A Namespace in Kubernetes is a virtual cluster inside the main physical cluster.

You can separate environments like:

    dev, test, prod

Default namespaces:

        default → for normal workloads

        kube-system → for system components (e.g., kube-dns)

        kube-public → visible to all (used rarely)

        kube-node-lease → used for heartbeats

YAML Example (Create a Namespace)

```
apiVersion: v1
kind: Namespace
metadata:
  name: dev
```

Declare Namespace in the YAML (metadata.namespace)
📄 Example: Pod in a Specific Namespace

```
apiVersion: v1
kind: Pod
metadata:
  name: mypod
  namespace: dev   # 👈 This puts the Pod in the 'dev' namespace
spec:
  containers:
    - name: nginx
      image: nginx
```

Bonus: Set Default Namespace in Context (Optional)

```
kubectl config set-context --current --namespace=dev
```

```
kubectl apply -f pod.yaml -n dev
kubectl get pods -n dev
```

```
kubectl get namespaces

kubectl create namespace myteam

kubectl delete namespace dev

kubectl get pods --namespace=dev

kubectl config set-context --current --namespace=dev
```