CC

LAB – 5

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SRN – PES2UG23CS077

SS1:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl create namespace pes2ug23cs077-alpha
namespace/pes2ug23cs077-alpha created
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl create namespace pes2ug23cs077-beta
namespace/pes2ug23cs077-beta created
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl get namespaces
NAME                    STATUS    AGE
default                 Active    30m
kube-node-lease         Active    30m
kube-public             Active    30m
kube-system             Active    30m
pes2ug23cs077-alpha     Active    13s
pes2ug23cs077-beta      Active    6s
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$
```

SS2:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl run pod-pes2ug23cs077 --image=nginx -n pes2ug23cs077-alpha
pod/pod-pes2ug23cs077 created
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl get pods -n pes2ug23cs077-alpha
NAME                READY   STATUS    RESTARTS   AGE
pod-pes2ug23cs077   1/1     Running   0          9s
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl decribe pod citizen
error: unknown command "decribe" for "kubectl"

Did you mean this?
        describe
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl describe pod citizen
Error from server (NotFound): pods "citizen" not found
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl describe pod citizen
Error from server (NotFound): pods "citizen" not found
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl describe pod pod-pes2ug23cs077 -n pes2ug23cs077-alpha
Name:             pod-pes2ug23cs077
Namespace:        pes2ug23cs077-alpha
Priority:         0
Service Account:  default
Node:             docker-desktop/192.168.65.3
Start Time:       Thu, 19 Feb 2026 14:49:16 +0000
Labels:           run=pod-pes2ug23cs077
Annotations:      <none>
Status:           Running
IP:               10.1.0.6
IPs:
  IP:  10.1.0.6
Containers:
  pod-pes2ug23cs077:
    Container ID:   docker://b0a1495cdef16013dc154694cf0e85ba6ea7cbc63a32ff2254ed570eb167644a
    Image:          nginx
    Image ID:       docker-pullable://nginx@sha256:341bf0f3ce6c5277d6002cf6e1fb0319fa4252add24ab6a0e262e0056d313208
    Port:           <none>
    Host Port:      <none>
    State:          Running
```

SS3:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl get pods -w

NAME    READY    STATUS             RESTARTS    AGE
temp    0/1      Pending            0           0s
temp    0/1      Pending            0           0s
temp    0/1      ContainerCreating  0           0s
temp    0/1      Terminating        0           0s
temp    1/1      Terminating        0           2s
temp    0/1      Completed          0           3s
temp    0/1      Completed          0           3s
temp    0/1      Completed          0           3s
```

SS4:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl logs citizen
/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: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/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
2026/02/19 14:58:40 [notice] 1#1: using the "epoll" event method
2026/02/19 14:58:40 [notice] 1#1: nginx/1.29.5
2026/02/19 14:58:40 [notice] 1#1: built by gcc 14.2.0 (Debian 14.2.0-19)
2026/02/19 14:58:40 [notice] 1#1: OS: Linux 5.15.167.4-microsoft-standard-WSL2
2026/02/19 14:58:40 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2026/02/19 14:58:40 [notice] 1#1: start worker processes
2026/02/19 14:58:40 [notice] 1#1: start worker process 29
2026/02/19 14:58:40 [notice] 1#1: start worker process 30
2026/02/19 14:58:40 [notice] 1#1: start worker process 31
2026/02/19 14:58:40 [notice] 1#1: start worker process 32
2026/02/19 14:58:40 [notice] 1#1: start worker process 33
2026/02/19 14:58:40 [notice] 1#1: start worker process 34
2026/02/19 14:58:40 [notice] 1#1: start worker process 35
2026/02/19 14:58:40 [notice] 1#1: start worker process 36
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$
```

SS5:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl run broken --image=busybox --image-pull-policy=Never --resta
rt=Never --command -- sh -c "echo 'CRASH: something went wrong' >&2; exit 1"
Error from server (AlreadyExists): pods "broken" already exists
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl logs broken
'CRASH: something went wrong'
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$
```

SS6:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl create deployment deploy-pes2ug23cs077 --image=nginx:1.25 --
replicas=3 -n pes2ug23cs077-beta
deployment.apps/deploy-pes2ug23cs077 created
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl get deployments -n pes2ug23cs077-beta
kubectl get pods -n pes2ug23cs077-beta
NAME                    READY   UP-TO-DATE   AVAILABLE   AGE
deploy-pes2ug23cs077    3/3     3            3           18s
NAME                                     READY   STATUS    RESTARTS   AGE
deploy-pes2ug23cs077-6fcc7bb5d9-6c88b    1/1     Running   0          18s
deploy-pes2ug23cs077-6fcc7bb5d9-hstt6    1/1     Running   0          18s
deploy-pes2ug23cs077-6fcc7bb5d9-vtl7m    1/1     Running   0          18s
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$
```

SS7:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl get pods -n pes2ug23cs077-beta
NAME                                     READY   STATUS    RESTARTS   AGE
deploy-pes2ug23cs077-6fcc7bb5d9-6c88b    1/1     Running   0          2m33s
deploy-pes2ug23cs077-6fcc7bb5d9-hstt6    1/1     Running   0          2m33s
deploy-pes2ug23cs077-6fcc7bb5d9-jsgh4    1/1     Running   0          4s
deploy-pes2ug23cs077-6fcc7bb5d9-s8bhj    1/1     Running   0          4s
deploy-pes2ug23cs077-6fcc7bb5d9-vtl7m    1/1     Running   0          2m33s
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl scale deployment deploy-pes2ug23cs077 --replicas=3 -n pes2ug
23cs077-beta
deployment.apps/deploy-pes2ug23cs077 scaled
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl get pods -n pes2ug23cs077-beta
NAME                                     READY   STATUS    RESTARTS   AGE
deploy-pes2ug23cs077-6fcc7bb5d9-6c88b    1/1     Running   0          2m40s
deploy-pes2ug23cs077-6fcc7bb5d9-hstt6    1/1     Running   0          2m40s
deploy-pes2ug23cs077-6fcc7bb5d9-vtl7m    1/1     Running   0          2m40s
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$
```

SS8:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl get rs,po -n pes2ug23cs077-beta
NAME                                             DESIRED   CURRENT   READY   AGE
replicaset.apps/deploy-pes2ug23cs077-6fcc7bb5d9   3         3         3       8m30s

NAME                                        READY   STATUS    RESTARTS   AGE
pod/deploy-pes2ug23cs077-6fcc7bb5d9-6c88b   1/1     Running   0          8m30s
pod/deploy-pes2ug23cs077-6fcc7bb5d9-hstt6   1/1     Running   0          8m30s
pod/deploy-pes2ug23cs077-6fcc7bb5d9-vtl7m   1/1     Running   0          8m30s
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl set image deployment/deploy-pes2ug23cs077 nginx=nginx:alpine
 -n pes2ug23cs077-beta
deployment.apps/deploy-pes2ug23cs077 image updated
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl get rs,po -n pes2ug23cs077-beta
NAME                                              DESIRED   CURRENT   READY   AGE
replicaset.apps/deploy-pes2ug23cs077-6b4bf84454   3         3         3       31s
replicaset.apps/deploy-pes2ug23cs077-6fcc7bb5d9   0         0         0       9m44s

NAME                                         READY   STATUS    RESTARTS   AGE
pod/deploy-pes2ug23cs077-6b4bf84454-2n4lt    1/1     Running   0          29s
pod/deploy-pes2ug23cs077-6b4bf84454-96pp2    1/1     Running   0          28s
pod/deploy-pes2ug23cs077-6b4bf84454-s5fhj    1/1     Running   0          31s
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$
```

SS9:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl rollout status deployment/deploy-pes2ug23cs077 -n pes2ug23cs
077-beta
deployment "deploy-pes2ug23cs077" successfully rolled out
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl rollout history deployment deploy-pes2ug23cs077 -n pes2ug23c
s077-beta
deployment.apps/deploy-pes2ug23cs077
REVISION   CHANGE-CAUSE
1          <none>
2          <none>

ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$ kubectl rollout history deployment deploy-pes2ug23cs077 --revision=1
 -n pes2ug23cs077-beta
deployment.apps/deploy-pes2ug23cs077 with revision #1
Pod Template:
  Labels:       app=deploy-pes2ug23cs077
        pod-template-hash=6fcc7bb5d9
  Containers:
   nginx:
    Image:      nginx:1.25
    Port:       <none>
    Host Port:  <none>
    Environment:        <none>
    Mounts:     <none>
  Volumes:      <none>
  Node-Selectors:       <none>
  Tolerations:  <none>

ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5$
```

SS10:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$ kubectl get deployments
NAME                   READY   UP-TO-DATE   AVAILABLE   AGE
deploy-pes2ug23cs077   3/3     3            3           22m
nginx-pes2ug23cs077    0/3     3            0           33s
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$
```

SS11:

```
Events:                    <none>
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$ nano pes2ug23cs077-service.yaml
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$ nano pes2ug23cs077-service.yaml
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$ kubectl apply -f pes2ug23cs077-service.yaml
kubectl get endpoints pes2ug23cs077-service -n pes2ug23cs077-beta
kubectl describe service pes2ug23cs077-service -n pes2ug23cs077-beta
service/pes2ug23cs077-service configured
Warning: v1 Endpoints is deprecated in v1.33+; use discovery.k8s.io/v1 EndpointSlice
NAME                    ENDPOINTS                               AGE
pes2ug23cs077-service   10.1.0.15:80,10.1.0.16:80,10.1.0.17:80  5m29s
Name:                   pes2ug23cs077-service
Namespace:              pes2ug23cs077-beta
Labels:                 <none>
Annotations:            <none>
Selector:               app=deploy-pes2ug23cs077
Type:                   ClusterIP
IP Family Policy:       SingleStack
IP Families:            IPv4
IP:                     10.100.60.175
IPs:                    10.100.60.175
Port:                   <unset>  80/TCP
TargetPort:             80/TCP
Endpoints:              10.1.0.15:80,10.1.0.16:80,10.1.0.17:80
Session Affinity:       None
Internal Traffic Policy: Cluster
Events:                 <none>
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$
```

SS12:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$ kubectl delete pod -l app=deploy-pes2ug23cs077
pod "deploy-pes2ug23cs077-6b4bf84454-2n4lt" deleted from pes2ug23cs077-beta namespace
pod "deploy-pes2ug23cs077-6b4bf84454-96pp2" deleted from pes2ug23cs077-beta namespace
pod "deploy-pes2ug23cs077-6b4bf84454-s5fhj" deleted from pes2ug23cs077-beta namespace
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$ kubectl get endpoints pes2ug23cs077-service -n pes2ug2
3cs077-beta
Warning: v1 Endpoints is deprecated in v1.33+; use discovery.k8s.io/v1 EndpointSlice
NAME                    ENDPOINTS                               AGE
pes2ug23cs077-service   10.1.0.24:80,10.1.0.25:80,10.1.0.26:80  7m36s
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$ kubectl describe service pes2ug23cs077-service -n pes2
ug23cs077-beta
Name:                   pes2ug23cs077-service
Namespace:              pes2ug23cs077-beta
Labels:                 <none>
Annotations:            <none>
Selector:               app=deploy-pes2ug23cs077
Type:                   ClusterIP
IP Family Policy:       SingleStack
IP Families:            IPv4
IP:                     10.100.60.175
IPs:                    10.100.60.175
Port:                   <unset>  80/TCP
TargetPort:             80/TCP
Endpoints:              10.1.0.24:80,10.1.0.26:80,10.1.0.25:80
Session Affinity:       None
Internal Traffic Policy: Cluster
Events:                 <none>
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$
```

SS13:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$ kubectl port-forward deployment/nginx-pes2ug23cs071 8080:80
Forwarding from 127.0.0.1:8080 -> 80
Forwarding from [::1]:8080 -> 80
Handling connection for 8080
Handling connection for 8080
```

SS14:

Hello from district PES2UG23CS077-beta running in Kubernetes
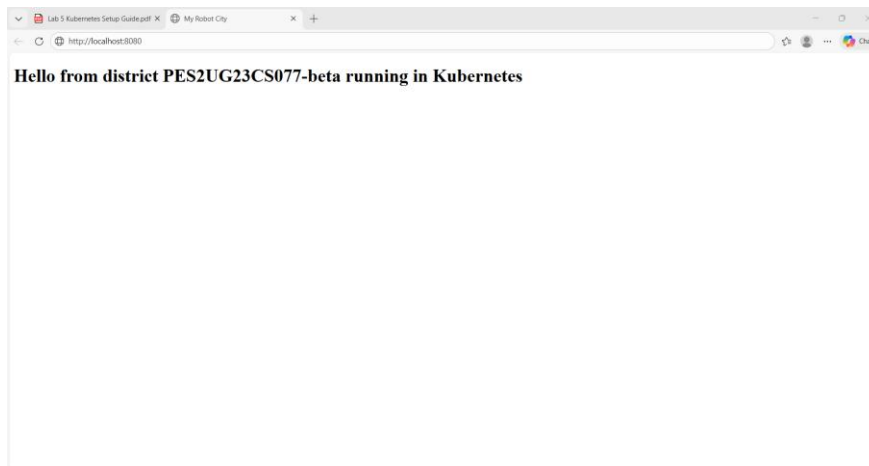
SS15:

```
ankur@JITU:/mnt/c/Users/ankur/Desktop/SEM6/cc-lab5/PES2UG23CS077$ kubectl delete namespace pes2ug23cs077-alpha pes2ug23cs077-beta
kubectl get ns
namespace "pes2ug23cs077-alpha" deleted
namespace "pes2ug23cs077-beta" deleted
NAME              STATUS   AGE
default           Active   99m
kube-node-lease   Active   99m
kube-public       Active   99m
kube-system       Active   99m
```