# MySQL Disable Foreign Key Checks

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**Summary**: in this tutorial, you will learn how to disable foreign key constraint checks in MySQL.

Sometimes, it is very useful to disable foreign key checks. For example, you can load data to the parent and child tables in any order with the foreign key constraint check disabled.

If you don't disable foreign key checks, you have to load data into the parent tables first and then the child tables in sequence, which can be tedious.

Another scenario in which you want to disable the foreign key check is when you want to drop a table. Unless you disable the foreign key checks, you cannot drop a table referenced by a foreign key constraint.

To disable foreign key checks, you set the `foreign_key_checks` variable to zero as follows:

```
SET foreign_key_checks = 0;
```

To enable the foreign key constraint check, you set the value of the `foreign_key_checks` to 1:

```
SET foreign_key_checks = 1;
```

Notice that setting `foreign_key_checks` to 1 does not trigger any validation of the existing table

data. In other words, MySQL will not verify the consistency of the data that was added during the foreign key check disabled.

## Disable foreign key check example

First, create a new table named `countries`:

```
CREATE TABLE countries(
    country_id INT AUTO_INCREMENT,
    country_name VARCHAR(255) NOT NULL,
    PRIMARY KEY(country_id)
);
```

Second, create another table named `cities`:

```
CREATE TABLE cities(
    city_id INT AUTO_INCREMENT,
    city_name VARCHAR(255) NOT NULL,
    country_id INT NOT NULL,
    PRIMARY KEY(city_id),
    FOREIGN KEY(country_id)
                REFERENCES countries(country_id)
);
```

The table `cities` has a foreign key constraint that references the column `country_id` of the table `countries`.

Third, insert a new row into the `cities` table:

```
INSERT INTO cities(city_name, country_id)
VALUES('New York',1);
```

MySQL issued the following error:

```
Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails (`class
```

Fourth, disable foreign key checks:

```
SET foreign_key_checks = 0;
```

Fifth, insert a new row into the `cities` table:

```
INSERT INTO cities(city_name, country_id)
VALUES('New York',1);
```

This time the `INSERT` statement executed successfully due to the foreign key check being disabled.

The following query returns the contents of the table `cities` :

```
SELECT * FROM cities;
```

Sixth, re-enable foreign key constraint check:

```
SET foreign_key_checks = 1;
```

When the foreign key checks were re-enabled, MySQL did not re-validate data in the table. However, it won't allow you to insert or update data that violates the foreign key constraint.

Finally, insert a row into the `countries` table whose value in the column `country_id` is 1 to make the data consistent in both tables:

```
INSERT INTO countries(country_id, country_name)
VALUES(1,'USA');
```

## Drop tables that have foreign key constraints

Suppose that you want to drop the `countries` and `cities` tables.

First, drop the table `countries` :

```
DROP TABLE countries;
```

MySQL issued this error:

```
Error Code: 3730. Cannot drop table 'countries' referenced by a foreign key constraint 'ci
```

To fix this, you have two options:

- Drop the table `cities` first and then remove the table `countries`.
- Disable foreign key checks and drop tables in any sequence.

We'll demonstrate the second way which disables the foreign key constraint check before dropping the tables.

Second, disable the foreign key check:

```
SET foreign_key_checks = 0;
```

Third, drop both tables `countries` and `cities`:

```
DROP TABLE countries;
DROP TABLE cities;
```

Both statements were executed successfully.

Finally, enable the foreign key check:

```
SET foreign_key_checks = 1;
```

## Summary

- Use the `SET foreign_key_checks = 0` to disable foreign key checks in MySQL.

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