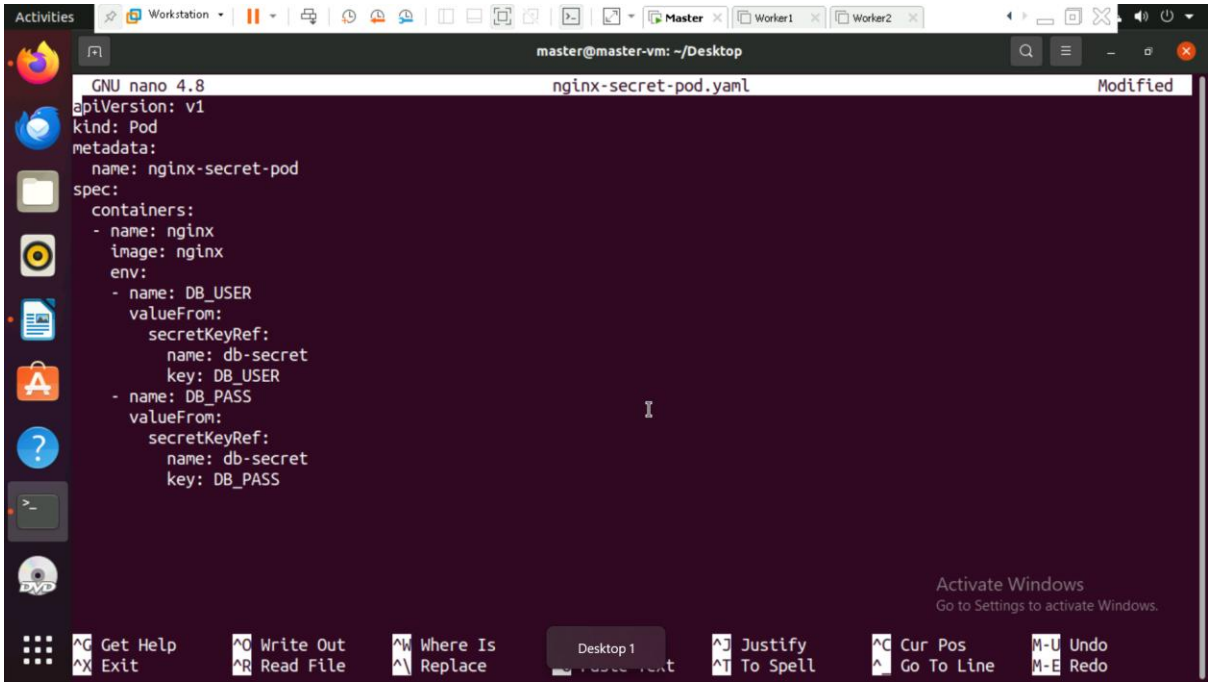
2. **Verify the Secret:**

```
kubectl get secrets
kubectl describe secret db-secret
```

3. **Create a Pod that uses the Secret (`nginx-secret-pod.yaml`):**

```
apiVersion: v1
kind: Pod
metadata:
  name: nginx-secret-pod
spec:
  containers:
  - name: nginx
    image: nginx
    env:
    - name: DB_USER
      valueFrom:
        secretKeyRef:
          name: db-secret
          key: DB_USER
    - name: DB_PASS
      valueFrom:
        secretKeyRef:
```

```
      name: db-secret
      key: DB_PASS
```



4. **Deploy the pod:**

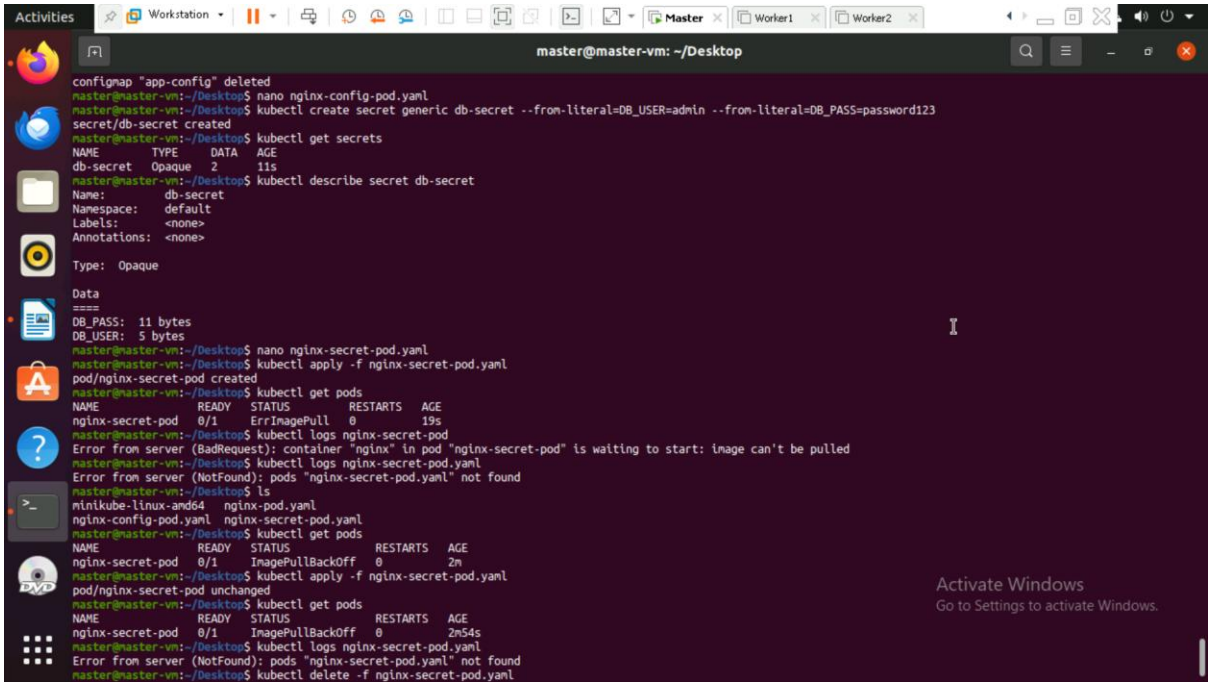
```
kubectl apply -f nginx-secret-pod.yaml
```

5. **Check the pod and logs:**

```
kubectl get pods
kubectl logs nginx-secret-pod
```

6. **Delete the pod and Secret:**

```
kubectl delete -f nginx-secret-pod.yaml
kubectl delete secret db-secret
```



Exercise 6: Create and Expose a Service

Objective: Deploy an application and expose it using a service.

Steps & Commands:

1. **Create a deployment:**

   ```
   kubectl create deployment webapp --image=nginx
   ```

2. **Expose the deployment using a service:**

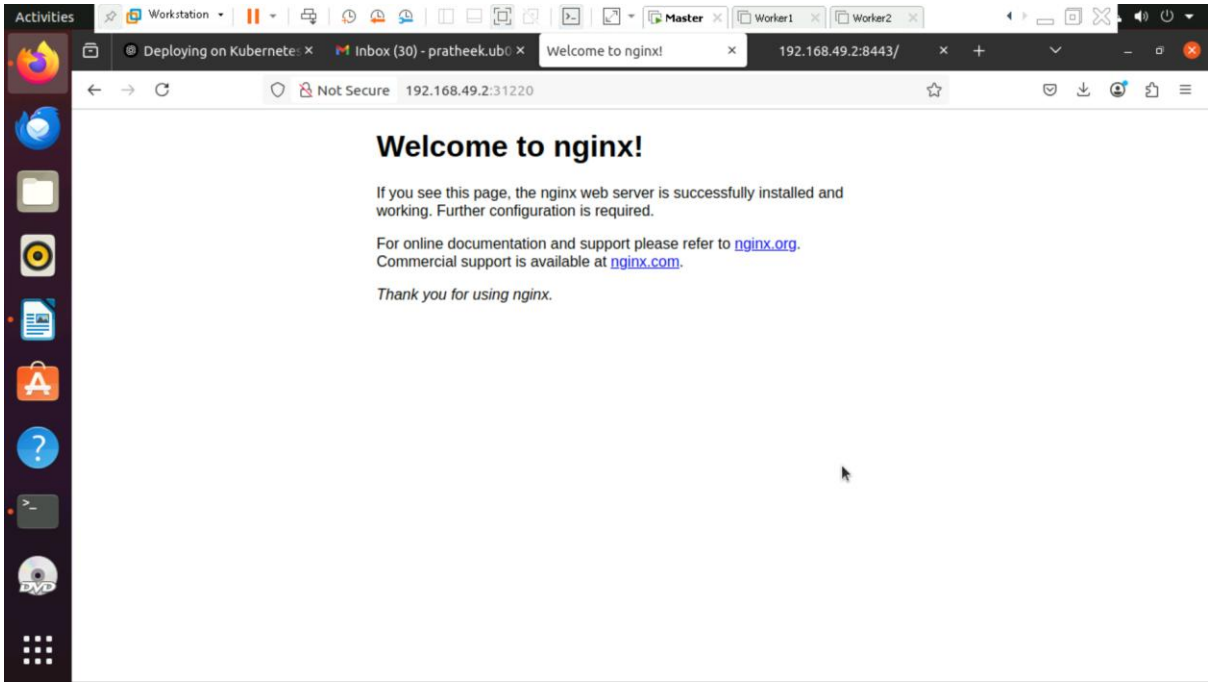
   ```
   kubectl expose deployment webapp --type=NodePort --port=80
   ```

3. **Get service details:**

   ```
   kubectl get svc webapp
   ```

4. **Access the service (Minikube users):**

   ```
   minikube service webapp –url
   ```



5. **Delete the service and deployment:**

```
kubectl delete svc webapp
kubectl delete deployment webapp
```