Basic Deployment YAML Example

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: nginx-deployment
spec:
  replicas: 3  # Number of Pods to run
  selector:
    matchLabels:
      app: nginx  # Select Pods with the label 'app=nginx'
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
        - name: nginx
          image: nginx:latest
          ports:
            - containerPort: 80
```

Basic ReplicaSet YAML Example

```
apiVersion: apps/v1
kind: ReplicaSet
metadata:
  name: nginx-replicaset
spec:
  replicas: 3  # Number of Pods to maintain
  selector:
    matchLabels:
      app: nginx  # Match Pods with label 'app=nginx'
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
        - name: nginx
          image: nginx:latest
          ports:
            - containerPort: 80
```

```
# Deployments commands
# Create a Deployment from a YAML file
kubectl apply -f deployment.yaml

# List all Deployments
kubectl get deployments

# Get detailed information about a Deployment
kubectl describe deployment <deployment-name>

# Scale a Deployment to N replicas (e.g., 5 replicas)
kubectl scale deployment <deployment-name> --replicas=5

# Update a Deployment image (e.g., change the image of a container)
kubectl set image deployment/<deployment-name> <container-name>=<new-image>
```

```
# Rollback a Deployment to the previous version
kubectl rollout undo deployment/<deployment-name>

# Check the status of a Deployment rollout
kubectl rollout status deployment/<deployment-name>

# Get Pods managed by a Deployment (using label selector)
kubectl get pods -l app=<label-name>


# ReplicaSets commands
# Create a ReplicaSet from a YAML file
kubectl apply -f replicaset.yaml

# List all ReplicaSets
kubectl get replicasets

# Get detailed information about a ReplicaSet
kubectl describe replicaset <replicaset-name>

# Scale a ReplicaSet to N replicas (e.g., 3 replicas)
kubectl scale replicaset <replicaset-name> --replicas=3

# Get Pods managed by a ReplicaSet (using label selector)
kubectl get pods --selector=<label-selector>


# Pods commands
# List all Pods
kubectl get pods

# Get detailed information about a Pod
kubectl describe pod <pod-name>

# Delete a Pod
kubectl delete pod <pod-name>

# Get logs of a Pod
kubectl logs <pod-name>

# Get Pods by label selector
kubectl get pods -l app=<label-name>

# Get all resources (Pods, Deployments, Services, etc.)
kubectl get all

# Get all resources in a specific namespace
kubectl get all -n <namespace-name>

# Delete a Deployment
kubectl delete deployment <deployment-name>

# Delete a ReplicaSet
kubectl delete replicaset <replicaset-name>

# Show rollout history of a Deployment
kubectl rollout history deployment/<deployment-name>
```