UNIT 4.3 GRADED ASSIGNMENT

Group members

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UNIT 4.3 GRADED ASSIGNMENT

Task:

- Pull mongo related files from the repository.
- Support yourself with the slides, README and knowledge from the internet.
- Review all the files to learn the dependencies between Kubernetes objects
- Run the objects so you have both mongo-service and mongo-express-service deployed (list, pods, deployments, services and configmaps) - **document with screenshots.**
- Run describe on a deployment, pod, service, configmap or choice. - **document with screenshots.**
- Show logs from a pod of choice - **document with a screenshot.**
- Run minikube service <proper_service_name> to make the service appear in a browser and expose it for network traffic.
- Add db, collection and a document in the WebUI.
- Enter the pod for **mongodb run mongosh** to see if the document was created in collection in db.
- You may need some additional parameters (and use the environment variables from the .yaml files.)
- You can use https://www.mongodb.com/docs/manual/reference/method/db.collection.find/ to list the document created.
- Refer https://www.mongodb.com/docs/manual/ if still doubtful.

Solution:

- **Pull mongo related files from the repository**

mongo-configmap.yaml   mongodb-deployment.yaml   mongodb-service.yaml   mongo-express-deploym…   mongo-express-service.y…   mongo-secret.yaml

- **Start minikube by using the command minikube start.**

```
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ minikube start
😄  minikube v1.30.1 on Ubuntu 22.04
✨  Using the docker driver based on existing profile
👍  Starting control plane node minikube in cluster minikube
🚜  Pulling base image ...
🔄  Restarting existing docker container for "minikube" ...
🐳  Preparing Kubernetes v1.26.3 on Docker 23.0.2 ...
🔗  Configuring bridge CNI (Container Networking Interface) ...
🔎  Verifying Kubernetes components...
    ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🌟  Enabled addons: storage-provisioner
🏄  Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

- **Run the objects so you have both mongo-service and mongo-express-service deployed (list, pods, deployments, services and configmaps) - document with screenshots.**


```
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl apply -f mongo-configmap.yaml
configmap/mongodb-configmap created
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_deve(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_deve(base) all@localhost:~/data_engineering_bootca
mp_2303/tasks/4_microservices_deve(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_deve(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_deve(base) all@l
ocalhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_deve(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_deve(base) all@localhost:~/data_engineering_bootcamp_2303/task
s/4_microservices_development/day_3_kubernetes/hands-on$ k                          ^C
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl apply -f mongo-express-deployment.yaml
deployment.apps/mongo-express created
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl apply -f mongo-express-service.yaml
service/mongo-express-service created
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl apply -f mongo-secret.yaml
secret/mongodb-secret created
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl apply -f mongodb-deployment.yaml
deployment.apps/mongo-deployment created
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl apply -f mongodb-service.yaml
service/mongo-service created
```



```
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get pods
NAME                              READY   STATUS      RESTARTS        AGE
firstdeployment-74d587bc86-cwzsd  1/1     Running     1 (3m58s ago)   2d18h
mongo-deployment-85bbdc6549-vzdnq 1/1     Running     0               46s
mongo-express-5bcd46fcff-jcksm    0/1     Completed   3 (44s ago)     96s
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get deployments
NAME              READY   UP-TO-DATE   AVAILABLE   AGE
firstdeployment   1/1     1            1           2d18h
mongo-deployment  1/1     1            1           62s
mongo-express     0/1     1            0           112s
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get services
NAME                   TYPE          CLUSTER-IP     EXTERNAL-IP    PORT(S)         AGE
kubernetes             ClusterIP     10.96.0.1      <none>         443/TCP         2d18h
mongo-express-service  LoadBalancer  10.96.150.147  192.168.0.10   8080:30001/TCP  107s
mongo-service          ClusterIP     10.110.50.80   <none>         27017/TCP       60s
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl get configmaps
NAME               DATA   AGE
kube-root-ca.crt   1      2d18h
mongodb-configmap  1      3m21s
```

- **Run describe on a deployment, pod, service, configmap or choice. - document with screenshots.**


```
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl describe deployment mongo-deployment Name:                   mongo-deployment
Namespace:              default
CreationTimestamp:      Fri, 12 May 2023 08:19:46 +0500
Labels:                 app=mongodb
Annotations:            deployment.kubernetes.io/revision: 1
Selector:               app=mongodb
Replicas:               1 desired | 1 updated | 1 total | 1 available | 0 unavailable
StrategyType:           RollingUpdate
MinReadySeconds:        0
RollingUpdateStrategy:  25% max unavailable, 25% max surge
Pod Template:
  Labels:  app=mongodb
  Containers:
   mongodb:
    Image:       mongo
    Port:        27017/TCP
    Host Port:   0/TCP
    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:                         <none>
  Volumes:                          <none>
Conditions:
  Type           Status  Reason
  ----           ------  ------
  Available      True    MinimumReplicasAvailable
  Progressing    True    NewReplicaSetAvailable
OldReplicaSets:  <none>
NewReplicaSet:   mongo-deployment-85bbdc6549 (1/1 replicas created)
Events:
  Type    Reason             Age    From                   Message
  ----    ------             ----   ----                   -------
  Normal  ScalingReplicaSet  3m24s  deployment-controller  Scaled up replica set mongo-deployment-85bbdc6549 to 1
```

```
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl describe pods mongo-deployment-85bbdc6549-vzdnq
Name:             mongo-deployment-85bbdc6549-vzdnq
Namespace:        default
Priority:         0
Service Account:  default
Node:             minikube/192.168.49.2
Start Time:       Fri, 12 May 2023 08:19:46 +0500
Labels:           app=mongodb
                  pod-template-hash=85bbdc6549
Annotations:      <none>
Status:           Running
IP:               10.244.0.7
IPs:
  IP:           10.244.0.7
Controlled By:  ReplicaSet/mongo-deployment-85bbdc6549
Containers:
  mongodb:
    Container ID:   docker://23b4052d1ab0be84fbd12a6a0248d1e8fe5f96b14a3bef8839a5eb1af50c9560
    Image:          mongo
    Image ID:       docker-pullable://mongo@sha256:928347070dc089a596f869a22a4204c0feace3eb03470a6a2de6814f11fb7309
    Port:           27017/TCP
    Host Port:      0/TCP
    State:          Running
      Started:      Fri, 12 May 2023 08:20:30 +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-f84mp (ro)
Conditions:
  Type              Status
  Initialized       True
  Ready             True
  ContainersReady   True
  PodScheduled      True
Volumes:
  kube-api-access-f84mp:
    Type:                    Projected (a volume that contains injected data from multiple sources)
    TokenExpirationSeconds:  3607
    ConfigMapName:           kube-root-ca.crt
    ConfigMapOptional:       <nil>
    DownwardAPI:             true
QoS Class:                   BestEffort
Node-Selectors:              <none>
Tolerations:                 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  4m42s  default-scheduler  Successfully assigned default/mongo-deployment-85bbdc6549-vzdnq to minikube
  Normal  Pulling    4m42s  kubelet            Pulling image "mongo"
  Normal  Pulled     4m1s   kubelet            Successfully pulled image "mongo" in 41.239811612s (41.525732843s including waiting)
```

```
  Normal  Started    3m59s  kubelet            Started container mongodb
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl describe services mongo-express-service
Name:                     mongo-express-service
Namespace:                default
Labels:                   <none>
Annotations:              <none>
Selector:                 app=mongo-express
Type:                     LoadBalancer
IP Family Policy:         SingleStack
IP Families:              IPv4
IP:                       10.96.150.147
IPs:                      10.96.150.147
External IPs:             192.168.0.10
Port:                     <unset>  8080/TCP
TargetPort:               8081/TCP
NodePort:                 <unset>  30001/TCP
Endpoints:                10.244.0.6:8081
Session Affinity:         None
External Traffic Policy:  Cluster
Events:                   <none>
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_de(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_(base) all@localhost:~/data_engineering_bootcamp_23
3/tasks/4_microservice(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservi(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_deve
lopment/day_3_kubernetes/hands-on$ kubectl describe configmap mongodb-
configmap
Name:         mongodb-configmap
Namespace:    default
Labels:       <none>
Annotations:  <none>

Data
====
database_url:
----
mongo-service

BinaryData
====

Events:  <none>
```

- **Show logs from a pod of choice - document with a screenshot.**

Events: <none>
(base) ali@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_____dev_d_____development/day_3_kubernetes/hands-on$ kubectl logs mongo-deployment-85bbdc6549-vzdnq
about to fork child process, waiting until server is ready for connections.
forked process: 28

{"t":{"$date":"2023-05-12T03:20:30.715+00:00"},"s":"I", "c":"CONTROL", "id":20698, "ctx":"-","msg":"***** SERVER RESTARTED *****"}
{"t":{"$date":"2023-05-12T03:20:30.716+00:00"},"s":"I", "c":"NETWORK", "id":4915701,"ctx":"-","msg":"Initialized wire specification","attr":{"spec":{"incomingExternalClient":{"minWireVersion":0,"maxWir
ersion":17},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":17},"outgoing":{"minWireVersion":6,"maxWireVersion":17},"isInternalClient":true}}}
{"t":{"$date":"2023-05-12T03:20:30.719+00:00"},"s":"I", "c":"CONTROL", "id":23285, "ctx":"main","msg":"Automatically disabling TLS 1.0, to force-enable TLS 1.0 specify --sslDisabledProtocols 'none'"}
{"t":{"$date":"2023-05-12T03:20:30.720+00:00"},"s":"I", "c":"NETWORK", "id":4648601,"ctx":"main","msg":"Implicit TCP FastOpen unavailable. If TCP FastOpen is required, set tcpFastOpenServer, tcpFastOpe
lient, and tcpFastOpenQueueSize."}
{"t":{"$date":"2023-05-12T03:20:30.722+00:00"},"s":"I", "c":"REPL",   "id":5123008,"ctx":"main","msg":"Successfully registered PrimaryOnlyService","attr":{"service":"TenantMigrationDonorService","name
ace":"config.tenantMigrationDonors"}}
{"t":{"$date":"2023-05-12T03:20:30.722+00:00"},"s":"I", "c":"REPL",   "id":5123008,"ctx":"main","msg":"Successfully registered PrimaryOnlyService","attr":{"service":"TenantMigrationRecipientService","
mespace":"config.tenantMigrationRecipients"}}
{"t":{"$date":"2023-05-12T03:20:30.722+00:00"},"s":"I", "c":"REPL",   "id":5123008,"ctx":"main","msg":"Successfully registered PrimaryOnlyService","attr":{"service":"ShardSplitDonorService","namespace
"config.tenantSplitDonors"}}
{"t":{"$date":"2023-05-12T03:20:30.722+00:00"},"s":"I", "c":"CONTROL", "id":5945603,"ctx":"main","msg":"Multi threading initialized"}
{"t":{"$date":"2023-05-12T03:20:30.723+00:00"},"s":"I", "c":"CONTROL", "id":4615611,"ctx":"initandlisten","msg":"MongoDB starting","attr":{"pid":28,"port":27017,"dbPath":"/data/db","architecture":"64-b
","host":"mongo-deployment-85bbdc6549-vzdnq"}}
{"t":{"$date":"2023-05-12T03:20:30.723+00:00"},"s":"I", "c":"CONTROL", "id":23403, "ctx":"initandlisten","msg":"Build Info","attr":{"buildInfo":{"version":"6.0.5","gitVersion":"c9a99c120371d4d4c52cbb1
ac34a36ce8d3b1d","openSSLVersion":"OpenSSL 3.0.2 15 Mar 2022","modules":[],"allocator":"tcmalloc","environment":{"distmod":"ubuntu2204","distarch":"x86_64","target_arch":"x86_64"}}}}
{"t":{"$date":"2023-05-12T03:20:30.723+00:00"},"s":"I", "c":"CONTROL", "id":51765, "ctx":"initandlisten","msg":"Operating System","attr":{"os":{"name":"Ubuntu","version":"22.04"}}}
{"t":{"$date":"2023-05-12T03:20:30.723+00:00"},"s":"I", "c":"CONTROL", "id":21951, "ctx":"initandlisten","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":{"$date":"2023-05-12T03:20:30.724+00:00"},"s":"I", "c":"STORAGE", "id":22297, "ctx":"initandlisten","msg":"Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See
ttp://dochub.mongodb.org/core/prodnotes-filesystem","tags":["startupWarnings"]}
{"t":{"$date":"2023-05-12T03:20:30.724+00:00"},"s":"I", "c":"STORAGE", "id":22315, "ctx":"initandlisten","msg":"Opening WiredTiger","attr":{"config":"create,cache_size=3360M,session_max=33000,eviction
threads_min=4,threads_max=4,config_base=false,statistics=(fast),log=(enabled=true,remove=true,path=journal,compressor=snappy),builtin_extension_config=(zstd=(compression_level=6)),file_manager=(close_idl
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,c
pact:0,evict:0,history_store:0,recovery:0,rts:0,salvage:0,tiered:0,timestamp:0,transaction:0,verify:0,log:0],"}}
{"t":{"$date":"2023-05-12T03:20:30.920+00:00"},"s":"I", "c":"STORAGE", "id":4795906,"ctx":"initandlisten","msg":"WiredTiger opened","attr":{"durationMillis":196}}
{"t":{"$date":"2023-05-12T03:20:30.920+00:00"},"s":"I", "c":"RECOVERY", "id":23987, "ctx":"initandlisten","msg":"WiredTiger recoveryTimestamp","attr":{"recoveryTimestamp":{"$timestamp":{"t":0,"i":0}}}}
{"t":{"$date":"2023-05-12T03:20:31.046+00:00"},"s":"W", "c":"CONTROL", "id":22120, "ctx":"initandlisten","msg":"Access control is not enabled for the database. Read and write access to data and config
ation is unrestricted","tags":["startupWarnings"]}
{"t":{"$date":"2023-05-12T03:20:31.047+00:00"},"s":"W", "c":"CONTROL", "id":5123300,"ctx":"initandlisten","msg":"vm.max_map_count is too low","attr":{"currentValue":262144,"recommendedMinimum":1677720,
axConns":838860},"tags":["startupWarnings"]}
{"t":{"$date":"2023-05-12T03:20:31.047+00:00"},"s":"I", "c":"STORAGE", "id":20320, "ctx":"initandlisten","msg":"createCollection","attr":{"namespace":"admin.system.version","uuidDisposition":"provided
"uuid":{"$uuid":{"$uuid":"c2cc0f2e-f187-42f5-99b2-c6298fb53f98"}},"options":{"uuid":{"$uuid":{"$uuid":"c2cc0f2e-f187-42f5-99b2-c6298fb53f98"}}}}
{"t":{"$date":"2023-05-12T03:20:31.064+00:00"},"s":"I", "c":"INDEX",   "id":20345, "ctx":"initandlisten","msg":"Index build: done building","attr":{"buildUUID":null,"collectionUUID":{"uuid":{"$uuid":"
cc0f2e-f187-42f5-99b2-c6298fb53f98"}},"namespace":"admin.system.version","index":"_id_","ident":"index-1-3792979366195958977","collectionIdent":"collection-0-3792979366195958977","commitTimestamp":null}
{"t":{"$date":"2023-05-12T03:20:31.064+00:00"},"s":"I", "c":"REPL",   "id":20459, "ctx":"initandlisten","msg":"Setting featureCompatibilityVersion","attr":{"newVersion":"6.0"}}
{"t":{"$date":"2023-05-12T03:20:31.064+00:00"},"s":"I", "c":"REPL",   "id":5853300,"ctx":"initandlisten","msg":"current featureCompatibilityVersion value","attr":{"featureCompatibilityVersion":"6.0","
ntext":"setFCV"}}
{"t":{"$date":"2023-05-12T03:20:31.064+00:00"},"s":"I", "c":"NETWORK", "id":4915702,"ctx":"initandlisten","msg":"Updated wire specification","attr":{"oldSpec":{"incomingExternalClient":{"minWireVersion
0,"maxWireVersion":17},"incomingInternalClient":{"minWireVersion":0,"maxWireVersion":17},"outgoing":{"minWireVersion":6,"maxWireVersion":17},"isInternalClient":true},"newSpec":{"incomingExternalClient":{"
nWireVersion":0,"maxWireVersion":17},"incomingInternalClient":{"minWireVersion":17,"maxWireVersion":17},"outgoing":{"minWireVersion":17,"maxWireVersion":17},"isInternalClient":true}}}
{"t":{"$date":"2023-05-12T03:20:31.064+00:00"},"s":"I", "c":"NETWORK", "id":4915702,"ctx":"initandlisten","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":"2023-05-12T03:20:31.064+00:00"},"s":"I", "c":"REPL",   "id":5853300,"ctx":"initandlisten","msg":"current featureCompatibilityVersion value","attr":{"featureCompatibilityVersion":"6.0","
ntext":"startup"}}

- **Run minikube service <proper_service_name> to make the service appear in a browser and expose it for network traffic.**

```
(base) ali@localhost:~/data_engineering_bootcamp_2303/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 |
|-----------|---------------------|-------------|---------------------------|
🏃 Starting tunnel for service mongo-express-service.
|-----------|---------------------|-------------|---------------------------|
| NAMESPACE |        NAME         | TARGET PORT |            URL            |
|-----------|---------------------|-------------|---------------------------|
| default   | mongo-express-service |            | http://127.0.0.1:37739    |
|-----------|---------------------|-------------|---------------------------|
🎉 Opening service default/mongo-express-service in default browser...
❗ Because you are using a Docker driver on linux, the terminal needs to be open to run it.
Opening in existing browser session.
```

- **Add db, collection and a document in the WebUI.**

Viewing Collection: new_collection

Document added!   ✕

✏ New Document   ✏ New Index

| Simple | Advanced |

| Key | Value | String ▾ | 🔍 Find |

🗑 Delete all 1 documents retrieved

_id

🗑 645db344adc95116d69b827c

Rename Collection

assignment . | new_collection | ✏ Rename

Tools

| ⋈ Export Standard | ⋈ Export --jsonArray | ⋈ Export --csv |

| ✏ Reindex | ⬆ Import --mongoexport json | ✏ Compact |

| 🗑 Delete |

Collection Stats

Documents	1
Total doc size	22 Bytes
Average doc size	22 Bytes
Pre-allocated size	4 KB
Indexes	1
Total index size	4 KB
Padding factor	
Extents	

Indexes

Name	Columns	Size	Attributes	Actions
_id_	_id ASC	4 KB		🗑 DEL

- **Enter the pod for mongodb run mongosh to see if the document was created in collection in db.**

```
(base) all@localhost:~/data_engineering_bootcamp_2303/tasks/4_microservices_development/day_3_kubernetes/hands-on$ kubectl exec -it mongo-deployment-85bbdc6549-vzdnq -- /bin/bash
root@mongo-deployment-85bbdc6549-vzdnq:/# mongosh -u $MONGO_INITDB_ROOT_USERNAME -p $MONGO_INITDB_ROOT_PASSWORD --authenticationDatabase admin
Current Mongosh Log ID: 645dff9bc23324a5b23d7e31
Connecting to:          mongodb://<credentials>@127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&authSource=admin&appName=mongosh+1.8.2
Using MongoDB:          6.0.5
Using Mongosh:          1.8.2

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

------
   The server generated these startup warnings when booting
   2023-05-12T03:20:34.996+00:00: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-filesystem
   2023-05-12T03:20:35.576+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 assignment
switched to db assignment
assignment> db.new_collection.find()
[ { _id: ObjectId("645db344adc95116d69b827c") } ]
assignment>
```