1- How many Namespaces exist on the system?
2- How many pods exist in the `kube-system` namespace?

```
controlplane:~$ kubectl get namespaces
NAME                STATUS   AGE
default             Active   30d
kube-node-lease     Active   30d
kube-public         Active   30d
kube-system         Active   30d
local-path-storage  Active   30d
controlplane:~$ kubectl get pods -n kube-system
NAME                                        READY   STATUS    RESTARTS       AGE
calico-kube-controllers-fdf5f5495-dgc76     1/1     Running   2 (20m ago)    30d
canal-9hc7x                                 2/2     Running   2 (20m ago)    30d
canal-b5cnm                                 2/2     Running   2 (20m ago)    30d
coredns-7695687499-2vdd4                    1/1     Running   1 (20m ago)    30d
coredns-7695687499-ltw2v                    1/1     Running   1 (20m ago)    30d
etcd-controlplane                           1/1     Running   3 (20m ago)    30d
kube-apiserver-controlplane                 1/1     Running   2 (20m ago)    30d
kube-controller-manager-controlplane        1/1     Running   2 (20m ago)    30d
kube-proxy-f7jnk                            1/1     Running   2 (20m ago)    30d
kube-proxy-fbkjh                            1/1     Running   1 (20m ago)    30d
kube-scheduler-controlplane                 1/1     Running   2 (20m ago)    30d
controlplane:~$
```

3- Create a deployment with
   Name: beta
   Image: redis
   Replicas: 2
   Namespace: finance
   Resources Requests:
      CPU: .5 vcpu
      Mem: 1G
    Resources Limits:
      CPU: 1 vcpu
      Mem: 2G

```yaml
Editor    Tab1    +
apiVersion: apps/v1
kind: Deployment
metadata:
  name: beta
  namespace: finance
spec:
  replicas: 2
  selector:
    matchLabels:
      app: beta
  template:
    metadata:
      labels:
        app: beta
    spec:
      containers:
        - name: redis
          image: redis
          resources:
            requests:
              memory: "1Gi"
              cpu: "500m"
            limits:
              memory: "2Gi"
              cpu: "1"
~
~
~
~
~
```

```
controlplane:~$ kubectl create namespace finance
namespace/finance created
controlplane:~$ kubectl apply -f file.yaml
deployment.apps/beta created
controlplane:~$
```

4- How many Nodes exist on the system?

5- Do you see any taints on `master`?

6- Apply a label `color=blue` to the master node

```
controlplane:~$ kubectl get nodes
NAME            STATUS    ROLES           AGE    VERSION
controlplane    Ready     control-plane   30d    v1.32.1
node01          Ready     <none>          30d    v1.32.1
controlplane:~$ kubectl describe node controlplane | grep Taints
Taints:              <none>
controlplane:~$ kubectl label nodes controlplane color=blue
node/controlplane labeled
```