HANDLING MYSQL NULL VALUES

We have seen SQL SELECT command along with WHERE clause to fetch data from MySQL table, but when we try to give a condition, which compare field or column value to NULL, it does not work properly.

To handle such situation MySQL provides three operators

- **IS NULL**: operator returns true if column value is NULL.
- **IS NOT NULL**: operator returns true if column value is not NULL.
- <==>: operator compares values, which unlikely = operator is true even for two NULL values.

Conditions involving NULL are special. You cannot use = NULL or != NULL to look for NULL values in columns. Such comparisons always fail because it's impossible to tell whether or not they are true. Even NULL = NULL fails.

To look for columns that are or are not NULL, use IS NULL or IS NOT NULL.

**Using NULL values at Command Prompt:**

Suppose a table tcount_tbl in TUTORIALS database and it contains two columns tutorial_author and tutorial_count, where a NULL tutorial_count indicates that the value is unknown:

**Example:**

Try out the following examples:

```sql
root@host# mysql -u root -p password;
Enter password:******
mysql> use TUTORIALS;
Database changed
mysql> create table tcount_tbl
   -> (tutorial_author varchar(40) NOT NULL,
   ->   tutorial_count  INT);
Query OK, 0 rows affected (0.05 sec)
mysql> INSERT INTO tcount_tbl
   -> (tutorial_author, tutorial_count) values ('mahran', 20);
mysql> INSERT INTO tcount_tbl
   -> (tutorial_author, tutorial_count) values ('mahnaz', NULL);
mysql> INSERT INTO tcount_tbl
   -> (tutorial_author, tutorial_count) values ('Jen', NULL);
mysql> INSERT INTO tcount_tbl
   -> (tutorial_author, tutorial_count) values ('Gill', 20);
mysql> SELECT * from tcount_tbl;
```

```
+-----------------+----------------+
| tutorial_author | tutorial_count |
+-----------------+----------------+
| mahran          |    20          |
| mahnaz          |      NULL      |
| Jen             |      NULL      |
| Gill            |      20        |
+-----------------+----------------+
4 rows in set (0.00 sec)
```

You can see that = and != do not work with NULL values as follows:

```sql
mysql> SELECT * FROM tcount_tbl WHERE tutorial_count = NULL;
```
To find records where the tutorial_count column is or is not NULL, the queries should be written like this:

```sql
mysql> SELECT * FROM tcount_tbl WHERE tutorial_count IS NULL;
+-----------------+----------------+
| tutorial_author | tutorial_count |
+-----------------+----------------+
| mahnaz          | NULL           |
| Jen             | NULL           |
+-----------------+----------------+
2 rows in set (0.00 sec)
```

```sql
mysql> SELECT * FROM tcount_tbl WHERE tutorial_count IS NOT NULL;
+-----------------+----------------+
| tutorial_author | tutorial_count |
| mahran          | 20             |
| Gill            | 20             |
+-----------------+----------------+
2 rows in set (0.00 sec)
```

**Handling NULL Values in PHP Script:**

You can use `if...else` condition to prepare a query based on NULL value.

**Example:**

Following example takes tutorial_count from outside and then compares it with the value available in the table.

```php
<?php
$dbhost = 'localhost:3036';
$dbuser = 'root';
$dbpass = 'rootpassword';
$conn = mysql_connect($dbhost, $dbuser, $dbpass);
if(! $conn )
{
    die('Could not connect: ' . mysql_error());
}
if( isset($tutorial_count ))
{
    $sql = 'SELECT tutorial_author, tutorial_count
            FROM  tcount_tbl
            WHERE tutorial_count = $tutorial_count';
}
else
{
    $sql = 'SELECT tutorial_author, tutorial_count
            FROM  tcount_tbl
            WHERE tutorial_count IS $tutorial_count';
}
mysql_select_db('TUTORIALS');
$retval = mysql_query( $sql, $conn );
if(! $retval )
{
    die('Could not get data: ' . mysql_error());
}
while($row = mysql_fetch_array($retval, MYSQL_ASSOC))
{
    echo "Author:{$row['tutorial_author']}  <br> 
    "Count:  {$row['tutorial_count']}  <br>
".
```
"--------------------------<br>
} echo "Fetched data successfully\n"; mysql_close($conn);
?>
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