

ASSIGNMENT 4.3

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Paired With

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Starting minikube and running all commands

To start minikube type “minikube start”

```
muhammadhumza@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ minikube start
minikube v1.28.0 on Ubuntu 22.04
Using the docker driver based on existing profile
Starting control plane node minikube in cluster minikube
Pulling base image ...
Updating the running docker "minikube" container ...
Preparing Kubernetes v1.25.3 on Docker 20.10.20 ...
Verifying Kubernetes components...
  ■ Using image gcr.io/k8s-minikube/storage-provisioner:v5
  ■ Using image docker.io/kubernetes/dashboard:v2.7.0
  ■ Using image docker.io/kubernetes/metrics-scraper:v1.0.8
Some dashboard features require the metrics-server addon. To enable all features please run:

    minikube addons enable metrics-server

🌟 Enabled addons: storage-provisioner, default-storageclass, dashboard
🏠 Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
muhammadhumza@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
hello-minikube-7ddcbc9b8b-zx7th     1/1     Running   5 (46s ago)  4h46m
mongo-deployment-5fb8d98f85-ls7kb   1/1     Running   1 (46s ago)  47m
mongo-express-5bf4b56f47-qxsl2     0/1     Error     0           46m
nginx-example-544474585b-6cnlx      1/1     Running   6 (41s ago)  4h39m
muhammadhumza@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get services
NAME            TYPE           CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
hello-minikube  NodePort       10.111.49.35     <none>            8080:31148/TCP   4h47m
kubernetes      ClusterIP      10.96.0.1        <none>            443/TCP          4h56m
mongo-express-service  LoadBalancer  10.108.161.165   192.168.0.10     8080:30001/TCP   47m
mongo-service      ClusterIP      10.107.62.107    <none>            27017/TCP        47m
muhammadhumza@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ ls
mongo-configmap.yaml  mongodb-secret.yaml  mongo-express-deployment.yaml  mongo-secret.yaml
mongodb-deployment.yaml  mongodb-service.yaml  mongo-express-service.yaml
muhammadhumza@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get configmaps
NAME            DATA   AGE
kube-root-ca.crt  1       4h56m
mongodb-configmap  1       47m
muhammadhumza@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get deployments
NAME            READY   UP-TO-DATE   AVAILABLE   AGE
hello-minikube  1/1     1             1           4h48m
mongo-deployment  1/1     1             1           48m
mongo-express    1/1     1             1           47m
```

Check all the PODS running in Kubectl

To check all the running pods type “kubectl get pods”

```
muhammadhumza@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
hello-minikube-7ddcbc9b8b-zx7th     1/1     Running   4 (5m10s ago)  4h2m
mongo-deployment-5fb8d98f85-ls7kb   1/1     Running   0           2m25s
mongo-express-5bf4b56f47-qxsl2     1/1     Running   0           87s
nginx-example-544474585b-6cnlx      1/1     Running   4 (6m10s ago)  3h54m
```

Check all the services in Kubectl

To check all the services running in Kubectl type “kubectl get services”

```
muhammadhuma@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get services
```

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
hello-minikube	NodePort	10.111.49.35	<none>	8080:31148/TCP	4h1m
kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	4h10m
mongo-express-service	LoadBalancer	10.108.161.165	192.168.0.10	8080:30001/TCP	69s
mongo-service	ClusterIP	10.107.62.107	<none>	27017/TCP	81s

Get list of all the files

To get all the files type “ls”

```
muhammadhuma@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ ls
```

mongo-configmap.yaml	mongodb-secret.yaml	mongo-express-deployment.yaml	mongo-secret.yaml
mongodb-deployment.yaml	mongodb-service.yaml	mongo-express-service.yaml	

Get all configmap files

To get all configmap files in Kubectl type “kubectl get configmaps”

```
muhammadhuma@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get configmaps
```

NAME	DATA	AGE
kube-root-ca.crt	1	4h56m
mongodb-configmap	1	47m

Get all deployments

To get all deployments in kubectl type “kubectl get deployments”

```
muhammadhuma@all-MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get deployments
```

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
hello-minikube	1/1	1	1	4h48m
mongo-deployment	1/1	1	1	48m
mongo-express	1/1	1	1	47m

Get logs for specific pod in Kubectl

To get all logs for a pod in Kubectl type “kubectl logs <pod_id>”

```
muhammadhunza@ali-M5-7035:/ny_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl logs mongo-deployment-5fb8d98f85-l5tkb
about to fork child process, waiting until server is ready for connections.
forked process: 28

{"t":{"$date":"2022-12-20T12:51:57.911+00:00"},"s":"I",  "c":"CONTROL",  "id":20698,   "ctx":"","msg":"***** SERVER RESTARTED *****"}
{"t":{"$date":"2022-12-20T12:51:57.912+00:00"},"s":"I",  "c":"CONTROL",  "id":23285,   "ctx":"main", "msg":"Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'"}
{"t":{"$date":"2022-12-20T12:51:57.913+00:00"},"s":"I",  "c":"NETWORK",  "id":4915701, "ctx":"main", "msg":"Initialized wire specification","attr":{"spec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":17},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":17},"outgoing":{"minWireVersion":0,"maxWireVersion":17},"isInternalClient":true}}}
{"t":{"$date":"2022-12-20T12:51:57.916+00:00"},"s":"I",  "c":"NETWORK",  "id":4648601, "ctx":"main", "msg":"Implicit TCP FastOpen unavailable. If TCP FastOpen is required, set tcpFastOpenServer, tcpFastOpenClient, and tcpFastOpenQueueSize."}
{"t":{"$date":"2022-12-20T12:51:57.917+00:00"},"s":"I",  "c":"REPL",    "id":5123008, "ctx":"main", "msg":"Successfully registered PrimaryOnlyService","attr":{"service":"TenantMigrationDonorService","namespace":"config.tenantMigrationDonors"}}
{"t":{"$date":"2022-12-20T12:51:57.917+00:00"},"s":"I",  "c":"REPL",    "id":5123008, "ctx":"main", "msg":"Successfully registered PrimaryOnlyService","attr":{"service":"TenantMigrationRecipientService","namespace":"config.tenantMigrationRecipients"}}
{"t":{"$date":"2022-12-20T12:51:57.917+00:00"},"s":"I",  "c":"REPL",    "id":5123008, "ctx":"main", "msg":"Successfully registered PrimaryOnlyService","attr":{"service":"ShardSplitDonorService","namespace":"config.tenantSplitDonors"}}
{"t":{"$date":"2022-12-20T12:51:57.917+00:00"},"s":"I",  "c":"CONTROL",  "id":5945003, "ctx":"main", "msg":"Multi threading initialized"}
{"t":{"$date":"2022-12-20T12:51:57.917+00:00"},"s":"I",  "c":"CONTROL",  "id":4615011, "ctx":"","msg":"MongoDB starting","attr":{"pid":28,"port":27017,"dbPath":"/data/db","architecture":"64-bit","host":"mongo-deployment-5fb8d98f85-l5tkb"}}
{"t":{"$date":"2022-12-20T12:51:57.917+00:00"},"s":"I",  "c":"CONTROL",  "id":23403,   "ctx":"","msg":"Build Info","attr":{"buildInfo":{"version":"6.0.3","gitVersion":"f803681c3ae19817d31958965850193de067c516","openSSLVersion":"OpenSSL 1.1.1f  31 Mar 2020","modules":[],"allocator":"tcmalloc","environment":{"distmod":"ubuntu2004","distarch":"x86_64","target_arch":"x86_64"}}}}}
{"t":{"$date":"2022-12-20T12:51:57.917+00:00"},"s":"I",  "c":"CONTROL",  "id":51765,   "ctx":"","msg":"Operating System","attr":{"os":{"name":"Ubuntu","version":"20.04"}}}
{"t":{"$date":"2022-12-20T12:51:57.917+00:00"},"s":"I",  "c":"CONTROL",  "id":21951,   "ctx":"","msg":"Options set by command line","attr":{"options":{"net":{"bindip":"127.0.0.1","port":27017,"tls":{"mode":"disabled"},"processManagement":{"fork":true,"pidFilePath":"/tmp/docker-entrypoint-temp-mongod.pid"},"systemLog":{"destination":"file","logAppend":true,"path":"/proc/1/fd/1"}}}}}
{"t":{"$date":"2022-12-20T12:51:57.917+00:00"},"s":"I",  "c":"STORAGE",  "id":22297,   "ctx":"","msg":"Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://doc.mongodb.org/core/prodnotes-filesystem","tags":["startupWarnings"]}
{"t":{"$date":"2022-12-20T12:51:57.918+00:00"},"s":"I",  "c":"STORAGE",  "id":22315,   "ctx":"","msg":"Opening WiredTiger","attr":{"config":{"create,cache_size=15442M,session_max=33000,eviction=(threads_min=4,threads_max=4),config_base=false,statistics=(fast),log=(enabled=true,remove=true,path=journal,compressor=snappy),built_in_extension_config=(zstd=(compression_level=0)),file_manager=(close_idle_time=600,close_scan_interval=10,close_handle_minimum=2000),statistics_log=(wait=0),json_output=(error,message),verbose=(recovery_progress:1,checkpoint_progress:1,compact_progress:1,backup:0,checkpoint:0,compact:0,evict:0,histogram_stores:0,recovery:0,fts:0,salvage:0,tiered:0,timestamap:0,transaction:0,verify:0,log:0)}}}}
{"t":{"$date":"2022-12-20T12:51:58.024+00:00"},"s":"I",  "c":"RECOVERY", "id":23987,   "ctx":"","msg":"WiredTiger recovery/flush","attr":{"recoveryTimestamp":{"timestamp":{"t":0,"l":0}}}}
{"t":{"$date":"2022-12-20T12:51:58.031+00:00"},"s":"W",  "c":"CONTROL",  "id":22120,   "ctx":"","msg":"Access control is not enabled for the database. Read and write access to data and configuration is unrestricted","tags":["startupWarnings"]}
{"t":{"$date":"2022-12-20T12:51:58.031+00:00"},"s":"W",  "c":"CONTROL",  "id":5123300, "ctx":"","msg":"vm.max_map_count is too low","attr":{"currentValue":65530,"recommendedMinimum":1677720,"maxConn":16383000},"tags":["startupWarnings"]}
{"t":{"$date":"2022-12-20T12:51:58.031+00:00"},"s":"I",  "c":"STORAGE",  "id":20320,   "ctx":"","msg":"createCollection","attr":{"namespace":"admin.system.version","uulDnsposition":"provided","uulD":{"$uid":{"$uid":"1050d097-ea45-44a6-af22-b913046abb20"},"options":{"$uid":{"$uid":"1050d097-ea45-44a6-af22-b913046abb20"}}}}}
{"t":{"$date":"2022-12-20T12:51:58.036+00:00"},"s":"I",  "c":"INDEX",    "id":20345,   "ctx":"","msg":"Index build: done building","attr":{"buildUUID:null,"collectionUUID":{"$uid":{"$uid":"1050d097-ea45-44a6-af22-b913046abb20"},"namespace":"admin.system.version","index":{"$id":{"$id":"1-8509613730358915640","collectionId":"collection-0-8509613730358915640","commitTimestamp:null}}}}}
{"t":{"$date":"2022-12-20T12:51:58.036+00:00"},"s":"I",  "c":"REPL",    "id":20459,   "ctx":"","msg":"Setting featureCompatibilityVersion","attr":{"newVersion":"6.0"}}
{"t":{"$date":"2022-12-20T12:51:58.036+00:00"},"s":"I",  "c":"REPL",    "id":5853306, "ctx":"","msg":"current featureCompatibilityVersion value","attr":{"featureCompatibilityVersion":"6.0","context":{"setFCV"}}}
{"t":{"$date":"2022-12-20T12:51:58.036+00:00"},"s":"I",  "c":"NETWORK",  "id":4915702, "ctx":"","msg":"Updated wire specification","attr":{"oldSpec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":17},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":17},"outgoing":{"minWireVersion":0,"maxWireVersion":17},"isInternalClient":true},"newSpec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":17},"incomingInternalClient":{"minWireVersion":17,"maxWireVersion":17},"outgoing":{"minWireVersion":17,"maxWireVersion":17},"isInternalClient":true}}}
{"t":{"$date":"2022-12-20T12:51:58.036+00:00"},"s":"I",  "c":"NETWORK",  "id":4915702, "ctx":"","msg":"Updated wire specification","attr":{"oldSpec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":17},"incomingInternalClient":{"minWireVersion":17,"maxWireVersion":17},"outgoing":{"minWireVersion":17,"maxWireVersion":17},"isInternalClient":true},"newSpec":{"incomingExternalClient":{"minWireVersion":0,"maxWireVersion":17},"incomingInternalClient":{"minWireVersion":17,"maxWireVersion":17},"outgoing":{"minWireVersion":17,"maxWireVersion":17},"isInternalClient":true}}}
{"t":{"$date":"2022-12-20T12:51:58.036+00:00"},"s":"I",  "c":"REPL",    "id":5853300, "ctx":"","msg":"current featureCompatibilityVersion value","attr":{"featureCompatibilityVersion":"6.0","context":{"startup"}}}
{"t":{"$date":"2022-12-20T12:51:58.036+00:00"},"s":"I",  "c":"STORAGE",  "id":5071100, "ctx":"","msg":"Clearing temp directory"}
{"t":{"$date":"2022-12-20T12:51:58.036+00:00"},"s":"I",  "c":"CONTROL",  "id":20656,   "ctx":"","msg":"Flow Control is enabled on this deployment"}
{"t":{"$date":"2022-12-20T12:51:58.036+00:00"},"s":"I",  "c":"FTDC",    "id":20625,   "ctx":"","msg":"Initializing full-time diagnostic data capture","attr":{"dataDirectory":"/data/db/diagnostic.data"}}
```

Get description for a pod in Kubectl for mongo express

To get the description of a pod in Kubectl type “kubectl describe pods <pod_id>”

```
muhammadhunza@ali-M5-7035:/ny_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl describe pods mongo-express-5bf4b56f47-qxs12
Name:         mongo-express-5bf4b56f47-qxs12
Namespace:    default
Priority:      0
Service Account: default
Node:         minikube/192.168.49.2
Start Time:   Tue, 20 Dec 2022 17:05:52 +0500
Labels:       app=mongo-express
              pod-template-hash=5bf4b56f47
Annotations:  none
Status:       Running
IP:           172.17.0.5
IPs:          IP: 172.17.0.5
Controlled By: ReplicaSet/mongo-express-5bf4b56f47
Containers:
  mongo-express:
    Container ID:  docker://32b2548692445a20ac91f961d96df15e911511c27f5e472fd6039e6c8a50
    Image:         mongo-express
    Image ID:      docker-pullable://mongo-express@sha256:dcf8f89bf91238ff129469a5a94523b3025913dc4c1597d7244d5f8a0339c7d
    Port:         8081/TCP
    Host Port:     0/TCP
    State:         Running
      Started:     Tue, 20 Dec 2022 17:05:55 +0500
    Ready:         True
    Restart Count:  0
    Environment:
      ME_CONFIG_MONGODB_ADMINUSERNAME: <set to the key 'mongo-root-username' in secret 'mongodb-secret'> Optional: false
      ME_CONFIG_MONGODB_ADMINPASSWORD: <set to the key 'mongo-root-password' in secret 'mongodb-secret'> Optional: false
      ME_CONFIG_MONGODB_SERVER:         <set to the key 'database.url' of config map 'mongodb-configmap'> Optional: false
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-7thqn (ro)
Conditions:
  Type             Status
  Initialized       True
  Ready             True
  ContainersReady   True
  PodScheduled      True
Volumes:
  kube-api-access-7thqn:
    Type:          Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName:  kube-root-ca.crt
    ConfigMapOptional:  
    DownwardAPI:    true
  qos-class:
    Type:          BestEffort
  kube-selectors:
    Type:          NodeSelector
    Selector:       node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
  tolerations:
    Type:          NodeToleration
    Tolerator:      node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:
  Type    Reason            Age   From          Message
  ----    -
  Normal  Scheduled         96s   default-scheduler   Successfully assigned default/mongo-express-5bf4b56f47-qxs12 to minikube
  Normal  Pulling           95s   kubelet           Pulling image 'mongo-express'
  Normal  Pulled            93s   kubelet           Successfully pulled image 'mongo-express' in 2.034248836s
  Normal  Created           93s   kubelet           Created container mongo-express
  Normal  Started           93s   kubelet           Started container mongo-express
```

Get description for a pod in Kubectl for mongo deployment

```
muhammadhuzayif@MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl describe pods mongo-deployment-5fbd98f85-ls7kb
Name: mongo-deployment-5fbd98f85-ls7kb
Namespace: default
Priority: 0
Service Account: default
Node: minikube/192.168.49.2
Start Time: Tue, 10 Dec 2023 17:04:54 +0500
Labels: app=mongodb
Annotations: pod-template-hash=5fbd98f85
Status: Running
IP: 172.17.0.2
IPs: 172.17.0.2
Controlled By: ReplicaSet/mongo-deployment-5fbd98f85
Containers:
  mongodb:
    Container ID: docker://eb8ff071df41abc7465d9db739bdc7461b8ab40dfbacc34e6821e6773819df28
    Image: mongo
    Image ID: docker-pullable://mongo@sha256:c015870b10451c414911aff5648495bd3fcc9febcec340f46bb852706697a72f
    Port: 27017/TCP
    Host Port: 0/TCP
    State: Running
    Started: Tue, 20 Dec 2023 17:04:57 +0500
    Ready: True
    Restart Count: 0
    Environment:
      MONGO_INITDB_DATABASE: admin
      MONGO_INITDB_ROOT_USERNAME: <set to the key 'mongo-root-username' in secret 'mongodb-secret'. Optional: false
      MONGO_INITDB_ROOT_PASSWORD: <set to the key 'mongo-root-password' in secret 'mongodb-secret'. Optional: false
    Mounts:
      /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-svplv (ro)
Conditions:
  Type             Status
  Initialized       True
  Ready             True
  ContainersReady   True
  PodScheduled      True
Volumes:
  kube-api-access-svplv:
    Type: Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds: 3607
    ConfigMapName: kube-root-ca.crt
    ConfigMapOptional: <nil>
    DownwardAPI: true
    BestEffort: <none>
  Node-Selectors:
    node.kubernetes.io/not-ready:NoExecute op=Exists for 300s
    node.kubernetes.io/unreachable:NoExecute op=Exists for 300s
Events:
  Type    Reason      Age    From          Message
  ----    -
  Normal  Scheduled   3m3s   default-scheduler   Successfully assigned default/mongo-deployment-5fbd98f85-ls7kb to minikube
  Normal  Pulling     3m3s   kubelet          Pulling image "mongo"
  Normal  Pulled      3m3s   kubelet          Successfully pulled image "mongo" in 2.21359143s
  Normal  Created     3m3s   kubelet          Created container mongodb
  Normal  Started     3m3s   kubelet          Started container mongodb
muhammadhuzayif@MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get service
NAME                                TYPE                CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
minikube                            NodePort            10.111.49.35     <none>            8080:31140/TCP    43m
kubernetes                           ClusterIP           10.96.0.1        <none>            443/TCP           4h12m
mongo-express-service                LoadBalancer       10.108.161.165   192.168.0.10     8080:30001/TCP    2m59s
mongo-service                        ClusterIP           10.107.42.187    <none>            27017/TCP         3m15s
muhammadhuzayif@MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ minikube service mongo-express-service
-----
| NAMESPACE | NAME           | TARGET PORT | URL              |
|-----|-----|-----|-----|
| default | mongo-express-service | 8080        | http://192.168.49.2:30001 |
|-----|-----|-----|-----|
Opening service default/mongo-express-service in default browser...
```

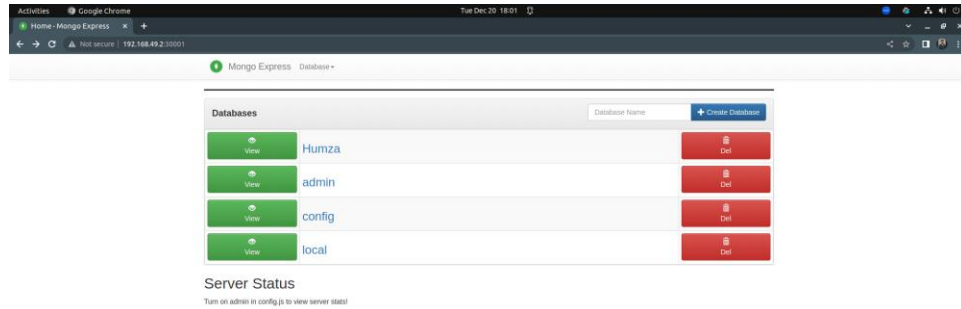
Launch service in minikube

To launch a service in minikube type “minikube service <name>”

```
muhammadhuzayif@MS-7035:~/my_practice/code_practice/Module_4/Material/Day_3/data-engineering-bootcamp-main/tasks/4_microservices_development/day_3_kubernetes/hands-on$ minikube service mongo-express-service
-----
| NAMESPACE | NAME           | TARGET PORT | URL              |
|-----|-----|-----|-----|
| default | mongo-express-service | 8080        | http://192.168.49.2:30001 |
|-----|-----|-----|-----|
Opening service default/mongo-express-service in default browser...
```

Opening MongoDB using the service port

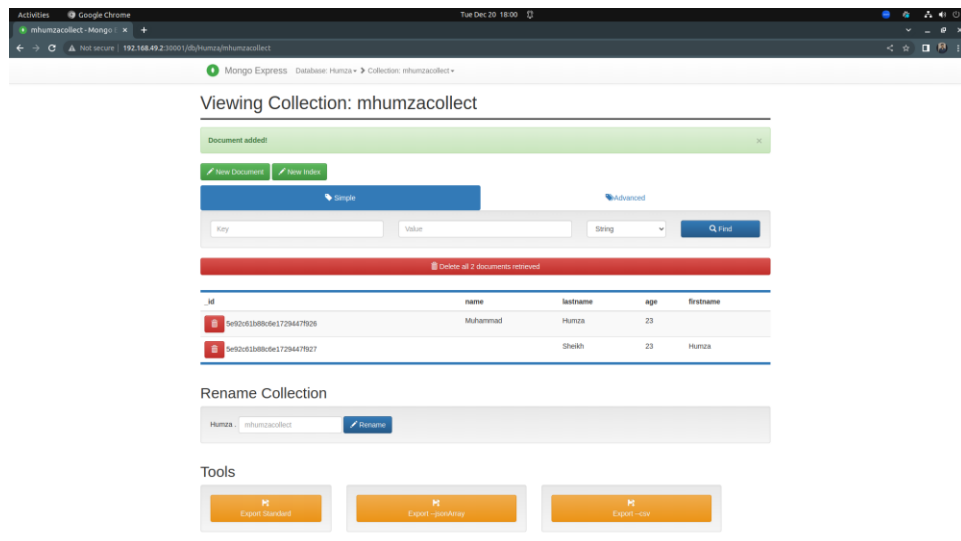
In MongoDB I created a database named “Humza”



Creating a collection inside the database and create a document

The name of the collection is “mhumzacollect”

And created a document with values “name, lastname, age”



Accessing the MongoDB in the terminal and verifying the database, collection and document.

To open MongoDB in the terminal, we will use mongosh with ID and PASSWORD

To access the database, we type “use <Database_name>”

To access the collections, we type “show_collections”

To access the document, we type “db.collection_name.find().pretty()”

```
root@mongo-deployment-5fb8d98f85-ls7kb:/#
root@mongo-deployment-5fb8d98f85-ls7kb:/# mongosh -u $MONGO_INITDB_ROOT_USERNAME -p $MONGO_INITDB_ROOT_PASSWORD
Current Mongosh Log ID: 63a1ae22aefbbdf63534c4d6
Connecting to:      mongodb://<credentials>@127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&ap
pName=mongosh+1.6.1
Using MongoDB:      6.0.3
Using Mongosh:      1.6.1

For mongosh info see: https://docs.mongodb.com/mongodb-shell/

-----
  The server generated these startup warnings when booting
  2022-12-20T12:05:01.980+00:00: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine.
  See http://dochub.mongodb.org/core/prodnotes-filesystem
  2022-12-20T12:05:02.331+00:00: vm.max_map_count is too low
-----

-----
  Enable MongoDB's free cloud-based monitoring service, which will then receive and display
  metrics about your deployment (disk utilization, CPU, operation statistics, etc).

  The monitoring data will be available on a MongoDB website with a unique URL accessible to you
  and anyone you share the URL with. MongoDB may use this information to make product
  improvements and to suggest MongoDB products and deployment options to you.

  To enable free monitoring, run the following command: db.enableFreeMonitoring()
  To permanently disable this reminder, run the following command: db.disableFreeMonitoring()
-----

test> use Humza
switched to db Humza
Humza> show collections
mhumzacollect
Humza> db.mhumzacollect.find().pretty()
[
  {
    _id: ObjectId("5e92c61b88c6e1729447f926"),
    name: 'Muhammad',
    lastname: 'Humza',
    age: 23
  },
]
```