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Help

db-deployment.yaml - kuber\_pro - Visual Studio Code

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EXPLORER

...

KUBER\_PRO

springboot-cru...

src

main

java

resources

test

target

app-deployment.yaml

db-deployment.yaml

Dockerfile

mysql-configMap.ya...

mysql-secrets.yaml

pom.xml

README.md

springboot-cru... U

DEBUG CONSOLE

OUTLINE

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JAVA PROJECTS

MAVEN

! db-deployment.yaml

springboot-crud-k8s > ! db-deployment.yaml

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volumeMounts:

- name: mysql-persistent-storage

mountPath: /var/lib/mysql #This is the path in the container on which the mounting will take place.

volumes:

- name: mysql-persistent-storage # Obtaining 'vloume' from PVC

persistentVolumeClaim:

claimName: mysql-pv-claim

---

# Define a 'Service' To Expose mysql to Other Services

apiVersion: v1

kind: Service

metadata:

name: mysql # DNS name

labels:

app: mysql

tier: database

spec:

ports:

- port: 3306

targetPort: 3306

selector: # mysql Pod Should contain same labels

app: mysql

tier: database

clusterIP: None # We Use DNS, Thus ClusterIP is not relevant

PROBLEMS

2

OUTPUT

TERMINAL

powershell

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✕

PS C:\Users\Sumukh G\Desktop\kuber\_pro>

main\*

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Ln 1, Col 1

Spaces: 2

UTF-8

CRLF

YAML

Go Live

🔍

🔔

12:22 PM

27-04-2023

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db-deployment.yaml - kuber\_pro - Visual Studio Code

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springboot-crud-k8s > ! db-deployment.yaml

# Define a 'Persistent Voulume Claim'(PVC) for Mysql Storage, dynamically provisioned by cluster

apiVersion: v1

kind: PersistentVolumeClaim

metadata:

name: mysql-pv-claim # name of PVC essential for identifying the storage data

labels:

app: mysql

tier: database

spec:

accessModes:

- ReadWriteOnce #This specifies the mode of the claim that we are trying to create.

resources:

requests:

storage: 1Gi #This will tell kubernetes about the amount of space we are trying to claim.

---

# Configure 'Deployment' of mysql server

apiVersion: apps/v1

kind: Deployment

metadata:

name: mysql

labels:

app: mysql

tier: database

spec:

selector: # mysql Pod Should contain same labels

matchLabels:

app: mysql

tier: database

EXPLORER

KUBER\_PRO

springboot-cru...

src

main

java

resources

test

target

! app-deployment.yaml

! db-deployment.yaml

Dockerfile

! mysql-configMap.ya...

! mysql-secrets.yaml

pom.xml 1

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PROBLEMS 2

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TERMINAL

PS C:\Users\Sumukh G\Desktop\kuber\_pro>

Ln 1, Col 1

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UTF-8

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YAML

Go Live

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27-04-2023



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```
C:\Users\Sumukh G>minikube start
* minikube v1.30.1 on Microsoft Windows 11 Pro 10.0.22621.1555 Build 22621.1555
* 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 v1.26.3 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, default-storageclass
* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
```

```
C:\Users\Sumukh G>@FOR /f "tokens=*" %i IN ('minikube docker-env') DO @%i
```

FileEditSelectionViewGoRunTerminalHelp

app-deployment.yaml - kuber\_pro - Visual Studio Code

EXPLORER

KUBER\_PRO

springboot-cru...

src

main

java\com\javate...

controller

entity

repository

service

SpringbootCrud...

resources

test

target

! app-deploye... M

! db-deploymen... M

Dockerfile

pom.xml 1

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springboot-cru... U

SpringbootCrudK8sExampleApplication.java

! app-deployment.yaml M X

Dockerfile

springboot-crud-k8s > ! app-deployment.yaml

```
1  apiVersion: apps/v1
2  kind: Deployment
3  metadata:
4    name: springboot-crud-deployment
5  spec:
6    selector:
7      matchLabels:
8        app: springboot-k8s-mysql
9    replicas: 3
10   template:
11     metadata:
12       labels:
13         app: springboot-k8s-mysql
14     spec:
15       containers:
16         - name: springboot-crud-k8s
17           image: springboot-crud-k8s:1.0
18           ports:
19             - containerPort: 8080
20           env: # Setting Enviornmental Variables
21             - name: DB_HOST # Setting Database host address from configMap
22               value: mysql
23             - name: DB_NAME # Setting Database name from configMap
24               value: javatechie
25             - name: DB_USERNAME # Setting Database username from Secret
```

PROBLEMS 2

OUTPUT

TERMINAL

```
2023-04-27 14:22:17.683 INFO 22352 --- [main] o.s.b.w.embedded.tomcat.TomcatWebServer : Tomcat started on port(s)
: 8080 (http) with context path ''
2023-04-27 14:22:17.722 INFO 22352 --- [main] .j.c.SpringbootCrudK8sExampleApplication : Started SpringbootCrudK8s
ExampleApplication in 16.574 seconds (JVM running for 18.347)
```

powershell

Run: Spri...

Maven-ku...

main\*

Ln 24, Col 32

Spaces: 2

UTF-8

CRLF

YAML

Go Live

ENG IN

02:40 PM 27-04-2023



```
C:\Users\Sumukh G\Desktop\kuber_pro\springboot-crud-k8s>
```







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Help

Dockerfile - kuber\_pro - Visual Studio Code

EXPLORER

...

KUBER\_PRO

> controller

> entity

> repository

> service

SpringbootCrud...

> resources

> test

target

> classes

> generated-sources

> generated-test-so...

> maven-archiv...

> maven-status

> surefire-repo...

> test-classes

springboot-cr... U

springboot-cr... U

! db-deploymen... M

Dockerfile

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SpringbootCrudK8sExampleApplication.java

Dockerfile X

springboot-crud-k8s > Dockerfile > ...

1 FROM openjdk:8

2 EXPOSE 8080

3 ADD target/springboot-crud-k8s.jar springboot-crud-k8s.jar

4 ENTRYPOINT ["java","-jar","/springboot-crud-k8s.jar"]

PROBLEMS 2

OUTPUT

TERMINAL

[INFO] Total time: 01:14 min

[INFO] Finished at: 2023-04-27T14:11:13+05:30

[INFO] -----

PS C:\Users\Sumukh G\Desktop\kuber\_pro>

main\*

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Ln 4, Col 54

Spaces: 4

UTF-8

CRLF

Dockerfile

Go Live

ENG IN

02:20 PM 27-04-2023

Command Prompt - kubectl +

Microsoft Windows [Version 10.0.22621.1555]  
(c) Microsoft Corporation. All rights reserved.  
  
C:\Users\Sumukh G>kubectl get pods  
NAME READY STATUS RESTARTS AGE  
mysql-6fb5464f8c-npznk 1/1 Running 0 4m20s  
  
C:\Users\Sumukh G>kubectl exec -it mysql-6fb5464f8c-npznk /bin/bash  
kubectl exec [POD] [COMMAND] is DEPRECATED and will be removed in a future version. Use kubectl exec [POD] -- [COMMAND] instead.  
bash-4.2# mysql -u root -p  
Enter password:  
Welcome to the MySQL monitor. Commands end with ; or \g.  
Your MySQL connection id is 2  
Server version: 5.7.42 MySQL Community Server (GPL)  
  
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Oracle is a registered trademark of Oracle Corporation and/or its  
affiliates. Other names may be trademarks of their respective  
owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
mysql> show databases;  
+-----+  
| Database |  
+-----+  
| information\_schema |  
| javatechie |  
| mysql |  
| performance\_schema |  
| sys |  
+-----+  
5 rows in set (0.00 sec)  
  
mysql> use javatechie  
Database changed  
mysql>

ENG IN 01:44 PM 27-04-2023



```
C:\Users\Sumukh G\Desktop\kuber_pro\springboot-crud-k8s>kubectl apply -f db-deployment.yaml
persistentvolumeclaim/mysql-pv-claim unchanged
deployment.apps/mysql configured
service/mysql unchanged
```

```
C:\Users\Sumukh G\Desktop\kuber_pro\springboot-crud-k8s>kubectl get pods
```

NAME	READY	STATUS	RESTARTS	AGE
mysql-6fb5464f8c-npznk	1/1	Running	0	5s

```
C:\Users\Sumukh\Desktop\kuber_pro\springboot-crud-k8s>kubectl logs mysql-6fb5464f8c-npznk
2023-04-27 08:07:46+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 5.7.42-1.el7 started.
2023-04-27 08:07:47+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
2023-04-27 08:07:48+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 5.7.42-1.el7 started.
2023-04-27 08:07:48+00:00 [Note] [Entrypoint]: Initializing database files
2023-04-27T08:07:48.821244Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentation for more details).
2023-04-27T08:07:49.519922Z 0 [Warning] InnoDB: New log files created, LSN=45790
2023-04-27T08:07:49.638356Z 0 [Warning] InnoDB: Creating foreign key constraint system tables.
2023-04-27T08:07:49.730614Z 0 [Warning] No existing UUID has been found, so we assume that this is the first time that this server has been started. Generating a new UUID: 9a0f2e9a-e4d2-11ed-b652-566336076e60.
2023-04-27T08:07:49.740238Z 0 [Warning] Gtid table is not ready to be used. Table 'mysql.gtid_executed' cannot be opened.
2023-04-27T08:07:50.320429Z 0 [Warning] A deprecated TLS version TLSv1 is enabled. Please use TLSv1.2 or higher.
2023-04-27T08:07:50.320584Z 0 [Warning] A deprecated TLS version TLSv1.1 is enabled. Please use TLSv1.2 or higher.
2023-04-27T08:07:50.385742Z 0 [Warning] CA certificate ca.pem is self signed.
2023-04-27T08:07:51.914566Z 1 [Warning] root@localhost is created with an empty password ! Please consider switching off the --initialize-insecure option.
2023-04-27 08:07:58+00:00 [Note] [Entrypoint]: Database files initialized
2023-04-27 08:07:58+00:00 [Note] [Entrypoint]: Starting temporary server
2023-04-27 08:07:58+00:00 [Note] [Entrypoint]: Waiting for server startup
2023-04-27T08:08:02.437123Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentation for more details).
2023-04-27T08:08:02.472689Z 0 [Note] mysqld (mysqld 5.7.42) starting as process 126 ...
2023-04-27T08:08:02.581953Z 0 [Note] InnoDB: PUNCH HOLE support available
2023-04-27T08:08:02.582771Z 0 [Note] InnoDB: Mutexes and rw_locks use GCC atomic builtins
2023-04-27T08:08:02.582800Z 0 [Note] InnoDB: Uses event mutexes
2023-04-27T08:08:02.582816Z 0 [Note] InnoDB: GCC builtin __atomic_thread_fence() is used for memory barrier
2023-04-27T08:08:02.582965Z 0 [Note] InnoDB: Compressed tables use zlib 1.2.13
2023-04-27T08:08:02.582998Z 0 [Note] InnoDB: Using Linux native AIO
2023-04-27T08:08:02.596209Z 0 [Note] InnoDB: Number of pools: 1
2023-04-27T08:08:02.600056Z 0 [Note] InnoDB: Using CPU crc32 instructions
2023-04-27T08:08:02.900531Z 0 [Note] InnoDB: Initializing buffer pool, total size = 128M, instances = 1, chunk size = 128M
```

```
C:\Users\Sumukh G\Desktop\kuber_pro\springboot-crud-k8s>
```

Scratch Pad

NewImport

Collections

APIs

Environments

Mock Servers

Monitors

History

You don't have any collections

Collections let you group related requests, making them easier to access and run.

Create Collection

GET http://localhost:8080/c

+

...

http://localhost:8080/orders

Save

Send

GET

http://localhost:8080/orders

Params

Authorization

Headers (9)

Body

Pre-request Script

Tests

Settings

Cookies

Query Params

Key	Value	Description	Bulk Edit
Key	Value	Description	

Body

Cookies

Headers (5)

Test Results

Pretty

Raw

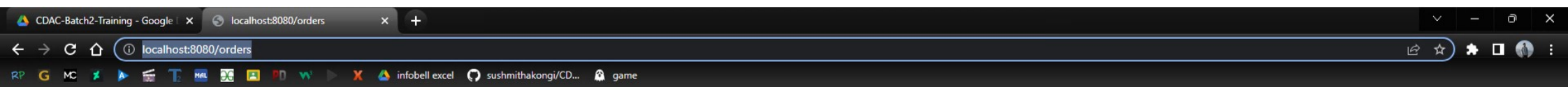
Preview

Visualize

JSON

```
1  {
2    "id": 1,
3    "name": "LG TV",
4    "qty": 2,
5    "price": 75000.0
6  },
7  {
8    "id": 2,
9    "name": "Samsung s23",
10   "qty": 3,
11   "price": 105000.0
12  }
13 }
```





```
[{"id":1,"name":"LG TV","qty":2,"price":75000.0},{id":2,"name":"Samsung s23","qty":3,"price":105000.0}]
```

```
mysql> show tables;
```

```
+-----+  
| Tables_in_javatechie |  
+-----+  
| orders_tbl           |  
+-----+
```

```
1 row in set (0.00 sec)
```

```
mysql> select * from orders_tbl;
```

```
+-----+-----+-----+-----+  
| id | name  | quantity | price  |  
+-----+-----+-----+-----+  
|  1 | LG TV |         2 | 75000.00 |  
+-----+-----+-----+-----+
```

```
1 row in set (0.01 sec)
```

```
mysql>
```



```
C:\WINDOWS\system32\cmd. X + v

* Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default

C:\Users\Sumukh G\Desktop\kuber_pro\springboot-crud-k8s>kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
mysql-6fb5464f8c-npznk              1/1     Running   1 (11m ago) 5d2h
springboot-crud-deployment-58b558cd4f-js2lp  1/1     Running   4 (11m ago) 5d
springboot-crud-deployment-58b558cd4f-n8qwr  1/1     Running   4 (11m ago) 5d
springboot-crud-deployment-58b558cd4f-zhpcs  1/1     Running   4 (11m ago) 5d

C:\Users\Sumukh G\Desktop\kuber_pro\springboot-crud-k8s>kubectl get deployments
NAME                                READY   UP-TO-DATE   AVAILABLE   AGE
mysql                               1/1     1             1           5d3h
springboot-crud-deployment          3/3     3             3           5d

C:\Users\Sumukh G\Desktop\kuber_pro\springboot-crud-k8s>kubectl exec -it springboot-crud-deployment-58b558cd4f-js2lp /bin/bash
kubectl exec [POD] [COMMAND] is DEPRECATED and will be removed in a future version. Use kubectl exec [POD] -- [COMMAND] instead.
error: unable to upgrade connection: container not found ("springboot-crud-k8s")

C:\Users\Sumukh G\Desktop\kuber_pro\springboot-crud-k8s>kubectl exec -it mysql-6fb5464f8c-npznk /bin/bash
kubectl exec [POD] [COMMAND] is DEPRECATED and will be removed in a future version. Use kubectl exec [POD] -- [COMMAND] instead.
bash-4.2# mysql -h mysql -u root
ERROR 1045 (28000): Access denied for user 'root'@'10.244.0.35' (using password: NO)
bash-4.2# mysql -h mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 3
Server version: 5.7.42 MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| javatechie |
| mysql |
| performance_schema |
| sys |
+-----+
5 rows in set (0.10 sec)

mysql> use javatechie
Database changed
mysql> show tables;
```