

Basic Pod YAML Example

```
apiVersion: v1
kind: Pod
metadata:
  name: mypod
spec:
  containers:
  - name: nginx-container
    image: nginx
    ports:
    - containerPort: 80
```

Pod Template

✅ What is a Pod Template?

A Pod Template is the Pod definition that is used inside other resources like:

Deployments

ReplicaSets

Jobs

DaemonSets

It's not a standalone object. It's used to define how Pods should be created.

Pod Template Example (inside a Deployment)

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: nginx-deploy
spec:
  replicas: 3
  selector:
    matchLabels:
      app: nginx
  template: # 📁 Pod Template starts here
    metadata:
      labels:
        app: nginx
    spec:
      containers:
      - name: nginx
        image: nginx:latest
```

```
apiVersion: v1
kind: Pod
metadata:
  name: labeled-pod
  labels:
    app: web
    env: dev
spec:
```

```
containers:
  - name: web-container
    image: nginx
```

Pod with Environment Variables

```
apiVersion: v1
kind: Pod
metadata:
  name: env-pod
spec:
  containers:
    - name: app-container
      image: busybox
      command: ["sh", "-c", "echo Hello $MY_NAME && sleep 3600"]
      env:
        - name: MY_NAME
          value: "DevOps Student"
```

Pod with Volume Mount

```
apiVersion: v1
kind: Pod
metadata:
  name: volume-pod
spec:
  containers:
    - name: volume-container
      image: nginx
      volumeMounts:
        - name: html
          mountPath: /usr/share/nginx/html
  volumes:
    - name: html
      hostPath:
        path: /data/html
```

Multi-container Pod (Sidecar Pattern)

```
apiVersion: v1
kind: Pod
metadata:
  name: sidecar-pod
spec:
  containers:
    - name: main-container
      image: nginx
    - name: sidecar
      image: busybox
      command: ["sh", "-c", "while true; do echo Hello; sleep 5; done"]
```

Pod with Resource Limits

```
apiVersion: v1
kind: Pod
metadata:
  name: limited-pod
spec:
  containers:
```

```
- name: app
  image: nginx
  resources:
    requests:
      memory: "64Mi"
      cpu: "250m"
    limits:
      memory: "128Mi"
      cpu: "500m"
```