

Setup minikube at your local and explore creating namespaces (Go through official documentation). **Techstacks needs to be used :**

- Vbox, WSL
- Docker
- Minikube
- Kubectl

If the Local system has any issues you can use AWS.

- AWS EC2 (t2.medium)

```
Command Prompt
Microsoft Windows [Version 10.0.26100.3476]
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C:\Users\Palla> minikube start
* minikube v1.35.0 on Microsoft Windows 11 Home Single Language 10.0.26100.3476 Build 26100.3476
* Using the docker driver based on existing profile
* Starting "minikube" primary control-plane node in "minikube" cluster
* Pulling base image v0.0.46 ...
* Restarting existing docker container for "minikube" ...
! Failing to connect to https://registry.k8s.io/ from inside the minikube container
* To pull new external images, you may need to configure a proxy: https://minikube.sigs.k8s.io/docs/reference/networking/proxy/
* Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
* Verifying Kubernetes components...
  - Using image gcr.io/k8s-minikube/storage-provisioner:v5
  - Using image docker.io/kubernetes/dashboard:v2.7.0
  - Using image docker.io/kubernetes/metrics-scraper:v1.0.8
* Some dashboard features require the metrics-server addon. To enable all features please run:

    minikube addons enable metrics-server

* Enabled addons: storage-provisioner, default-storageclass, dashboard
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default

C:\Users\Palla> sudo choco install kubernetes-cli
Operation was cancelled by the user

C:\Users\Palla> kubectl create namespace Flower
The Namespace "Flower" is invalid: metadata.name: Invalid value: "Flower": a lowercase RFC 1123 label must consist of lower case alphanumeric characters or '-', and must start and end with an alphanumeric character (e.g. 'my-name', or '123-abc', regex used for validation is '[a-z0-9]([-a-z0-9]*[a-z0-9])?')

C:\Users\Palla> kubectl create namespace flower
namespace/flower created

C:\Users\Palla> kubectl get namespaces
```

```
C:\Users\Palla> kubectl config set-context --current --namespace=flower
Context "minikube" modified.

C:\Users\Palla> vi pods.yaml
'vi' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Palla> vim pods.yaml
'vim' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Palla> notepad.yaml
'notepad.yaml' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Palla> notepad pods.yaml
```

```
C:\Users\Palla> vi pods.yaml
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C:\Users\Palla> notepad pods.yaml

C:\Users\Palla> cat pods.yaml
'cat' is not recognized as an internal or external command,
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C:\Users\Palla>kubectl apply -f pods.yaml
pod/nginx-pod created

C:\Users\Palla>kubectl get pods
NAME      READY   STATUS    RESTARTS   AGE
nginx-pod  1/1     Running   0           22s

C:\Users\Palla>
```



```
apiVersion: v1
kind: Pod
metadata:
  name: nginx-pod
  labels:
    app: nginx
spec:
  containers:
    - name: nginx-container
      image: nginx:1.21.6
      ports:
        - containerPort: 80
```