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Help

db-deployment.yaml - kuber_pro - Visual Studio Code

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! db-deployment.yaml

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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springboot-cru... U

DEBUG CONSOLE

OUTLINE

TIMELINE

JAVA PROJECTS

MAVEN

PROBLEMS 2

OUTPUT

TERMINAL

PS C:\Users\Sumukh G\Desktop\kuber_pro>

Ln 1, Col 1

Spaces: 2

UTF-8

CRLF

YAML

Go Live

12:22 PM

27-04-2023

+

```
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
```

C:\Users\Sumukh G>

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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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

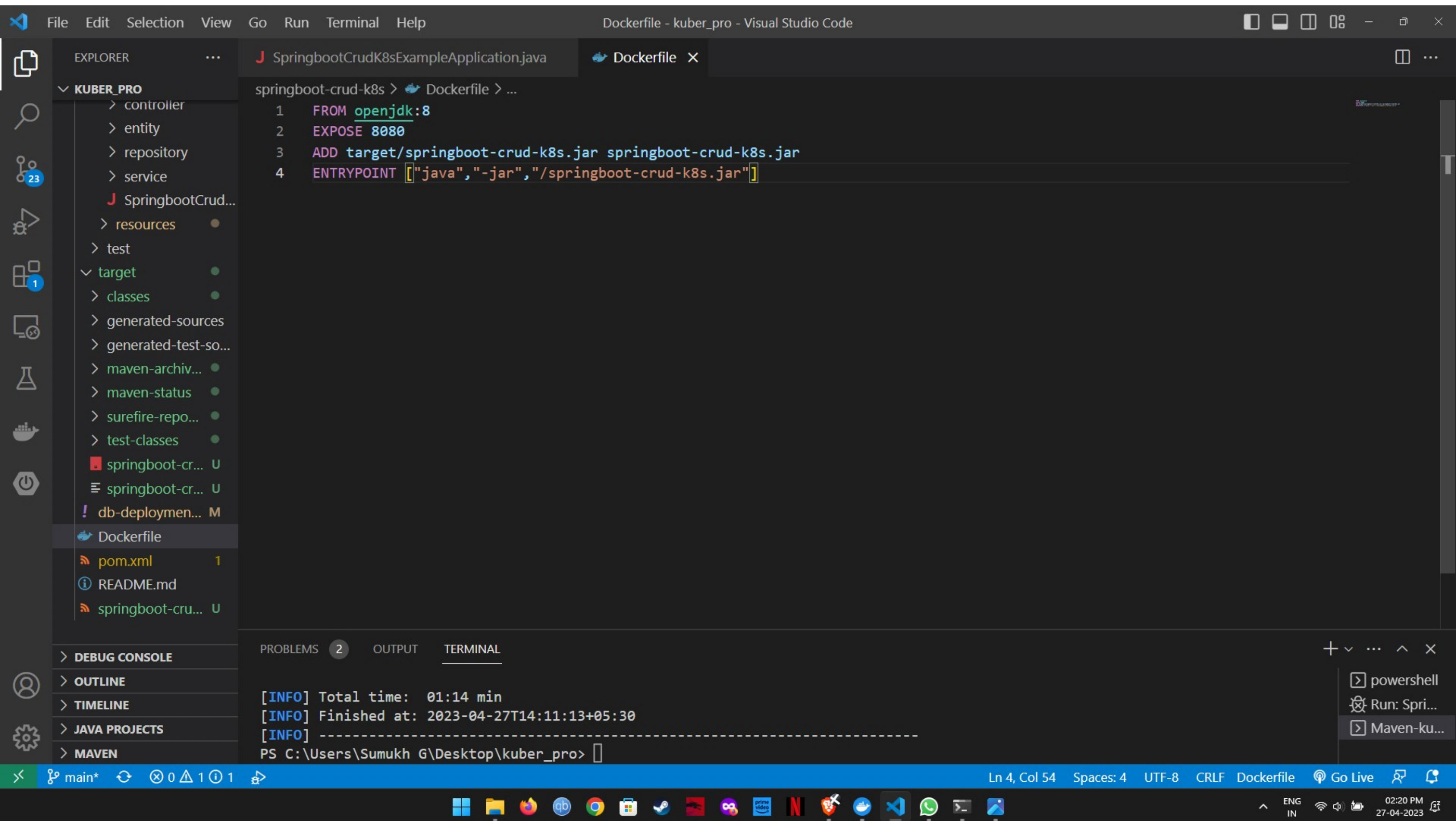
YAML

Go Live

ENG IN

02:40 PM 27-04-2023


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

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>
```

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```
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>
```