EXPLORER ···

MINIPROJ

springboot-crud-k8s > Dockerfile

```dockerfile
1   FROM openjdk:8
2   EXPOSE 8080
3   COPY target/springboot-crud-k8s.jar springboot-crud-k8s.jar
4   ENTRYPOINT ["java","-jar","/springboot-crud-k8s.jar"]
```

∨ java \ com \ javatechie \ crud
  ∨ controller
    J OrderController.java
  ∨ entity
    J Order.java
  ∨ repository
    J OrderRepository.java
  > service
    J SpringbootCrudK8sExampleAp...
  ∨ resources   ●
    ≡ application.properties   M
    ≡ application.yml
  > test
> target   ●
! app-deployment.yaml   M
! db-deployment.yaml   M
🐳 Dockerfile   M
≫ pom.xml   1, M
ⓘ README.md

> OUTLINE

∨ TIMELINE   Dockerfile
○ File Saved   2 hrs
◇ #code Basant kumar Hota   1 yr

> JAVA PROJECTS

Tabs: cation.java   J OrderController.java   application.properties M   application.yml   🐳 Dockerfile M ✕

ⓘ Do you want to install the recommended extension for Docker?

Install   Show Recommendations

main*   ⊗ 0 △ 1   Ln 4, Col 54   Spaces: 4   UTF-8   CRLF   Docker   Go Live

Type here to search   04:17 PM 27-04-2023

```
Microsoft Windows [Version 10.0.19043.928]
(c) Microsoft Corporation. All rights reserved.

C:\Users\DELL>mysql -uroot -p
Enter password: ****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 181
Server version: 5.7.33-log MySQL Community Server (GPL)

Copyright (c) 2000, 2021, Oracle and/or its affiliates.

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> use mydatabase;
Database changed
mysql> select * from orders_tbl;
+----+-------+-------+-----+
| id | name  | price | qty |
+----+-------+-------+-----+
|  1 | watch |  2000 |   2 |
+----+-------+-------+-----+
1 row in set (0.00 sec)

mysql> mysql version
    -> ;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'mysql version
' at line 1
mysql> select version();
+------------+
| version()  |
+------------+
| 5.7.33-log |
+------------+
1 row in set (0.05 sec)

mysql> drop mydatabase;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'mydatabase' a
t line 1
mysql> drop database mydatabase;
Query OK, 2 rows affected (0.59 sec)
```
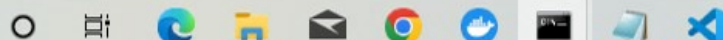
```
t line 1
mysql> drop database mydatabase;
Query OK, 2 rows affected (0.59 sec)

mysql> create database mydatabase;
Query OK, 1 row affected (0.02 sec)

mysql> show tables;
ERROR 1046 (3D000): No database selected
mysql> use mydatabase;
Database changed
mysql> show tables;
+----------------------+
| Tables_in_mydatabase |
+----------------------+
| hibernate_sequence   |
| orders_tbl           |
+----------------------+
2 rows in set (0.00 sec)

mysql> show tables;
+----------------------+
| Tables_in_mydatabase |
+----------------------+
| hibernate_sequence   |
| orders_tbl           |
+----------------------+
2 rows in set (0.00 sec)

mysql> select * from orders_tbl;
Empty set (0.00 sec)

mysql> select * from orders_tbl;
+----+-------+-------+-----+
| id | name  | price | qty |
+----+-------+-------+-----+
|  1 | watch |  2000 |   2 |
+----+-------+-------+-----+
1 row in set (0.00 sec)

mysql>
```

```
Command Prompt                                                                    —  □  ✕

service/mysql unchanged
The request is invalid: patch: Invalid value: "map[metadata:map[annotations:map[kubectl.kubernetes.io/last-applied-configuration:{\"apiVersion\":\"apps/v1\",\"kind\":\"
Deployment\",\"metadata\":{\"annotations\":{},\"labels\":{\"app\":\"mysql\",\"tier\":\"database\"},\"name\":\"mysql\",\"namespace\":\"default\"},\"spec\":{\"selector\":
{\"matchLabels\":{\"app\":\"mysql\",\"tier\":\"database\"}},\"strategy\":{\"type\":\"Recreate\"},\"template\":{\"metadata\":{\"labels\":{\"app\":\"mysql\",\"tier\":\"da
tabase\"}},\"spec\":{\"containers\":[{\"args\":[\"--ignore-db-dir=lost+found\"],\"env\":[{\"name\":\"MYSQL_ROOT_PASSWORD\",\"value\":1234},{\"name\":\"MYSQL_DATABASE\",
\"value\":\"javatechie\"}],\"image\":\"mysql:5.7\",\"name\":\"mysql\",\"ports\":[{\"containerPort\":3306,\"name\":\"mysql\"}],\"volumeMounts\":[{\"mountPath\":\"/var/li
b/mysql\",\"name\":\"mysql-persistent-storage\"}]}],\"volumes\":[{\"name\":\"mysql-persistent-storage\",\"persistentVolumeClaim\":{\"claimName\":\"mysql-pv-claim\"}}]}}
}}\n]] spec:map[template:map[spec:map[]]]]": cannot convert int64 to string

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

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl get pods
NAME                             READY   STATUS             RESTARTS      AGE
mysql-7b47b674b7-cwc29           0/1     ContainerCreating  0             4s
nginx-deployment-95585b474-x4gkw 1/1     Running            3 (89m ago)   23h

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl logs mysql-7b47b674b7-cwc29
2023-04-27 07:58:52+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 5.7.42-1.el7 started.
2023-04-27 07:58:53+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
2023-04-27 07:58:53+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 5.7.42-1.el7 started.
2023-04-27 07:58:53+00:00 [Note] [Entrypoint]: Initializing database files
2023-04-27T07:58:53.858673Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentati
on for more details).
2023-04-27T07:58:56.321706Z 0 [Warning] InnoDB: New log files created, LSN=45790
2023-04-27T07:58:57.118591Z 0 [Warning] InnoDB: Creating foreign key constraint system tables.
2023-04-27T07:58:57.720750Z 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 UU
ID: 5cf4ef98-e4d1-11ed-acb0-a2c2e485512c.
2023-04-27T07:58:57.870115Z 0 [Warning] Gtid table is not ready to be used. Table 'mysql.gtid_executed' cannot be opened.
2023-04-27T07:58:58.177351Z 0 [Warning] A deprecated TLS version TLSv1 is enabled. Please use TLSv1.2 or higher.
2023-04-27T07:58:58.177392Z 0 [Warning] A deprecated TLS version TLSv1.1 is enabled. Please use TLSv1.2 or higher.
2023-04-27T07:58:58.178917Z 0 [Warning] CA certificate ca.pem is self signed.
2023-04-27T07:58:58.234426Z 1 [Warning] root@localhost is created with an empty password ! Please consider switching off the --initialize-insecure option.

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl get pods
NAME                             READY   STATUS    RESTARTS      AGE
mysql-7b47b674b7-cwc29           1/1     Running   0             47s
nginx-deployment-95585b474-x4gkw 1/1     Running   3 (89m ago)   23h

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl logs mysql-85b5fc646-kjfqg
Error from server (NotFound): pods "mysql-85b5fc646-kjfqg" not found
```

```
Command Prompt                                                                    —  □  ✕

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl logs mysql-85b5fc646-kjfqg
Error from server (NotFound): pods "mysql-85b5fc646-kjfqg" not found

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl logs mysql-7b47b674b7-cwc29
2023-04-27 07:58:52+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 5.7.42-1.el7 started.
2023-04-27 07:58:53+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
2023-04-27 07:58:53+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 5.7.42-1.el7 started.
2023-04-27 07:58:53+00:00 [Note] [Entrypoint]: Initializing database files
2023-04-27T07:58:53.858673Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentati
on for more details).
2023-04-27T07:58:56.321706Z 0 [Warning] InnoDB: New log files created, LSN=45790
2023-04-27T07:58:57.118591Z 0 [Warning] InnoDB: Creating foreign key constraint system tables.
2023-04-27T07:58:57.720750Z 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 UU
ID: 5cf4ef98-e4d1-11ed-acb0-a2c2e485512c.
2023-04-27T07:58:57.870115Z 0 [Warning] Gtid table is not ready to be used. Table 'mysql.gtid_executed' cannot be opened.
2023-04-27T07:58:58.177351Z 0 [Warning] A deprecated TLS version TLSv1 is enabled. Please use TLSv1.2 or higher.
2023-04-27T07:58:58.177392Z 0 [Warning] A deprecated TLS version TLSv1.1 is enabled. Please use TLSv1.2 or higher.
2023-04-27T07:58:58.178917Z 0 [Warning] CA certificate ca.pem is self signed.
2023-04-27T07:58:58.234426Z 1 [Warning] root@localhost is created with an empty password ! Please consider switching off the --initialize-insecure option.
2023-04-27 08:00:03+00:00 [Note] [Entrypoint]: Database files initialized
2023-04-27 08:00:03+00:00 [Note] [Entrypoint]: Starting temporary server
2023-04-27 08:00:03+00:00 [Note] [Entrypoint]: Waiting for server startup
2023-04-27T08:00:03.846626Z 0 [Warning] TIMESTAMP with implicit DEFAULT value is deprecated. Please use --explicit_defaults_for_timestamp server option (see documentati
on for more details).
2023-04-27T08:00:03.849624Z 0 [Note] mysqld (mysqld 5.7.42) starting as process 125 ...
2023-04-27T08:00:03.855849Z 0 [Note] InnoDB: PUNCH HOLE support available
2023-04-27T08:00:03.855920Z 0 [Note] InnoDB: Mutexes and rw_locks use GCC atomic builtins
2023-04-27T08:00:03.855931Z 0 [Note] InnoDB: Uses event mutexes
2023-04-27T08:00:03.855935Z 0 [Note] InnoDB: GCC builtin __atomic_thread_fence() is used for memory barrier
2023-04-27T08:00:03.855939Z 0 [Note] InnoDB: Compressed tables use zlib 1.2.13
2023-04-27T08:00:03.855946Z 0 [Note] InnoDB: Using Linux native AIO
2023-04-27T08:00:03.856310Z 0 [Note] InnoDB: Number of pools: 1
2023-04-27T08:00:03.856476Z 0 [Note] InnoDB: Using CPU crc32 instructions
2023-04-27T08:00:03.859857Z 0 [Note] InnoDB: Initializing buffer pool, total size = 128M, instances = 1, chunk size = 128M
2023-04-27T08:00:03.878029Z 0 [Note] InnoDB: Completed initialization of buffer pool
2023-04-27T08:00:03.882582Z 0 [Note] InnoDB: If the mysqld execution user is authorized, page cleaner thread priority can be changed. See the man page of setpriority().

2023-04-27T08:00:03.895528Z 0 [Note] InnoDB: Highest supported file format is Barracuda.
2023-04-27T08:00:04.032378Z 0 [Note] InnoDB: Creating shared tablespace for temporary tables
2023-04-27T08:00:04.032614Z 0 [Note] InnoDB: Setting file './ibtmp1' size to 12 MB. Physically writing the file full; Please wait ...
2023-04-27T08:00:04.200750Z 0 [Note] InnoDB: File './ibtmp1' size is now 12 MB.
2023-04-27T08:00:04.201908Z 0 [Note] InnoDB: 96 redo rollback segment(s) found. 96 redo rollback segment(s) are active.
2023-04-27T08:00:04.201990Z 0 [Note] InnoDB: 32 non-redo rollback segment(s) are active.
2023-04-27T08:00:04.205069Z 0 [Note] InnoDB: 5.7.42 started; log sequence number 2770892
```

```
2023-04-27T08:00:29.093047Z 0 [Warning] A deprecated TLS version TLSv1.1 is enabled. Please use TLSv1.2 or higher.
2023-04-27T08:00:29.093677Z 0 [Warning] CA certificate ca.pem is self signed.
2023-04-27T08:00:29.093755Z 0 [Note] Skipping generation of RSA key pair as key files are present in data directory.
2023-04-27T08:00:29.094113Z 0 [Note] Server hostname (bind-address): '*'; port: 3306
2023-04-27T08:00:29.094409Z 0 [Note] IPv6 is available.
2023-04-27T08:00:29.094690Z 0 [Note]   - '::' resolves to '::';
2023-04-27T08:00:29.094745Z 0 [Note] Server socket created on IP: '::'.
2023-04-27T08:00:29.152768Z 0 [Warning] Insecure configuration for --pid-file: Location '/var/run/mysqld' in the path is accessible to all OS users. Consider choosing a
 different directory.
2023-04-27T08:00:29.160154Z 0 [Note] Event Scheduler: Loaded 0 events
2023-04-27T08:00:29.160661Z 0 [Note] mysqld: ready for connections.
Version: '5.7.42'  socket: '/var/run/mysqld/mysqld.sock'  port: 3306  MySQL Community Server (GPL)

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl get pods
NAME                            READY   STATUS    RESTARTS      AGE
mysql-7b47b674b7-cwc29          1/1     Running   0             11m
nginx-deployment-95585b474-x4gkw 1/1    Running   3 (100m ago)  23h

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>ls
'ls' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>docker ls
docker: 'ls' is not a docker command.
See 'docker --help'

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>dir
 Volume in drive C is WIN10
 Volume Serial Number is 9A14-9E92

 Directory of C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s

27-04-2023  01:19 PM    <DIR>          .
27-04-2023  01:19 PM    <DIR>          ..
27-04-2023  01:27 PM             2,287 db-deployment.yaml
26-04-2023  11:41 AM               142 Dockerfile
26-04-2023  11:46 AM             1,981 pom.xml
26-04-2023  11:41 AM                88 README.md
26-04-2023  11:41 AM    <DIR>          src
26-04-2023  11:45 AM    <DIR>          target
               4 File(s)          4,498 bytes
               4 Dir(s)  125,184,348,160 bytes free

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>
```

```
Usage:  docker build [OPTIONS] PATH | URL | -

Build an image from a Dockerfile

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>docker build -t springboot-crud-k8s:1.0 .
[+] Building 160.9s (7/7) FINISHED
 => [internal] load .dockerignore                                                         0.5s
 => => transferring context: 2B                                                           0.0s
 => [internal] load build definition from Dockerfile                                      0.8s
 => => transferring dockerfile: 182B                                                      0.0s
 => [internal] load metadata for docker.io/library/openjdk:8                              4.9s
 => [internal] load build context                                                         2.5s
 => => transferring context: 38.57MB                                                      2.2s
 => [1/2] FROM docker.io/library/openjdk:8@sha256:86e863cc57215cfb181bd319736d0baf625fe8f150577f9eb58bd937f5452cb8   136.3s
 => => resolve docker.io/library/openjdk:8@sha256:86e863cc57215cfb181bd319736d0baf625fe8f150577f9eb58bd937f5452cb8   0.6s
 => => sha256:86e863cc57215cfb181bd319736d0baf625fe8f150577f9eb58bd937f5452cb8 1.04kB / 1.04kB   0.0s
 => => sha256:3af2ac94130765b73fc8f1b42ffc04f77996ed8210c297fcfa28ca880ff0a217 1.79kB / 1.79kB   0.0s
 => => sha256:b273004037cc3af245d8e08cfbfa672b93ee7dcb289736c82d0b58936fb71702 7.81kB / 7.81kB   0.0s
 => => sha256:001c52e26ad57e3b25b439ee0052f6692e5c0f2d5d982a00a8819ace5e521452 55.00MB / 55.00MB   66.7s
 => => sha256:d9d4b9b6e964657da49910b495173d6c4f0d9bc47b3b44273cf82fd32723d165 5.16MB / 5.16MB   17.9s
 => => sha256:2068746827ec1b043b571e4788693eab7e9b2a95301176512791f8c317a2816a 10.88MB / 10.88MB   16.8s
 => => sha256:9daef329d35093868ef75ac8b7c6eb407fa53abbcb3a264c218c2ec7bca716e6 54.58MB / 54.58MB   89.8s
 => => sha256:d85151f15b6683b98f21c3827ac545188b1849efb14a1049710ebc4692de3dd5 5.42MB / 5.42MB   25.8s
 => => sha256:52a8c426d30b691c4f7e8c4b438901ddeb82ff80d4540d5bbd49986376d85cc9 210B / 210B   26.6s
 => => sha256:8754a66e005039a091c5ad0319f055be393c7123717b1f6fee8647c338ff3ceb 105.92MB / 105.92MB   118.4s
 => => extracting sha256:001c52e26ad57e3b25b439ee0052f6692e5c0f2d5d982a00a8819ace5e521452   7.8s
 => => extracting sha256:d9d4b9b6e964657da49910b495173d6c4f0d9bc47b3b44273cf82fd32723d165   0.6s
 => => extracting sha256:2068746827ec1b043b571e4788693eab7e9b2a95301176512791f8c317a2816a   0.8s
 => => extracting sha256:9daef329d35093868ef75ac8b7c6eb407fa53abbcb3a264c218c2ec7bca716e6   23.5s
 => => extracting sha256:d85151f15b6683b98f21c3827ac545188b1849efb14a1049710ebc4692de3dd5   0.7s
 => => extracting sha256:52a8c426d30b691c4f7e8c4b438901ddeb82ff80d4540d5bbd49986376d85cc9   0.0s
 => => extracting sha256:8754a66e005039a091c5ad0319f055be393c7123717b1f6fee8647c338ff3ceb   10.2s
 => [2/2] COPY target/springboot-crud-k8s.jar springboot-crud-k8s.jar                     16.2s
 => exporting to image                                                                    1.5s
 => => exporting layers                                                                    1.2s
 => => writing image sha256:f60f9ed64563a0687b1fce921f4e91aea45fa2320154c13c137fc6e900c15133   0.1s
 => => naming to docker.io/library/springboot-crud-k8s:1.0                                 0.2s

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>docker images
REPOSITORY                       TAG        IMAGE ID       CREATED         SIZE
springboot-crud-k8s              1.0        f60f9ed64563   13 seconds ago  565MB
mysql                            5.7        dd6675b5cfea   9 days ago      569MB
registry.k8s.io/kube-apiserver   v1.26.3    1d9b3cbae03c   6 weeks ago     134MB
```

```
mysql                                       5.7        dd6675b5cfea    9 days ago      569MB
registry.k8s.io/kube-apiserver              v1.26.3    1d9b3cbae03c    6 weeks ago     134MB
registry.k8s.io/kube-scheduler              v1.26.3    5a7904736932    6 weeks ago     56.4MB
registry.k8s.io/kube-controller-manager     v1.26.3    ce8c2293ef09    6 weeks ago     123MB
registry.k8s.io/kube-proxy                  v1.26.3    92ed2bec97a6    6 weeks ago     65.6MB
registry.k8s.io/etcd                        3.5.6-0    fce326961ae2    5 months ago    299MB
registry.k8s.io/pause                       3.9        e6f181688397    6 months ago    744kB
registry.k8s.io/coredns/coredns             v1.9.3     5185b96f0bec    11 months ago   48.8MB
gcr.io/k8s-minikube/storage-provisioner     v5         6e38f40d628d    2 years ago     31.5MB
nginx                                       1.16       dfcfd8e9a5d3    3 years ago     127MB

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl apply -f app-deployment.yaml
deployment.apps/springboot-crud-deployment created
service/springboot-crud-svc created

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl get deployment
NAME                         READY   UP-TO-DATE   AVAILABLE   AGE
mysql                        1/1     1            1           3h13m
nginx-deployment             1/1     1            1           24h
springboot-crud-deployment   3/3     3            3           16s

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl get svc
NAME                  TYPE        CLUSTER-IP     EXTERNAL-IP   PORT(S)          AGE
kubernetes            ClusterIP   10.96.0.1      <none>        443/TCP          25h
mysql                 ClusterIP   None           <none>        3306/TCP         3h13m
springboot-crud-svc   NodePort    10.103.101.7   <none>        8080:31140/TCP   32s

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl get pods
NAME                                          READY   STATUS    RESTARTS        AGE
mysql-7b47b674b7-cwc29                         1/1     Running   0               67m
nginx-deployment-95585b474-x4gkw               1/1     Running   3 (156m ago)    24h
springboot-crud-deployment-5769ddfb5c-2b77s    1/1     Running   0               38s
springboot-crud-deployment-5769ddfb5c-vdng7    1/1     Running   0               38s
springboot-crud-deployment-5769ddfb5c-z5bks    1/1     Running   0               38s

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl logs springboot-crud-deployment-5769ddfb5c-2b77s

  .   ____          _            __ _ _
 /\\ / ___'_ __ _ _(_)_ __  __ _ \ \ \ \
( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
  '  |____| .__|_| |_|_| |_\__, | / / / /
 =========|_|==============|___/=/_/_/_/
 :: Spring Boot ::        (v2.6.1)
```

```
Command Prompt                                                                                    —  ☐  ✕

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl get pods
NAME                                         READY   STATUS    RESTARTS        AGE
mysql-7b47b674b7-cwc29                        1/1     Running   0               67m
nginx-deployment-95585b474-x4gkw              1/1     Running   3 (156m ago)    24h
springboot-crud-deployment-5769ddfb5c-2b77s   1/1     Running   0               38s
springboot-crud-deployment-5769ddfb5c-vdng7   1/1     Running   0               38s
springboot-crud-deployment-5769ddfb5c-z5bks   1/1     Running   0               38s

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl logs springboot-crud-deployment-5769ddfb5c-2b77s

  .   ____          _            __ _ _
 /\\ / ___'_ __ _ _(_)_ __  __ _ \ \ \ \
( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
  '  |____| .__|_| |_|_| |_\__, | / / / /
 =========|_|==============|___/=/_/_/_/
 :: Spring Boot ::                (v2.6.1)

2023-04-27 09:05:36.443  INFO 1 --- [           main] .j.c.SpringbootCrudK8sExampleApplication : Starting SpringbootCrudK8sExampleApplication v0.0.1-SNAPSHOT using Java
 1.8.0_342 on springboot-crud-deployment-5769ddfb5c-2b77s with PID 1 (/springboot-crud-k8s.jar started by root in /)
2023-04-27 09:05:36.446  INFO 1 --- [           main] .j.c.SpringbootCrudK8sExampleApplication : No active profile set, falling back to default profiles: default
2023-04-27 09:05:52.000  INFO 1 --- [           main] .s.d.r.c.RepositoryConfigurationDelegate : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
2023-04-27 09:05:52.418  INFO 1 --- [           main] .s.d.r.c.RepositoryConfigurationDelegate : Finished Spring Data repository scanning in 312 ms. Found 1 JPA reposit
ory interfaces.
2023-04-27 09:06:06.710  INFO 1 --- [           main] o.s.b.w.embedded.tomcat.TomcatWebServer  : Tomcat initialized with port(s): 8080 (http)
2023-04-27 09:06:06.816  INFO 1 --- [           main] o.apache.catalina.core.StandardService   : Starting service [Tomcat]
2023-04-27 09:06:06.816  INFO 1 --- [           main] org.apache.catalina.core.StandardEngine  : Starting Servlet engine: [Apache Tomcat/9.0.55]
2023-04-27 09:06:07.592  INFO 1 --- [           main] o.a.c.c.C.[Tomcat].[localhost].[/]       : Initializing Spring embedded WebApplicationContext
2023-04-27 09:06:07.592  INFO 1 --- [           main] w.s.c.ServletWebServerApplicationContext : Root WebApplicationContext: initialization completed in 29156 ms
2023-04-27 09:06:11.224  INFO 1 --- [           main] o.hibernate.jpa.internal.util.LogHelper  : HHH000204: Processing PersistenceUnitInfo [name: default]
2023-04-27 09:06:11.605  INFO 1 --- [           main] org.hibernate.Version                    : HHH000412: Hibernate ORM core version 5.6.1.Final
2023-04-27 09:06:13.932  INFO 1 --- [           main] o.hibernate.annotations.common.Version   : HCANN000001: Hibernate Commons Annotations {5.1.2.Final}
2023-04-27 09:06:14.845  INFO 1 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Starting...
2023-04-27 09:06:17.233  INFO 1 --- [           main] com.zaxxer.hikari.HikariDataSource       : HikariPool-1 - Start completed.

C:\Users\DELL\Desktop\miniproj\springboot-crud-k8s>kubectl logs springboot-crud-deployment-5769ddfb5c-z5bks

  .   ____          _            __ _ _
 /\\ / ___'_ __ _ _(_)_ __  __ _ \ \ \ \
( ( )\___ | '_ | '_| | '_ \/ _` | \ \ \ \
 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
  '  |____| .__|_| |_|_| |_\__, | / / / /
 =========|_|==============|___/=/_/_/_/
 :: Spring Boot ::                (v2.6.1)
```

```
Command Prompt - kubectl  exec -it mysql-7b47b674b7-cwc29 /bin/bash
Microsoft Windows [Version 10.0.19043.928]
(c) Microsoft Corporation. All rights reserved.

C:\Users\DELL>kubectl get pods
NAME                              READY    STATUS    RESTARTS       AGE
mysql-7b47b674b7-cwc29            1/1      Running   0              12m
nginx-deployment-95585b474-x4gkw  1/1      Running   3 (101m ago)   23h

C:\Users\DELL>kubectl exec -it mysql-7b47b674b7-cwc29 /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 -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)

Copyright (c) 2000, 2023, Oracle and/or its affiliates.

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> exit;
Bye
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
```

```java
 5    import org.springframework.beans.factory.annotation.Autowired;
 6    import org.springframework.web.bind.annotation.*;
 7
 8    import java.util.List;
 9
10    @RestController
11    @RequestMapping("/orders")
12    public class OrderController {
13
14        @Autowired
15        private OrderService service;
16
17        @PostMapping
18        public Order addOrder(@RequestBody Order order){
19            return service.addOrder(order);
20        }
21
22        @GetMapping
23        public List<Order> getOrders(){
24            return service.getOrders();
25        }
26
27        @GetMapping("/{id}")
28        public Order getOrderById(@PathVariable int id){
29            return service.getOrderById(id);
30        }
31    }
32
```

```java
import lombok.Data;
import lombok.NoArgsConstructor;

import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Table;

@Data
@AllArgsConstructor
@NoArgsConstructor
@Entity
@Table(name = "ORDERS_TBL")
public class Order {
    @Id
    @GeneratedValue
    private int id;
    private String name;
    private int qty;
    private double price;
}
```

EXPLORER   ⋯   :.md   ! app-deployment.yaml M   J ‖ ⟲ ↓ ↑ ⟳ ☐ ⌄ tory.java ✕   J OrderController.java   ! db-deployment.yaml M

∨ MINIPROJ   springboot-crud-k8s › src › main › java › com › javatechie › crud › repository › J OrderRepository.java › ...
  ∨ springboot-crud-k8s   ●   1   package com.javatechie.crud.repository;
    ∨ src   ●   2
      ∨ main   ●   3   import com.javatechie.crud.entity.Order;
        ∨ java\com\javatechie\crud   4   import org.springframework.data.jpa.repository.JpaRepository;
          ∨ controller   5
            J OrderController.java   6   public interface OrderRepository extends JpaRepository<Order, Integer> {
          ∨ entity   7   }
            J Order.java   8
          ∨ repository
            J OrderRepository.java
          › service
          J SpringbootCrudK8sExampleAp...
        ∨ resources   ●
          ☰ application.properties   M
          ☰ application.yml
      › test
    › target   ●
    ! app-deployment.yaml   M
    ! db-deployment.yaml   M

> OUTLINE
∨ TIMELINE OrderRepository.java
  ⎔ #code Basant kumar Hota   1 yr

> JAVA PROJECTS

.md   ! app-deployment.yaml M   J II ↻ ↓ ↑ ↺ □ ∨ tory.java   J SpringbootCrudK8sExampleApplication.java ×   J OrderCont ▷ ∨ ⊟ ···

EXPLORER ···

MINIPROJ

springboot-crud-k8s > src > main > java > com > javatechie > crud > J SpringbootCrudK8sExampleApplication.java > Language Support for Java(TM) by Red Hat > ⁙ SpringbootC

∨ MINIPROJ
  ∨ springboot-crud-k8s
    ∨ src
      ∨ main
        ∨ java \ com \ javatechie \ crud
          ∨ controller
            J OrderController.java
          ∨ entity
            J Order.java
          ∨ repository
            J OrderRepository.java
          > service
            J SpringbootCrudK8sExampleAp...
      ∨ resources
        ☰ application.properties   M
        ☰ application.yml
    > test
    > target
    ! app-deployment.yaml   M
    ! db-deployment.yaml   M

> OUTLINE
∨ TIMELINE   SpringbootCrudK8sExampleApplic...
  ◇ #code Basant kumar Hota   1 yr

> JAVA PROJECTS

```
 1    package com.javatechie.crud;
 2
 3    import org.springframework.boot.SpringApplication;
 4    import org.springframework.boot.autoconfigure.SpringBootApplication;
 5
 6    @SpringBootApplication
 7    public class SpringbootCrudK8sExampleApplication {
 8
      Run | Debug
 9        public static void main(String[] args) {
10            SpringApplication.run(SpringbootCrudK8sExampleApplication.class, args);
11        }
12
13    }
14
```

main* ↻ ⊗ 0 ⚠ 1   Ln 12, Col 1   Tab Size: 4   UTF-8   CRLF   {} Java   Go Live

Type here to search   04:17 PM 27-04-2023 ENG
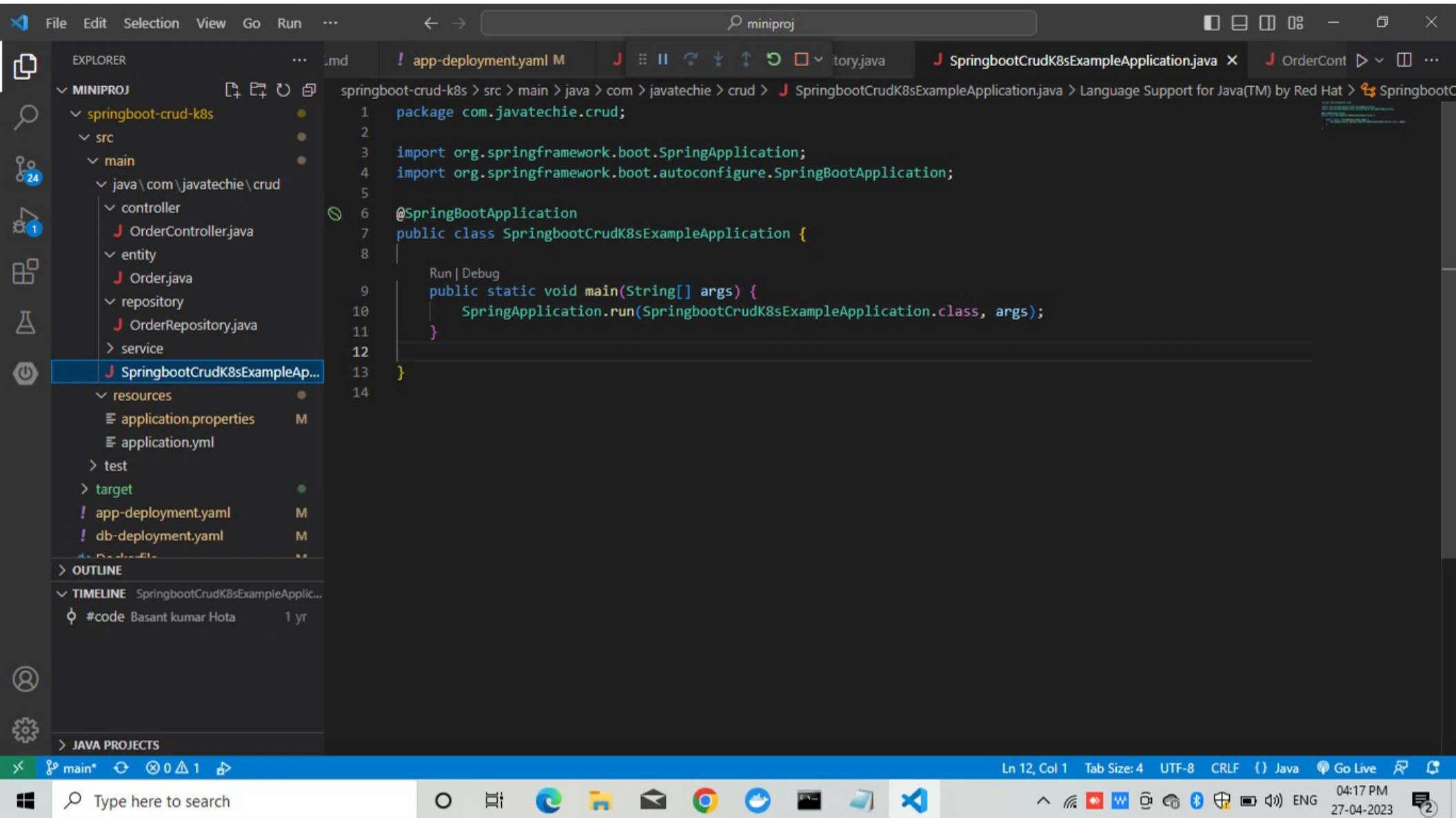
```
1
2    spring.datasource.url=jdbc:mysql://localhost:3306/mydatabase
3    spring.datasource.username=root
4    spring.datasource.password=1234
5
6
7
```

EXPLORER

springboot-crud-k8s > src > main > resources > ≡ application.yml

```yaml
spring:
  datasource:
    driver-class-name: com.mysql.cj.jdbc.Driver
    url: jdbc:mysql://${DB_HOST}/${DB_NAME}?useSSL=false
    username: ${DB_USERNAME}
    password: ${DB_PASSWORD}
    hikari:
      initialization-fail-timeout: 0
  jpa:
    database-platform: org.hibernate.dialect.MySQL5Dialect
    generate-ddl: true
    show-sql: true
    hibernate:
      ddl-auto: update
```

MINIPROJ
- springboot-crud-k8s
  - src
    - main
      - java\com\javatechie\crud
        - controller
          - OrderController.java
        - entity
          - Order.java
        - repository
          - OrderRepository.java
        - service
        - SpringbootCrudK8sExampleAp...
      - resources
        - application.properties   M
        - application.yml
    - test
  - target
  - app-deployment.yaml   M
  - db-deployment.yaml   M

> OUTLINE
> TIMELINE application.yml
  #code Basant kumar Hota   1 yr

> JAVA PROJECTS

main* ⊗ 0 △ 1   Ln 8, Col 37 Spaces: 2 UTF-8 CRLF Spring Boot Properties Yaml Go Live

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: springboot-crud-deployment
spec:
  selector:
    matchLabels:
      app: springboot-k8s-mysql
  replicas: 3
  template:
    metadata:
      labels:
        app: springboot-k8s-mysql
    spec:
      containers:
        - name: springboot-crud-k8s
          image: springboot-crud-k8s:1.0
          ports:
            - containerPort: 8080
          env:   # Setting Enviornmental Variables
            - name: DB_HOST   # Setting Database host address from configMap
              value: mysql
            - name: DB_NAME # Setting Database name from configMap
              value: javatechie
            - name: DB_USERNAME  # Setting Database username from Secret
              value: root
            - name: DB_PASSWORD # Setting Database password from Secret
              value: "1234"

---

apiVersion: v1 # Kubernetes API version
```

EXPLORER   ! app-deployment.yaml M ×   J Order.ja   II ⟳ ↓ ↑ ↺ □ ∨   J SpringbootCrudK8sExampleApplication.java   J OrderController.j

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

∨ springboot-crud-k8s   ●
  ∨ src   ●
    ∨ main   ●
      ∨ java \ com \ javatechie \ crud

```yaml
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
26                  value: root
27                - name: DB_PASSWORD  # Setting Database password from Secret
28                  value: "1234"
29
30      ---
31
32      apiVersion: v1 # Kubernetes API version
33      kind: Service # Kubernetes resource kind we are creating
34      metadata: # Metadata of the resource kind we are creating
35        name: springboot-crud-svc
36      spec:
37        selector:
38          app: springboot-k8s-mysql
39        ports:
40          - protocol: "TCP"
41            port: 8080 # The port that the service is running on in the cluster
42            targetPort: 8080 # The port exposed by the service
43        type: NodePort # type of the service.
```

∨ controller
    J OrderController.java
∨ entity
    J Order.java
∨ repository
    J OrderRepository.java
> service
    J SpringbootCrudK8sExampleAp...
∨ resources   ●
    ≡ application.properties   M
    ≡ application.yml   M
> test
> target   ●
! app-deployment.yaml   M
! db-deployment.yaml   M

> OUTLINE

∨ TIMELINE   app-deployment.yaml
  ○ File Saved   22 mins
  ○ File Saved   32 mins
  ○ File Saved   35 mins
  ○ File Saved   1 hr
  ○ File Saved

> JAVA PROJECTS

EXPLORER

MINIPROJ

- springboot-crud-k8s
  - src
    - main
      - java\com\javatechie\crud
        - controller
          - J OrderController.java
        - entity
          - J Order.java
        - repository
          - J OrderRepository.java
        - service
        - J SpringbootCrudK8sExampleAp...
      - resources
        - ≡ application.properties   M
        - ≡ application.yml
    - test
  - target
  - ! app-deployment.yaml   M
  - ! db-deployment.yaml   M

> OUTLINE

TIMELINE db-deployment.yaml
- ⭕ File Saved   2 hrs
- ⭕ File Saved
- ⭘ configMap & secrets Basant k... 1 yr
- ⭘ #code Basant kumar Hota

> JAVA PROJECTS

Tabs: Order.java | OrderRepository.java | lication.java | OrderController.java | **! db-deployment.yaml M ✕**

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

```yaml
 1  # Define a 'Persistent Voulume Claim'(PVC) for Mysql Storage, dynamically provisioned by cluster
 2  apiVersion: v1
 3  kind: PersistentVolumeClaim
 4  metadata:
 5    name: mysql-pv-claim # name of PVC essential for identifying the storage data
 6    labels:
 7      app: mysql
 8      tier: database
 9  spec:
10    accessModes:
11      - ReadWriteOnce   #This specifies the mode of the claim that we are trying to create.
12    resources:
13      requests:
14        storage: 1Gi    #This will tell kubernetes about the amount of space we are trying to claim.
15  ---
16  # Configure 'Deployment' of mysql server
17  apiVersion: apps/v1
18  kind: Deployment
19  metadata:
20    name: mysql
21    labels:
22      app: mysql
23      tier: database
24  spec:
25    selector: # mysql Pod Should contain same labels
26      matchLabels:
27        app: mysql
28        tier: database
29    strategy:
30      type: Recreate
31    template:
32      metadata:
```

main* ⊗ 0 ⚠ 1   Ln 45, Col 54   Spaces: 2   UTF-8   CRLF   YAML   Go Live

```yaml
    metadata:
      labels: # Must match 'Service' and 'Deployment' selectors
        app: mysql
        tier: database
    spec:
      containers:
        - image: mysql:5.7 # image from docker-hub
          args:
            - "--ignore-db-dir=lost+found" # Workaround for https://github.com/docker-library/mysql/issues/186
          name: mysql
          env:
            - name: MYSQL_ROOT_PASSWORD
              value: "1234"
            - name: MYSQL_DATABASE # Setting Database Name from a 'ConfigMap'
              value: javatechie
          ports:
            - containerPort: 3306
              name: mysql
          volumeMounts:        # Mounting voulume obtained from Persistent Volume Claim
            - 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:
```

```yaml
49              name: mysql
50          volumeMounts:            # Mounting voulume obtained from Persistent Volume Claim
51            - name: mysql-persistent-storage
52              mountPath: /var/lib/mysql #This is the path in the container on which the mounting will take place
53        volumes:
54          - name: mysql-persistent-storage # Obtaining 'vloume' from PVC
55            persistentVolumeClaim:
56              claimName: mysql-pv-claim
57  ---
58  # Define a 'Service' To Expose mysql to Other Services
59  apiVersion: v1
60  kind: Service
61  metadata:
62    name: mysql  # DNS name
63    labels:
64      app: mysql
65      tier: database
66  spec:
67    ports:
68      - port: 3306
69        targetPort: 3306
70    selector:        # mysql Pod Should contain same labels
71      app: mysql
72      tier: database
73    clusterIP: None  # We Use DNS, Thus ClusterIP is not relevant
```