

## Kubernetes cluster creation and deployment yaml :-

1. create a Kubernetes services cluster in azure portal
2. Go to visual studio code and save file with .yaml
3. This is a sample code it will be like this

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: nginx-deployment
spec:
  replicas: 7
  selector:
    matchLabels:
      app: nginx
  strategy:
    type: RollingUpdate
    rollingUpdate:
      maxSurge: 1
      maxUnavailable: 1
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
        - name: nginx
          image: nginx:1.14.2
          ports:
            - containerPort: 80
          readinessProbe:
            httpGet:
              path: /
              port: 80
          resources:
            requests:
              cpu: "50m"
              memory: "64Mi"
            limits:
              cpu: "70m"
```

```

        memory: "128Mi"
    volumeMounts:
      - name: nginx-pv
        mountPath: /data
    volumes:
      - name: nginx-pv
        persistentVolumeClaim:
          claimName: nginx-pvc
---
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: nginx-pvc
spec:
  accessModes:
    - ReadWriteOnce
  resources:
    requests:
      storage: 1Gi
---
apiVersion: v1
kind: Service
metadata:
  name: nginx-service
spec:
  selector:
    app: nginx
  ports:
    - protocol: TCP
      port: 80
      targetPort: 80
  type: LoadBalancer

```

Save this file and open terminal connect to portal - az login

4. Use this command it will connect your local code to portal kubernetes cluster

```
az aks get-credentials --resource-group <ResourceGroupName> --name <ClusterName>
```

5. Use this command to :- kubectl apply -f nginx-deployment.yaml

6. `kubectl get svc`
7. `kubectl describe svc nginx-service`
8. `Kubectl get pods`

**Task is :-**

write an yaml code for deployment yaml my requirements are

1. Deployment Yaml
2. take Nginx version should be V1 latest server
3. Take volumes PV,PVC
4. use this Readiness Probe
5. Replicas must be 7
6. use Strategy - rolling update
7. Rollback to version nginx V2 - 1.14.2
8. Request cpu:- 50m , Memory :- 64 mi  
limit cpu:- 70m , Memory :- 128 mi

for this give me an yaml code. and also tell me the step by step process of how to save these files where run commands which commands should be runned.

Now I need to do this all in azure portal now i am having one kubernetes cluster nginx cluster now how to connect with this from the visual studio and how to do next this tell me