UE20CS351-CC ASSIGNMENT-2b

NAME	SRN	CLASS & SECTION
VIJAY J	PES2UG20CS815	6 - J

Section - 1

1a.jpg:

Section - 2

2a.jpg:

2b.jpg:

File   Edit   View   Search   Terminal   Tabs   Help

yoyo@zaemon: ~   ×

```
yoyo@zaemon:~$ kubectl create deployment pes2ug20cs815 --image=nginx
deployment.apps/pes2ug20cs815 created
yoyo@zaemon:~$ █
```

2c.jpg:

File   Edit   View   Search   Terminal   Tabs   Help

yoyo@zaemon: ~   ×   y

```
yoyo@zaemon:~$ kubectl get deployment
NAME            READY   UP-TO-DATE   AVAILABLE   AGE
pes2ug20cs815   0/1     1            0           51s
yoyo@zaemon:~$ kubectl get pod
NAME                            READY   STATUS            RESTARTS   AGE
pes2ug20cs815-8568dc5cbc-z9d4g  0/1     ContainerCreating 0          58s
yoyo@zaemon:~$ █
```

2d.jpg:

File   Edit   View   Search   Terminal   Tabs   Help

yoyo@zaemon: ~   ×

```
    rollingUpdate:
      maxSurge: 25%
      maxUnavailable: 25%
    type: RollingUpdate
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: pes2ug20cs815
    spec:
      containers:
      - image: nginx:1.16
        imagePullPolicy: Always
        name: nginx
        resources: {}
        terminationMessagePath: /dev/termination-log
        terminationMessagePolicy: File
      dnsPolicy: ClusterFirst
      restartPolicy: Always
      schedulerName: default-scheduler
      securityContext: {}
      terminationGracePeriodSeconds: 30
```

2e.jpg:

```
yoyo@zaemon:~$ kubectl edit deployment pes2ug20cs815
deployment.apps/pes2ug20cs815 edited
yoyo@zaemon:~$
```

2f.jpg:

File   Edit   View   Search   Terminal   Tabs   Help

yoyo@zaemon: ~

yoyo@zaemon: ~   ✕

```
yoyo@zaemon:~$ kubectl rollout undo deployment/pes2ug20cs815
deployment.apps/pes2ug20cs815 rolled back
yoyo@zaemon:~$
```

2g.jpg:

File   Edit   View   Search   Terminal   Tabs   Help

yoyo@zaemon: ~

yoyo@zaemon: ~   ✕

```
      app: pes2ug20cs815
  strategy:
    rollingUpdate:
      maxSurge: 25%
      maxUnavailable: 25%
    type: RollingUpdate
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: pes2ug20cs815
    spec:
      containers:
      - image: nginx
        imagePullPolicy: Always
        name: nginx
        resources: {}
        terminationMessagePath: /dev/termination-log
        terminationMessagePolicy: File
      dnsPolicy: ClusterFirst
      restartPolicy: Always
      schedulerName: default-scheduler
      securityContext: {}
      terminationGracePeriodSeconds: 30
status:
```

Section - 3

3a.jpg:

```
                                      yoyo@zaemon: ~

File   Edit   View   Search   Terminal   Tabs   Help
                     yoyo@zaemon: ~                    ×              yoyo@zaemon: ~

yoyo@zaemon:~$ kubectl get pod
NAME                           READY    STATUS    RESTARTS    AGE
pes2ug20cs815-8568dc5cbc-rk4th  1/1     Running   0           86s
yoyo@zaemon:~$ kubectl logs pes2ug20cs815-8568dc5cbc-rk4th
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2023/02/23 14:24:49 [notice] 1#1: using the "epoll" event method
2023/02/23 14:24:49 [notice] 1#1: nginx/1.23.3
2023/02/23 14:24:49 [notice] 1#1: built by gcc 10.2.1 20210110 (Debian 10.2.1-6)
2023/02/23 14:24:49 [notice] 1#1: OS: Linux 5.15.0-56-generic
2023/02/23 14:24:49 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2023/02/23 14:24:49 [notice] 1#1: start worker processes
2023/02/23 14:24:49 [notice] 1#1: start worker process 28
2023/02/23 14:24:49 [notice] 1#1: start worker process 29
yoyo@zaemon:~$ █
```

3b.jpg:

```
                 node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:
  Type    Reason     Age    From               Message
  ----    ------     ----   ----               -------
  Normal  Scheduled  4m21s  default-scheduler  Successfully assigned default/pes2ug20cs815-8568dc5cbc-rk4th to minikube
  Normal  Pulling    4m14s  kubelet            Pulling image "nginx"
  Normal  Pulled     4m10s  kubelet            Successfully pulled image "nginx" in 4.082840216s (4.082846437s including waiting)
  Normal  Created    4m7s   kubelet            Created container nginx
  Normal  Started    4m5s   kubelet            Started container nginx
yoyo@zaemon:~$ █
```

3c.jpg:

```
                                      yoyo@zaemon: ~

File   Edit   View   Search   Terminal   Tabs   Help
                     yoyo@zaemon: ~                    ×              yoyo@zaemon: ~

yoyo@zaemon:~$ kubectl exec -it pes2ug20cs815-mongo-7cfff4f7d6-9n9f9 -- bin/bash
root@pes2ug20cs815-mongo-7cfff4f7d6-9n9f9:/# ls
bin   data  docker-entrypoint-initdb.d  home        lib    lib64   media  opt   root  sbin  sys  usr
boot  dev   etc                         js-yaml.js  lib32  libx32  mnt    proc  run   srv   tmp  var
root@pes2ug20cs815-mongo-7cfff4f7d6-9n9f9:/# exit
exit
yoyo@zaemon:~$ █
```

3d.jpg:


```
yoyo@zaemon:~$ kubectl delete deployment pes2ug20cs815
deployment.apps "pes2ug20cs815" deleted
yoyo@zaemon:~$ kubectl delete deployment pes2ug20cs815-mongo
deployment.apps "pes2ug20cs815-mongo" deleted
yoyo@zaemon:~$
```

Section - 4

4a.jpg:


```
yoyo@zaemon:~/Downloads/YAML Files$ kubectl apply -f nginx-deployment.yaml
deployment.apps/nginx-deployment-pes2ug20cs815 created
yoyo@zaemon:~/Downloads/YAML Files$
```

4b.jpg:

```
yoyo@zaemon:~/Downloads/YAML Files$ kubectl get deployment nginx-deployment-pes2ug20cs815 -o yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  annotations:
    deployment.kubernetes.io/revision: "1"
    kubectl.kubernetes.io/last-applied-configuration: |
      {"apiVersion":"apps/v1","kind":"Deployment","metadata":{"annotations":{},"labels":{"app":"nginx"},"name":"nginx-deployment-pes2ug20cs815","namespace":"default"},"spec":{"replicas":2,"selector":{"matchLabels":{"app":"nginx"}},"template":{"metadata":{"labels":{"app":"nginx"}},"spec":{"containers":[{"image":"nginx:1.22","name":"nginx","ports":[{"containerPort":80}]}]}}}}
  creationTimestamp: "2023-02-23T15:42:47Z"
  generation: 1
  labels:
    app: nginx
  name: nginx-deployment-pes2ug20cs815
  namespace: default
  resourceVersion: "4650"
  uid: 613567e9-bff1-4e34-aeca-364494559568
spec:
  progressDeadlineSeconds: 600
  replicas: 2
  revisionHistoryLimit: 10
  selector:
    matchLabels:
      app: nginx
  strategy:
    rollingUpdate:
      maxSurge: 25%
      maxUnavailable: 25%
    type: RollingUpdate
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: nginx
    spec:
      containers:
      - image: nginx:1.22
        imagePullPolicy: IfNotPresent
```

```
      labels:
        app: nginx
    spec:
      containers:
      - image: nginx:1.22
        imagePullPolicy: IfNotPresent
        name: nginx
        ports:
        - containerPort: 80
          protocol: TCP
        resources: {}
        terminationMessagePath: /dev/termination-log
        terminationMessagePolicy: File
      dnsPolicy: ClusterFirst
      restartPolicy: Always
      schedulerName: default-scheduler
      securityContext: {}
      terminationGracePeriodSeconds: 30
status:
  availableReplicas: 3
  conditions:
  - lastTransitionTime: "2023-02-23T15:42:47Z"
    lastUpdateTime: "2023-02-23T15:43:51Z"
    message: ReplicaSet "nginx-deployment-pes2ug20cs815-8cf4bf97" has successfully
      progressed.
    reason: NewReplicaSetAvailable
    status: "True"
    type: Progressing
  - lastTransitionTime: "2023-02-23T15:50:53Z"
    lastUpdateTime: "2023-02-23T15:50:53Z"
    message: Deployment has minimum availability.
    reason: MinimumReplicasAvailable
    status: "True"
    type: Available
  observedGeneration: 2
  readyReplicas: 3
  replicas: 3
  updatedReplicas: 3
yoyo@zaemon:~/Downloads/YAML Files$
```

Section - 5

5a.jpg:

```
yoyo@zaemon:~/Downloads/YAML Files$ kubectl delete pod nginx-deployment-pes2ug20cs815-8cf4bf97-2zln4
pod "nginx-deployment-pes2ug20cs815-8cf4bf97-2zln4" deleted
```

```
yoyo@zaemon:~/Downloads/YAML Files$ kubectl get pod
NAME                                             READY   STATUS    RESTARTS   AGE
nginx-deployment-pes2ug20cs815-8cf4bf97-6nkts    1/1     Running   0          10m
nginx-deployment-pes2ug20cs815-8cf4bf97-jpmb6    1/1     Running   0          18m
nginx-deployment-pes2ug20cs815-8cf4bf97-wp4sh    1/1     Running   0          73s
yoyo@zaemon:~/Downloads/YAML Files$
```

Section - 6

6a.jpg:

```
yoyo@zaemon: ~/Downloads/YAML Files
File  Edit  View  Search  Terminal  Help
yoyo@zaemon:~/Downloads/YAML Files$ kubectl apply -f nginx-service.yaml
service/nginx-service-pes2ug20cs815 created
yoyo@zaemon:~/Downloads/YAML Files$ kubectl get service
NAME                          TYPE        CLUSTER-IP     EXTERNAL-IP   PORT(S)    AGE
kubernetes                    ClusterIP   10.96.0.1      <none>        443/TCP    117m
nginx-service-pes2ug20cs815   ClusterIP   10.110.211.87  <none>        8080/TCP   12s
yoyo@zaemon:~/Downloads/YAML Files$
```

6b.jpg:


```
yoyo@zaemon:~/Downloads/YAML Files$ kubectl get pod -o wide
NAME                                          READY   STATUS    RESTARTS   AGE    IP            NODE       NOMINATED NODE   READINESS GATES
nginx-deployment-pes2ug20cs815-8cf4bf97-6nkts   1/1     Running   0          17m    10.244.0.11   minikube   <none>           <none>
nginx-deployment-pes2ug20cs815-8cf4bf97-jpmb6   1/1     Running   0          25m    10.244.0.10   minikube   <none>           <none>
nginx-deployment-pes2ug20cs815-8cf4bf97-wp4sh   1/1     Running   0          8m39s  10.244.0.12   minikube   <none>           <none>
yoyo@zaemon:~/Downloads/YAML Files$
```
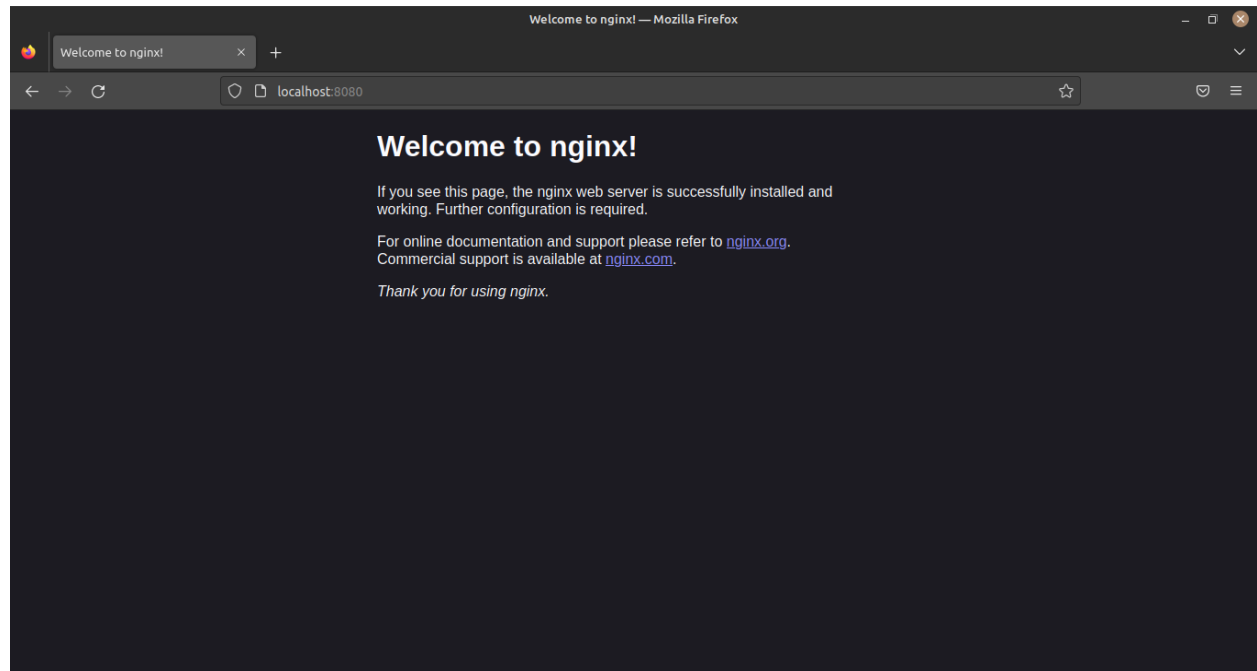
Section - 7

7a.jpg:


```
yoyo@zaemon: ~/Downloads/YAML Files

File   Edit   View   Search   Terminal   Help

yoyo@zaemon:~/Downloads/YAML Files$ kubectl get pod
NAME                                          READY   STATUS    RESTARTS   AGE
nginx-deployment-pes2ug20cs815-8cf4bf97-6nkts   1/1     Running   0          19m
nginx-deployment-pes2ug20cs815-8cf4bf97-jpmb6   1/1     Running   0          27m
nginx-deployment-pes2ug20cs815-8cf4bf97-wp4sh   1/1     Running   0          10m
yoyo@zaemon:~/Downloads/YAML Files$ kubectl port-forward service/nginx-service-pes2ug20cs815 8080:8080
Forwarding from 127.0.0.1:8080 -> 80
Forwarding from [::1]:8080 -> 80
Handling connection for 8080
```

7b.jpg:

Welcome to nginx! — Mozilla Firefox

localhost:8080

Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

Section - 8

8a.jpg:

```
File  Edit  View  Search  Terminal  Help
yoyo@zaemon:~/Downloads/YAML Files$ kubectl delete deployment nginx-deployment-pes2ug20cs815
deployment.apps "nginx-deployment-pes2ug20cs815" deleted
yoyo@zaemon:~/Downloads/YAML Files$ kubectl delete service nginx-service-pes2ug20cs815
service "nginx-service-pes2ug20cs815" deleted
yoyo@zaemon:~/Downloads/YAML Files$
```

8b.jpg:

```
File  Edit  View  Search  Terminal  Help
yoyo@zaemon:~/Downloads/YAML Files$ minikube stop
✋ Stopping node "minikube"  ...
❗ Executing "docker container inspect minikube --format={{.State.Status}}" took an unusually long time: 3.227138649s
💡 Restarting the docker service may improve performance.
🔴 Powering off "minikube" via SSH ...
🔴 1 node stopped.
yoyo@zaemon:~/Downloads/YAML Files$
```

Section - 9

9a.jpg:

```
File  Edit  View  Search  Terminal  Help
yoyo@zaemon:~$ kubectl create deployment nginx-pes2ug20cs815 --image=nginx
deployment.apps/nginx-pes2ug20cs815 created
yoyo@zaemon:~$ kubectl expose deployment nginx-pes2ug20cs815 --port=80 --type=NodePort
service/nginx-pes2ug20cs815 exposed
```

9b.jpg:

```
yoyo@zaemon:~$ kubectl get service
NAME                  TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)        AGE
kubernetes            ClusterIP   10.96.0.1       <none>        443/TCP        171m
nginx-pes2ug20cs815   NodePort    10.100.154.19   <none>        80:32366/TCP   18s
```

9c.jpg:

```
yoyo@zaemon:~$ minikube ip
192.168.49.2
yoyo@zaemon:~$
```

9d.jpg: