EXISTS Operator

This lesson discusses the EXISTS operator.

EXISTS Operator

In this lesson we'll learn about the boolean operator **EXISTS** and its complement, **NOT EXISTS**. The **EXISTS** operator is usually used to test if a subquery returns any rows or none at all.

> 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/33lesson.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 EXISTS ( SELECT *
               FROM DigitalAssets
               WHERE BINARY URL LIKE "%clooney%");

-- Query 2
SELECT *
FROM Actors
WHERE NOT EXISTS ( SELECT *
               FROM DigitalAssets
               WHERE BINARY URL LIKE "%clooney%");
```

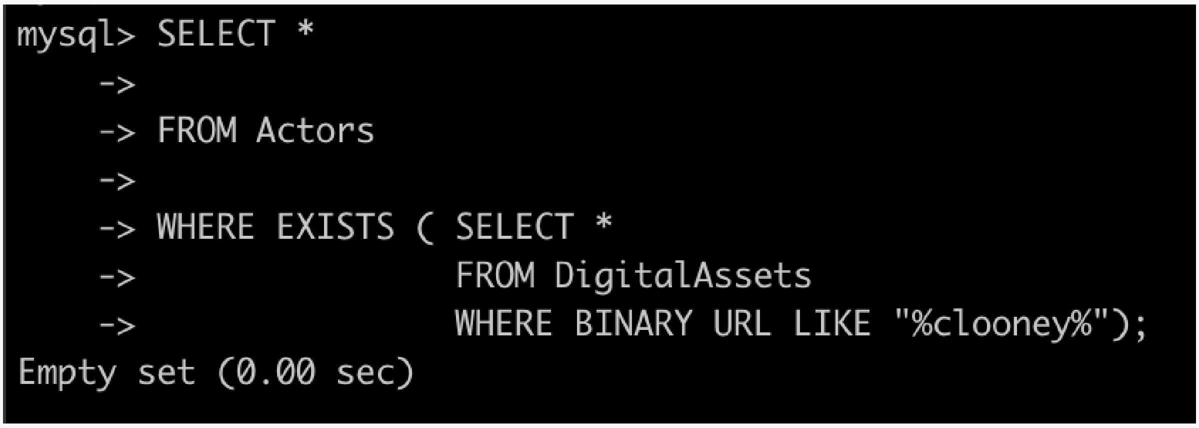
● Terminal

1. Let's start with a simple example. We'll check if our table **DigitalAssets** has any account owned by the actor George Clooney. If yes, we print the list of all the actors from our **Actors** table. Granted, the query doesn't make much sense but bear with me as we'll see more useful applications of the **EXISTS** operator in later lessons. The query is shown below:

```
SELECT *

FROM Actors

WHERE EXISTS ( SELECT *
               FROM DigitalAssets
               WHERE BINARY URL LIKE "%clooney%");
```



```
mysql> SELECT *
    ->
    -> FROM Actors
    ->
    -> WHERE EXISTS ( SELECT *
    ->                FROM DigitalAssets
    ->                WHERE BINARY URL LIKE "%clooney%");
Empty set (0.00 sec)
```

The outcome is an empty set because we don't have any entry for George Clooney in our **DigitalAssets** table. The subquery selects all the columns, but what the subquery selects is irrelevant because the **EXISTS** operator only checks for the *existence* of any rows from the result returned by the subquery. The WHERE condition of the outer query becomes false and the overall query returns an empty result set too.

Note we have used the **BINARY** operator to make the comparison case-insensitive which is not required if the collation is already set to be case-insensitive for the database.

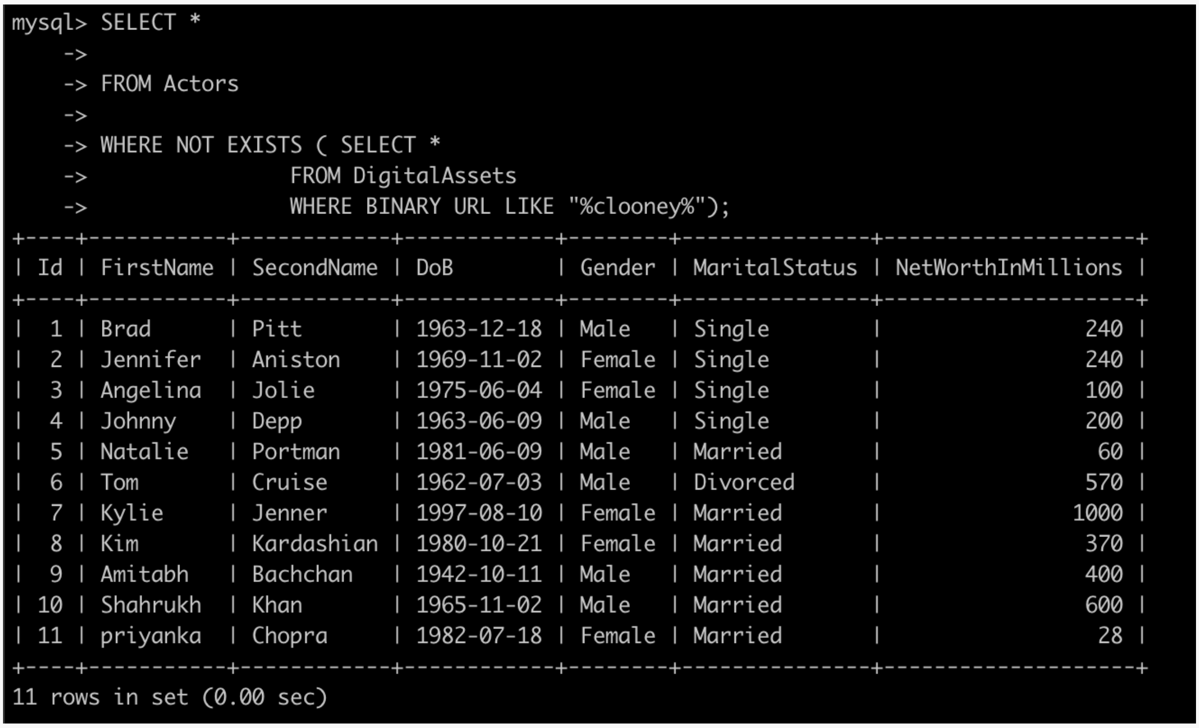
2. We add the **NOT** operator to the **EXISTS** clause and see the entire

Actors table print out.

```
SELECT *

FROM Actors

WHERE NOT EXISTS ( SELECT *
                   FROM DigitalAssets
                   WHERE BINARY URL LIKE "%clooney%");
```



```
mysql> SELECT *
    ->
    -> FROM Actors
    ->
    -> WHERE NOT EXISTS ( SELECT *
    ->                    FROM DigitalAssets
    ->                    WHERE BINARY URL LIKE "%clooney%");
+----+-----------+------------+------------+--------+---------------+--------------------+
| 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)
```