LIKE Operator

This lesson discusses how to use the LIKE operator for filtering rows.

LIKE Operator

In this lesson we'll learn how to query the data using the **LIKE** operator in the **WHERE** clause.

Example Syntax

> SELECT **col1, col2, ... coln**
>
> FROM **table**
>
> WHERE **col3 LIKE "%some-string%"**

> Connect to the terminal below by clicking in the widget. Once connected, the command line prompt will show up. Enter or copy and paste the command **./DataJek/Lessons/9lesson.sh** and wait for the MySQL prompt to start-up.

```
-- The lesson queries are reproduced below for convenient copy/paste into the terminal.

-- Query 1
SELECT * from Actors WHERE FirstName LIKE "Jen%";

-- Query 2
SELECT * from Actors where FirstName LIKE "Jennifer%";

-- Query 3
SELECT * from Actors where FirstName LIKE "%";

-- Query 4
```

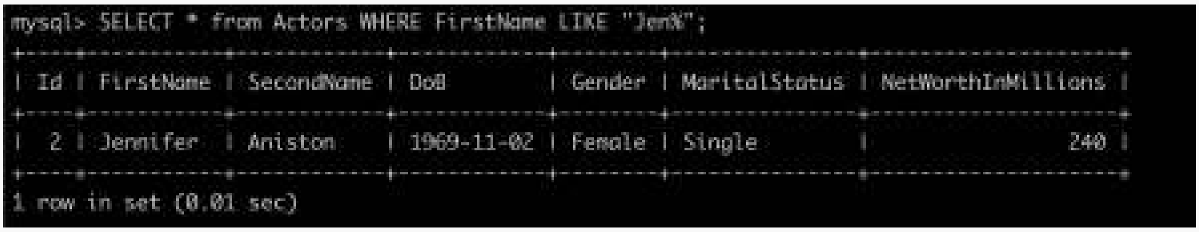
```
SELECT * from Actors WHERE FirstName LIKE "_enn%";

-- Query 5

SHOW DATABASES LIKE "M%";

-- Query 6
SHOW TABLES LIKE "A%";
```

Terminal

The **LIKE** operator works only with string data types and allows us to retrieve rows based on pattern matching on a particular column.

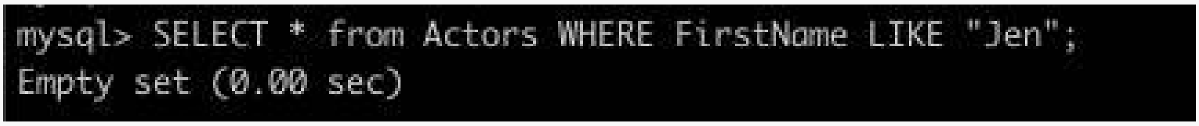
1. Say, you have forgotten the full name of a particular actor but remember that the name starts with the string "Jen". You can check if there is an actor with a name that has "Jen" as the prefix by executing the following query in the terminal.

   ```
   SELECT * from Actors WHERE FirstName LIKE "Jen%";
   ```

   ```
   mysql> SELECT * from Actors WHERE FirstName LIKE "Jen%";
   +----+-----------+------------+------------+--------+---------------+--------------------+
   | Id | FirstName | SecondName | DoB        | Gender | MaritalStatus | NetWorthInMillions |
   +----+-----------+------------+------------+--------+---------------+--------------------+
   |  2 | Jennifer  | Aniston    | 1969-11-02 | Female | Single        |                240 |
   +----+-----------+------------+------------+--------+---------------+--------------------+
   1 row in set (0.01 sec)
   ```

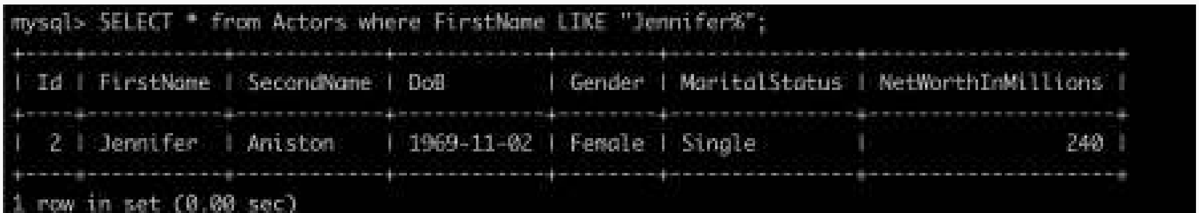
   Note that we use the string **"Jen%"** and not **"Jen"**. In fact, if you used the latter, no rows will be matched.

   ```
   mysql> SELECT * from Actors WHERE FirstName LIKE "Jen";
   Empty set (0.00 sec)
   ```

   The **%** symbol is a wildcard character that matches all strings. It can match zero or more characters. For instance, the following query returns one row and the wildcard character matches zero characters.

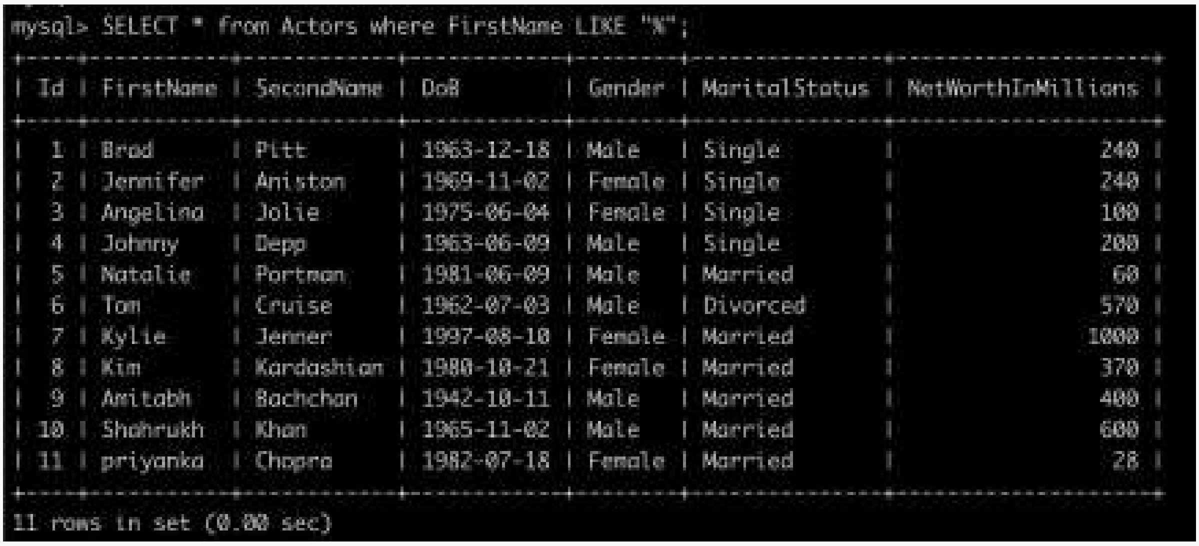
   ```
   SELECT * from Actors where FirstName LIKE "Jennifer%";
   ```

   ```
   mysql> SELECT * from Actors where FirstName LIKE "Jennifer%";
   +----+-----------+------------+------------+--------+---------------+--------------------+
   | Id | FirstName | SecondName | DoB        | Gender | MaritalStatus | NetWorthInMillions |
   +----+-----------+------------+------------+--------+---------------+--------------------+
   |  2 | Jennifer  | Aniston    | 1969-11-02 | Female | Single        |                240 |
   +----+-----------+------------+------------+--------+---------------+--------------------+
   1 row in set (0.00 sec)
   ```

As a final example, executing the following query will match all the rows in the table.

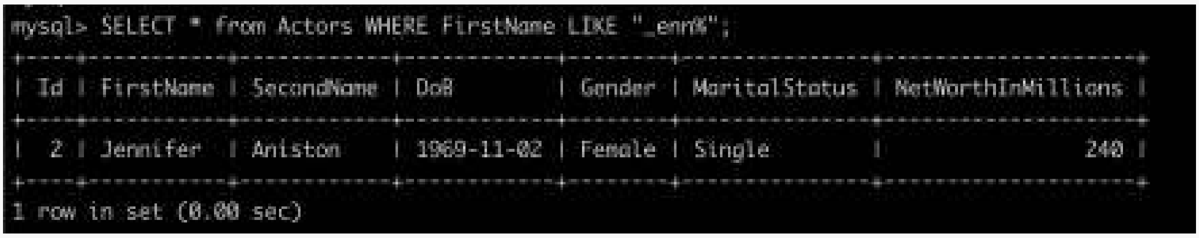
```
SELECT * from Actors where FirstName LIKE "%";
```



```
mysql> SELECT * from Actors where FirstName LIKE "%";
+----+-----------+------------+------------+--------+---------------+-------------------+
| Id | FirstName | SecondName | DoB        | Gender | MaritalStatus | NetWorthInMillions |
+----+-----------+------------+------------+--------+---------------+-------------------+
|  1 | Brad      | Pitt       | 1963-12-18 | Male   | Single        |               240 |
|  2 | Jennifer  | Aniston    | 1969-11-02 | Female | Single        |               240 |
|  3 | Angelina  | Jolie      | 1975-06-04 | Female | Single        |               100 |
|  4 | Johnny    | Depp       | 1963-06-09 | Male   | Single        |               200 |
|  5 | Natalie   | Portman    | 1981-06-09 | Male   | Married       |                60 |
|  6 | Tom       | Cruise     | 1962-07-03 | Male   | Divorced      |               570 |
|  7 | Kylie     | Jenner     | 1997-08-10 | Female | Married       |              1000 |
|  8 | Kim       | Kardashian | 1980-10-21 | Female | Married       |               370 |
|  9 | Amitabh   | Bachchan   | 1942-10-11 | Male   | Married       |               400 |
| 10 | Shahrukh  | Khan       | 1965-11-02 | Male   | Married       |               600 |
| 11 | priyanka  | Chopra     | 1982-07-18 | Female | Married       |                28 |
+----+-----------+------------+------------+--------+---------------+-------------------+
11 rows in set (0.00 sec)
```

2. We can use the underscore _ character to match exactly one character. For instance, the expression **LIKE "_enn%"** will match the string "Jennifer”.

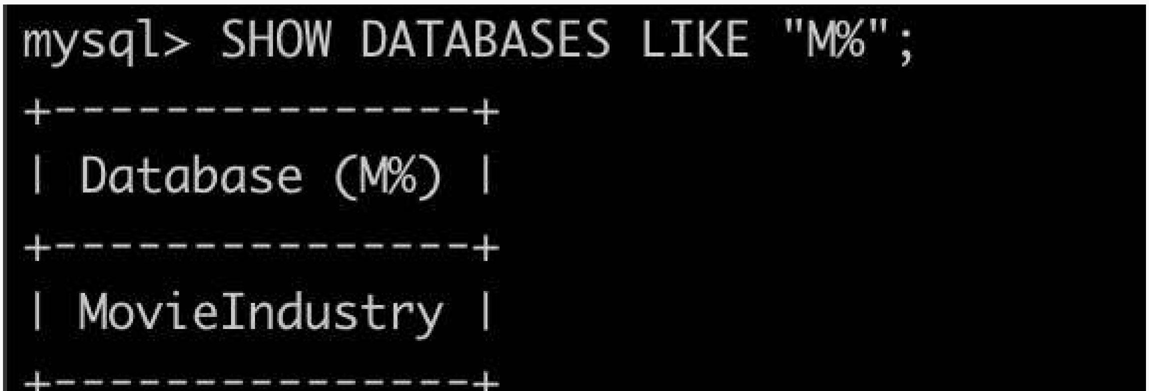
```
SELECT * from Actors WHERE FirstName LIKE "_enn%";
```



```
mysql> SELECT * from Actors WHERE FirstName LIKE "_enn%";
+----+-----------+------------+------------+--------+---------------+-------------------+
| Id | FirstName | SecondName | DoB        | Gender | MaritalStatus | NetWorthInMillions |
+----+-----------+------------+------------+--------+---------------+-------------------+
|  2 | Jennifer  | Aniston    | 1969-11-02 | Female | Single        |               240 |
+----+-----------+------------+------------+--------+---------------+-------------------+
1 row in set (0.00 sec)
```

3. The **LIKE** clause can also be used with the **SHOW** command. For example:

```
SHOW DATABASES LIKE "M%";
```

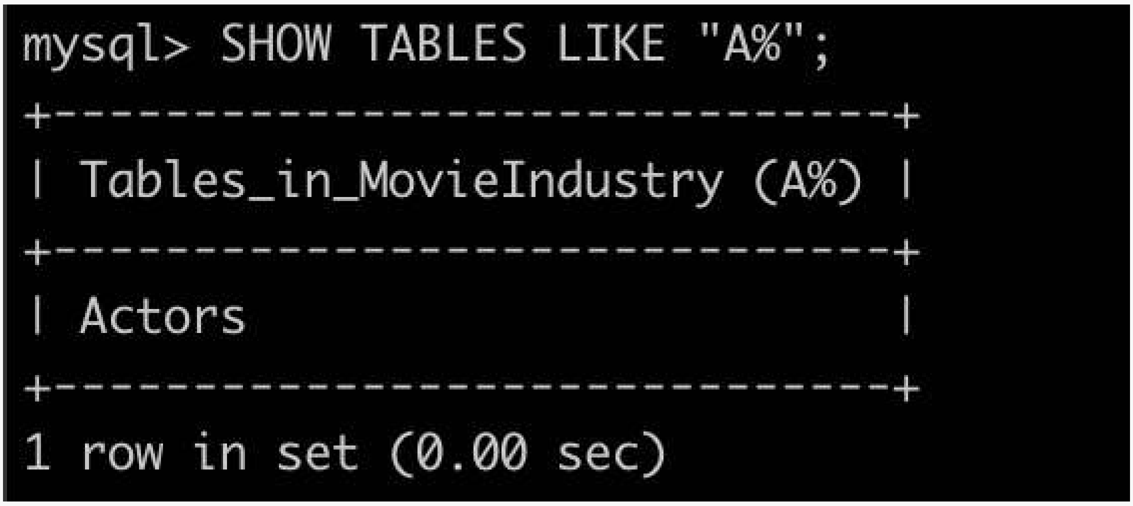


```
mysql> SHOW DATABASES LIKE "M%";
+---------------+
| Database (M%) |
+---------------+
| MovieIndustry |
+---------------+
```

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

Note that the **LIKE** statement is case sensitive. It shows different results for patterns "%M" and "%m". We can also use **LIKE** when listing tables as the following example demonstrates:

```
SHOW TABLES LIKE "A%";
```



```
mysql> SHOW TABLES LIKE "A%";
+------------------------------+
| Tables_in_MovieIndustry (A%) |
+------------------------------+
| Actors                       |
+------------------------------+
1 row in set (0.00 sec)
```