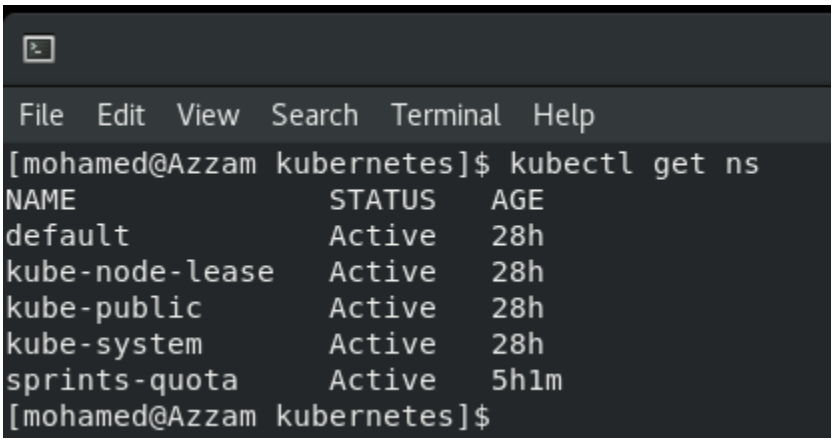
1- How many namespaces exist on the system?



2- How many pods exist in the kube-system namespace?

```
[mohamed@Azzam kubernetes]$ kubectl get po --namespace=kube-system
NAME                               READY   STATUS    RESTARTS        AGE
coredns-565d847f94-9vqtm           1/1     Running   0               28h
etcd-minikube                      1/1     Running   0               28h
kube-apiserver-minikube            1/1     Running   0               28h
kube-controller-manager-minikube   1/1     Running   0               28h
kube-proxy-xkfbc                   1/1     Running   0               28h
kube-scheduler-minikube            1/1     Running   0               28h
storage-provisioner                1/1     Running   1 (6h12m ago)   28h
[mohamed@Azzam kubernetes]$
```

3- create a Deployment with name= deployment-1 image= busybox replicas= 3

```
File  Edit  View  Search  Term
apiVersion: apps/v1
kind: Deployment
metadata:
  name: deployment-1
  labels:
    app: busybox
spec:
  replicas: 3
  selector:
    matchLabels:
      app: busybox
  template:
    metadata:
      labels:
        app: busybox
    spec:
      containers:
      - name: busybox-1
        image: busybox
        tty: true
```

```
[mohamed@Azzam kubernetes]$ vim deployment.yaml
[mohamed@Azzam kubernetes]$ vim deployment-1.yaml
[mohamed@Azzam kubernetes]$ kubectl apply -f deployment-1.yaml
deployment.apps/deployment-1 created
[mohamed@Azzam kubernetes]$
```

4- How many Deployments and ReplicaSets exist on the system now?

```
[mohamed@Azzam kubernetes]$ kubectl get deployment
NAME              READY   UP-TO-DATE   AVAILABLE   AGE
deployment-1      3/3     3            3           87s
nodeapp-sprints   3/3     3            3           21h
[mohamed@Azzam kubernetes]$
```

5- How many pods are ready with the deployment-1

```
[mohamed@Azzam kubernetes]$ kubectl get pods --show-labels
NAME                              READY   STATUS    RESTARTS   AGE     LABELS
deployment-1-56cfc67856-bbhd4     1/1     Running   0          2m35s   app=busybox,pod-template-hash=56cfc67856
deployment-1-56cfc67856-h5xll     1/1     Running   0          2m35s   app=busybox,pod-template-hash=56cfc67856
deployment-1-56cfc67856-hdbph     1/1     Running   0          2m35s   app=busybox,pod-template-hash=56cfc67856
frontend-4crh8                    1/1     Running   0          27h     tier=frontend
frontend-6r5mn                    1/1     Running   0          27h     tier=frontend
frontend-dqbrs                    1/1     Running   0          27h     tier=frontend
frontend-h9ss7                    1/1     Running   0          27h     tier=frontend
frontend-zhjcq                    1/1     Running   0          27h     tier=frontend
nodeapp-sprints-76db686699-2bqsl  1/1     Running   0          8h      app=nodeapp,pod-template-hash=76db686699
nodeapp-sprints-76db686699-dppk2  1/1     Running   0          8h      app=nodeapp,pod-template-hash=76db686699
nodeapp-sprints-76db686699-hp7cx  1/1     Running   0          21h     app=nodeapp,pod-template-hash=76db686699
webserver                         1/1     Running   0          28h     <none>
[mohamed@Azzam kubernetes]$
```

6- Update deployment-1 image to nginx then check the ready pods

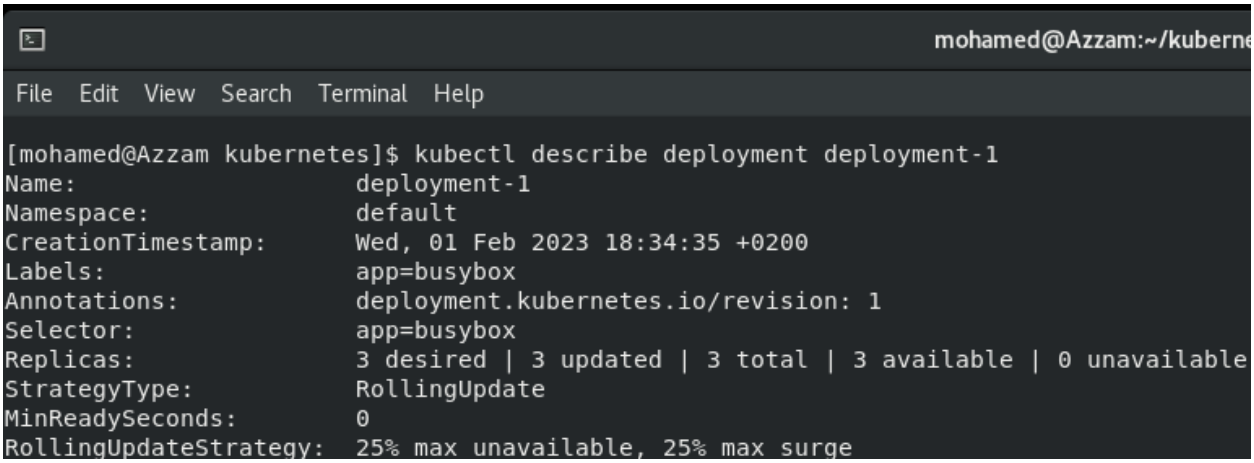
```
Activities  Terminal

File  Edit  View  Search  Terminal  Help
[mohamed@Azzam kubernetes]$ kubectl get deployment
NAME               READY   UP-TO-DATE   AVAILABLE   AGE
deployment-1       3/3     3            3           7m42s
nodeapp-sprints    3/3     3            3           21h
[mohamed@Azzam kubernetes]$
```

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: deployment-1
  labels:
    app: nginx
spec:
  replicas: 3
  selector:
    matchLabels:
      app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
      - name: nginx-1
        image: nginx
        tty: true
```

7- Run kubectl describe deployment deployment-1 and check events

What is the deployment strategy used to upgrade the deployment-1?



10- Create a deployment with Name: dev-deploy Image: redis Replicas: 2 Namespace: dev Resources Requests: CPU: .5 vcpu Mem: 1G Resources Limits: CPU: 1 v cpu Mem: 2G

```yaml
  name: dev-deployment
  labels:
    app: redis
spec:
  replicas: 2
  selector:
    matchLabels:
      app: redis
  template:
    metadata:
      namespace: dev
      labels:
        app: redis
    spec:
      containers:
      - name: redis
        image: redis
        resources:
          requests:
            memory: "1Gi"
            cpu: "1"
          limits:
            memory: "2Gi"
            cpu: "5"
```