

Adding database tables and data to a MySQL database.

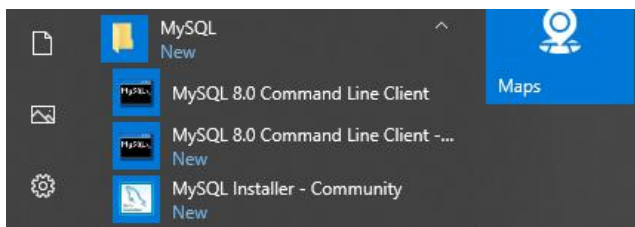


Using the MySQL Community Edition database.

In this tutorial you will learn how to carry out basic SQL commands in the Community Edition of the MySQL server so that it can be used as the data source for a Java application using JDBC.

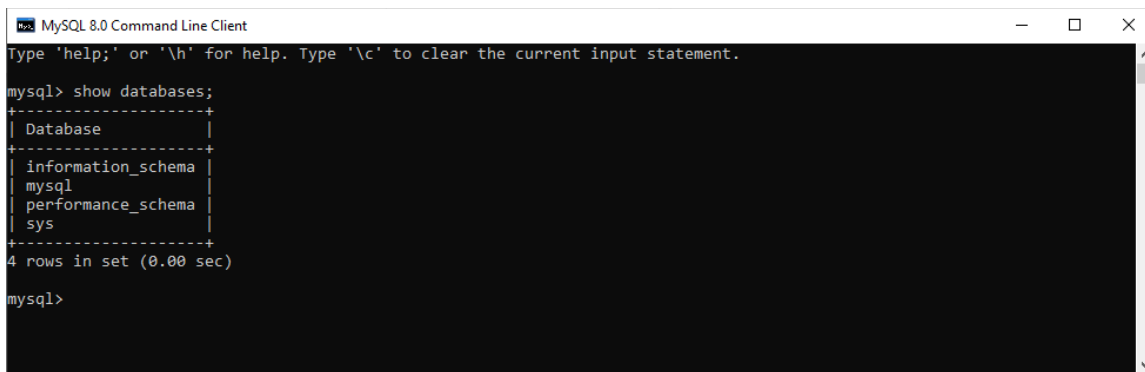
Accessing the MySQL database.

1. Open the MySQL directory on the windows application list and select MySQL 8.0 Command Line Client to access the database through the command line.



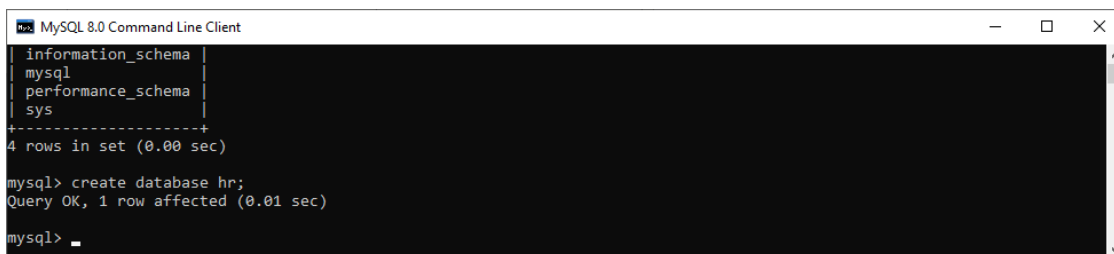
2. Enter **root** as the password.
3. To view the available databases on the MySQL server, enter the following command (the semi colon completes the command and must be included):

```
show databases;
```



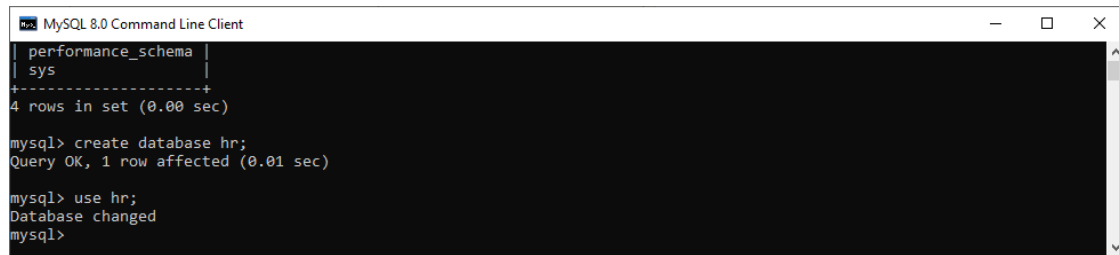
4. You are going to create a database that will hold some HR information about its employees. Enter the following command:

```
create database hr;
```



5. Set the new hr database to be the one in use by entering the following command:

```
use hr;
```



```
MySQL 8.0 Command Line Client
+-----+
| performance_schema |
| sys                |
+-----+
4 rows in set (0.00 sec)

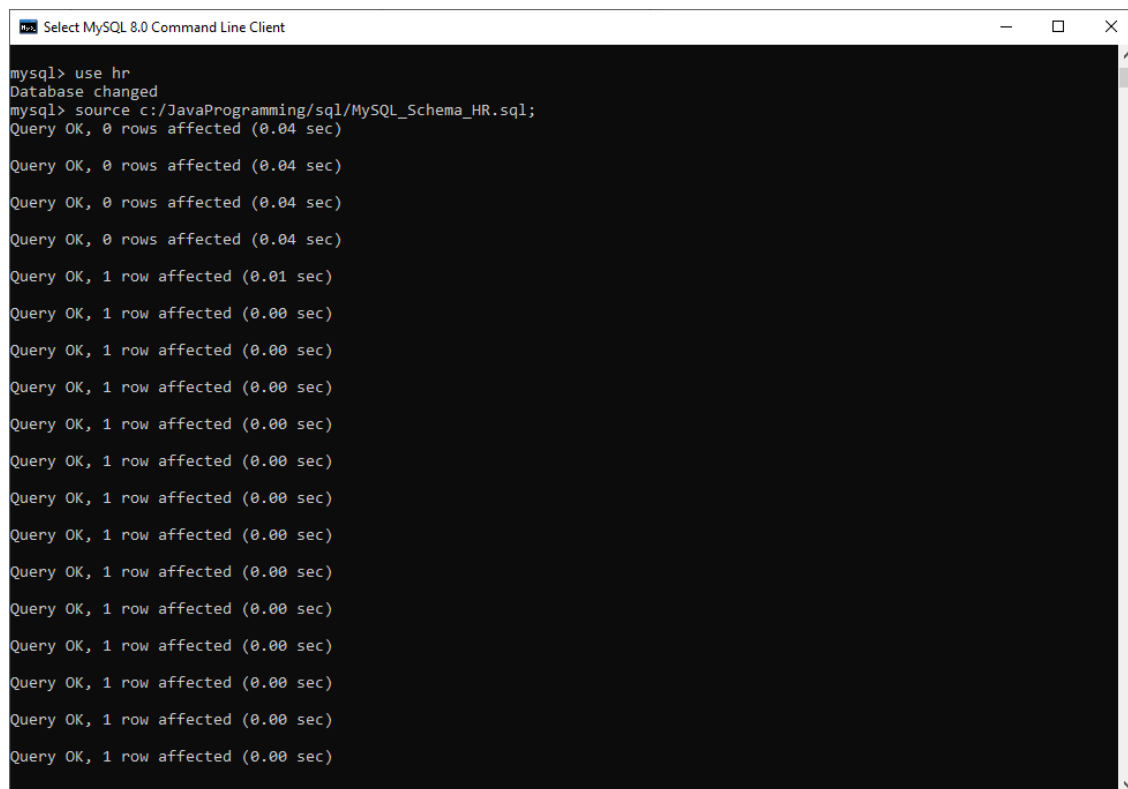
mysql> create database hr;
Query OK, 1 row affected (0.01 sec)

mysql> use hr;
Database changed
mysql>
```

6. You have been provided with a SQL script that will populate the hr database with tables and data. Copy the **MySQL_Schema_HR.sql** file into a **sql** directory within the **JavaProgramming** directory on the **C Drive**.

Run the script by entering the following command:

```
source c:/JavaProgramming/sql/MySQL_Schema_HR.sql;
```



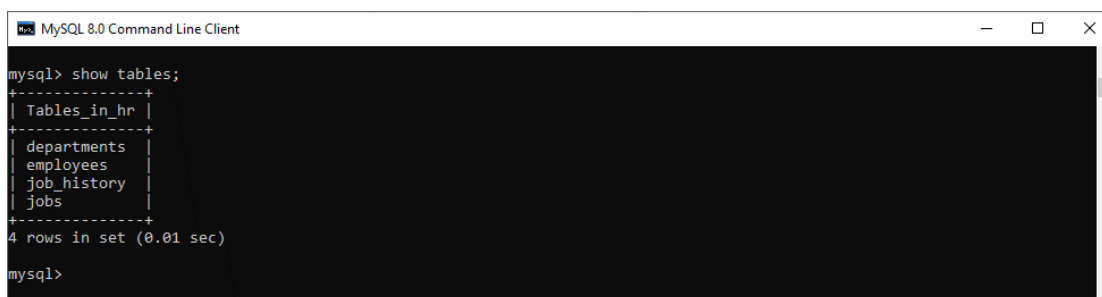
```
Select MySQL 8.0 Command Line Client

mysql> use hr
Database changed
mysql> source c:/JavaProgramming/sql/MySQL_Schema_HR.sql;
Query OK, 0 rows affected (0.04 sec)

Query OK, 0 rows affected (0.04 sec)
Query OK, 0 rows affected (0.04 sec)
Query OK, 1 row affected (0.01 sec)
Query OK, 1 row affected (0.00 sec)
Query OK, 1 row affected (0.00 sec)
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Query OK, 1 row affected (0.00 sec)
```

7. To view the created tables, enter the following command:

```
show tables;
```

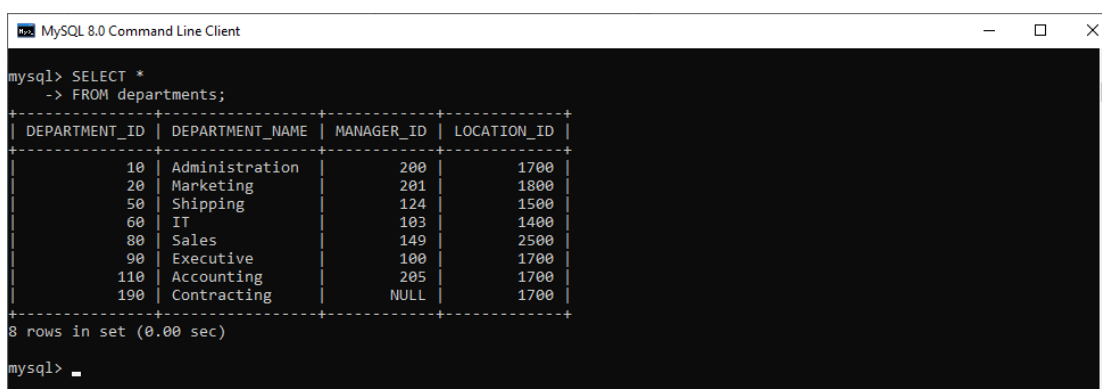


```
mysql> show tables;
+-----+
| Tables_in_hr |
+-----+
| departments |
| employees   |
| job_history  |
| jobs        |
+-----+
4 rows in set (0.01 sec)

mysql>
```

8. To view the contents of each table you can run the following select command:

```
SELECT *
FROM departments;
```



```
mysql> SELECT *
-> FROM departments;
+-----+-----+-----+-----+
| DEPARTMENT_ID | DEPARTMENT_NAME | MANAGER_ID | LOCATION_ID |
+-----+-----+-----+-----+
| 10             | Administration  | 200        | 1700        |
| 20             | Marketing       | 201        | 1800        |
| 50             | Shipping        | 124        | 1500        |
| 60             | IT              | 103        | 1400        |
| 80             | Sales           | 149        | 2500        |
| 90             | Executive       | 100        | 1700        |
| 110            | Accounting      | 205        | 1700        |
| 190            | Contracting     | NULL       | 1700        |
+-----+-----+-----+-----+
8 rows in set (0.00 sec)

mysql>
```

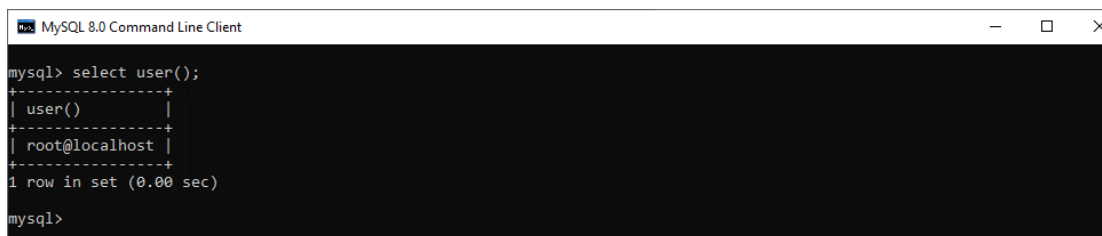
Substitute the **departments** table for **employees**, **job_history** and **jobs** to view the content of the remaining tables.

Accessing the MySQL database properties.

Now that the required data is in the database the following commands will be useful for when you want to connect to the database via JDBC.

9. To view the current username and database location enter the following command:

```
select user();
```



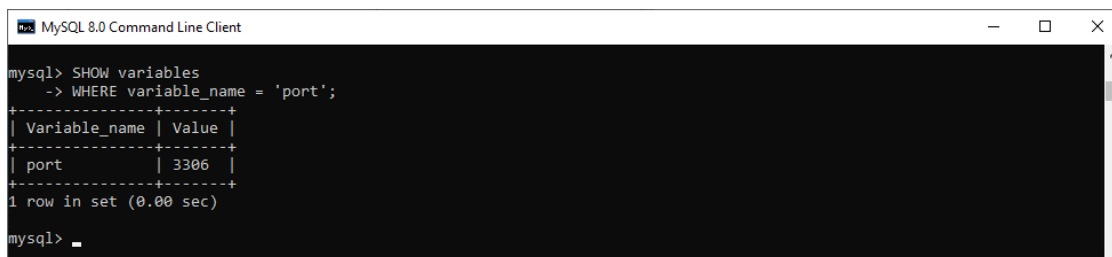
```
mysql> select user();
+-----+
| user() |
+-----+
| root@localhost |
+-----+
1 row in set (0.00 sec)

mysql>
```

In this example you are logged in as root to the localhost database.

10. To view the port number (required to access the database from Eclipse) enter the following command:

```
SHOW variables  
WHERE variable_name = 'port';
```



```
mysql> SHOW variables  
-> WHERE variable_name = 'port';  
+-----+-----+  
| Variable_name | Value |  
+-----+-----+  
| port          | 3306  |  
+-----+-----+  
1 row in set (0.00 sec)  
mysql>
```

This shows the default port address of 3306 for a MySQL database. Take a note of the settings that you have returned from your system as you will need them later.

11. Type exit to close the command line interface (not the database that is running in the background as a service).

```
exit;
```