Lab 4 K8s

1. How many ConfigMaps exist in the cluster?
2. Create a new ConfigMap Use the spec given below.
    - ➔ ConfigName Name: webapp-config-map
    - ➔ Data: APP_COLOR=darkblue
3. Create a webapp-color POD with nginx image and use the created ConfigMap
4. How many Secrets exist in the cluster?
5. How many secrets are defined in the default-token secret?
6. create a POD called db-pod with the image mysql:5.7 then check the POD status
7. why is the db-pod status not ready?
8. Create a new secret named db-secret with the data given below:
    - ➔ Secret Name: db-secret
    - ➔ Secret 1: MYSQL_DATABASE=sql01
    - ➔ Secret 2: MYSQL_USER=user1
    - ➔ Secret 3: MYSQL_PASSWORD=password
    - ➔ Secret 4: MYSQL_ROOT_PASSWORD=password123
9. Configure db-pod to load environment variables from the newly created secret. Delete and recreate the pod if required.
10. Create a multi-container pod with 2 containers.
    - ➔ Name: yellow
    - ➔ Container 1 Name: lemon
    - ➔ Container 1 Image: busybox
    - ➔ Container 2 Name: gold
    - ➔ Container 2 Image: redis
11. Create a pod red with redis image and use an initContainer that uses the busybox image and sleeps for 20 seconds
12. Create a pod named print-envars-greeting, Configure spec as, the container name should be print-env-container and use bash image, Create three environment variables:
    - ➔ GREETING and its value should be “Welcome to”
    - ➔ COMPANY and its value should be “DevOps”
    - ➔ GROUP and its value should be “Industries”

    Use command to echo ["$(GREETING) $(COMPANY) $(GROUP)"] message and sleep the container 3600.
13. You can check the output using <kubctl logs -f [pod-name]> command.
14. Create a pod with a container running the `nginx` image.
    - ➔ Configure a `startupProbe` that checks if Nginx is ready using `curl`.
    - ➔ Set the probe to check every 5 seconds with a failure threshold of 3.
    - ➔ What happens if the container takes longer to start than expected?
15. Deploy an Nginx pod with a **livenessProbe** that checks `/`
16. What happens to the pod?
17. Edit the **livenessProbe** inside the pod to /test.html.
18. What happens to the pod after the edit?

19. Create a pod running a simple Node.js web server.
20. Use a **readinessProbe** to check the HTTP endpoint (`/health`).
21. Test what happens when the application is **not ready**.S